R-390 Reflector January '02 Edited

From nextgen@nextcentury.com.au Tue Jan 1 08:34:56 2002
Subject: [R-390] that should do it

Hello folks, I need some help. I need a rf chassis with xtal oscillator and vfo and ofcourse counter.basically everything before the if stage. don't need a power supply orballast tube.comments? btw I need everything intact, I am prepared to replace caps etchowever.73's Lee.

From w5kp@swbell.net Tue Jan 1 15:21:40 2002
Subject: [R-390] new passwords

The new list password randomly assigned to me by Mailman was almost too goodto change: "noopum". :-) I think that's either what's in my cat's boxevery morning, or the stuff that oozes from the Capacitor That Rots. Happy New Year,Jerry W5KP

From w7itc@hotmail.com Tue Jan 1 18:23:56 2002
Subject: [R-390] great site for SWL

In My cruising around I found this site. http://www.hard-core-dx.com/ It is a great resource. be sure to look at the links. There is a bunch of antenna stuff. Check out the photo of the beverage antennas on the home page. can you image what an R390 would be able to hear hooked up to these monsters.
Ken

From roy.morgan@nist.gov Wed Jan 2 02:59:29 2002
Subject: [R-390] Facts of life 2

you wrote: >>I there fore challenge you to an R-390(*) toss off. >>What say you??????? > >Ok, if I can throw the 51S-1.....not much of a receiver anyway. Stand aside all ye lesser creatures!

I am gonna stand downrange and CATCH that 51S-1!(I always wanted *two* of them, heheh.)Roy

From rstetrault@attbi.com Wed Jan 2 03:48:03 2002
Subject: [R-390] great site for SWL

WOW!! I burned my eyes out! I must have entered the wrong hard-core URL!!

Date: Wed, 2 Jan 2002 01:04:46 -0500
Subject: [R-390] Kilocycle Dial Tightness (after cleanup)

I was just wondering: After removing the front pane of a (R-390 non A) and "de gumming" gears, rollers, bearings, planetary, PTO coupler I assembled and lubed with 50/50 Marvel and PTFE synthetic (The marvel was a suggestion posted here). I took my time and cleaned and polished everything on the RF deck also Results: I can now can use one finger to tune Kilocycle's I also feel the counter rolling now. Is this Spec or to loose ? , Joe

From nryan@intrex.net Wed Jan 2 06:25:12 2002
Subject: [R-390] Kilocycle Dial Tightness (after cleanup)

Hi Joe, Sounds like you've done good. If the dial stays where you leave it, everything is A-OK. 73... Norman

From eengineer@erols.com Wed Jan 2 23:31:12 2002
Subject: [R-390] EMAIL back up

Stupid me did something BAD to my computer today, losing about 5 days worth of email. I am back up after re-imaging my hard drive, but if anyone sent me email, rest assured it didn't get read. Send it to me again. Thank goodness for CD writers and image backups. Just figured out the Qth list address has also changed. Hope this one works. Cheers, Jeff

From courir26@yahoo.com Wed Jan 2 11:26:55 2002
Subject: [R-390] Kilocycle Dial Tightness (after cleanup)

Joe, I don't think it can be too loose. Make sure that the zero set disk/push pin connection is also well lubed else the kcs knob will turn when disengaging the clutch. Tom

From twleiper@juno.com Wed Jan 2 14:29:36 2002
Subject: [R-390] Kilocycle Dial Tightness (after cleanup)

wrote: [edited] > I can now can use one finger to tune Kilocycle's I also feel the > counter rolling now. Is this Spec or to loose ?

Seems a bit tight to me. You should be able to just sit back with your eyes closed, and it will spin itself to any frquency you think about (within that band of course). Only Uri Geller has shown the ability to rotate the megacycle control... Tom

From twleiper@juno.com Wed Jan 2 15:04:54 2002
Subject: [R-390] Test Message from Outlook

writes: > Just checking something...

I got something for ya... Happy New Year!! Tom

From Llgpt@aol.com Wed Jan 2 16:13:55 2002
Message-ID: <15f.67eca65.29648bc3@aol.com>

writes: << I can now can use one finger to tune Kilocycle's I also feel the counter rolling now.

Is this Spec or to loose ? , Joe >> If done properly, they can all tune like this. It's only too loose if you don't like it. Les Locklear Gulfport, MS.

From cbscott@ingr.com Wed Jan 2 16:18:56 2002
Subject: [R-390] Kilocycle Dial Tightness (after cleanup)

Dunno. Which finger are you using? Barry - N4BUQ

From goode@tribeam.com Wed Jan 2 16:42:22 2002
Subject: [R-390] AGC operation question

Happy New Year Everyone, This Christmas vacation was a good one for my R-390A and me. I finally got the rig back together after recapping, cleaning and fixing a PTO problem. It is working very well now. I have a question about the normal operation of the AGC switch. In this radio, if I start at the slow AGC position and switch to the medium position, the radio is muted for about two seconds and then slowly comes back to the proper level. Switching between the slow and fast positions does not exhibit this muting. Is the muting normal in switching between slow and medium? Best regards, Steve Goode, K9NG

From cbscott@ingr.com Wed Jan 2 16:52:30 2002
Subject: [R-390] AGC operation question

If I'm not mistaken, this is proper operation and I think it's mentioned in the manual. Mine does the same thing. 73, Barry - N4BUQ

From kd9kc@elp.rr.com Wed Jan 2 16:59:22 2002
Subject: [R-390] AGC operation question

> I have a question about the normal operation of the AGC switch. > In this radio, if I start at the slow AGC position and switch to the Mine does this too. Never gave it any thought, but since it don't arc or smoke when it does it, I guess it is OK. Mike.

From ba.williams@charter.net Wed Jan 2 17:09:18 2002
Subject: [R-390] K9AY Loop - any experience

> > Has anyone on the list had experience with the K9AY loop? It sounds very > good. > If so, did you build it or buy it? > > Happy New Year to all. >

I've read a few accounts where it performed well. I belonged to a VLF/LF list where members built such antennas. I have the Sep 1997 QST article written by K9AY in PDF format if you want it. It is a 700k file. Barry

From Llgpt@aol.com Wed Jan 2 17:25:21 2002
Subject: [R-390] AGC operation question

writes:. I have a question about the normal operation of the AGC switch. In this radio, if I start at the slow AGC position and switch to the medium position, the radio is muted for about two seconds and

then slowly comes back to the proper level. Switching between the slow and fast positions does not exhibit this muting. Is the muting normal in switching between slow and medium? Best regards, Steve Goode, K9NG

Perfectly normal, often referred to as the moment of silence. Les Locklear

From ba.williams@charter.net Wed Jan 2 17:50:55 2002
Subject: [R-390] Kilocycle Dial Tightness (after cleanup)

> If done properly, they can all tune like this. It's only too loose if you don't like it. Les Locklear > Gulfport, MS.

If it gets too loose the radio is ruined beyond all repair. Nothing you can do except send it to me. (g) Barry

From Joe" <joe.amp@verizon.net Wed Jan 2 19:21:31 2002
Subject: [R-390] Kilocycle Dial Tightness (after cleanup)

Same here Al. I finished one in midnight blue, gold front panel plated hardware, and white glow in the dark UV activated lettering. Its taken months but sure is sweet. Even painted 2 marine speakers the match amazing Taking my time to do the rest and making them nice, its amazing how much grease build up they have. Need to clean them up without blowing up the house with the solvents, brake parts cleaner, spray gun. Im in Long Island. To cold to do outside.....better wait till spring -Joe

From JamesMiller20@worldnet.att.net Wed Jan 2 20:20:55 2002
Subject: [R-390] Need Meters

Sometime last year I purchased a NOS carrier level meter from someone on the list. It was an original replacement meter with glow in the dark lettering, in its original foil wrapping and box. If you or someone else is out there, I am again in need of another carrier level, and matching line level meter as well. Glow in the dark is fine, in fact it is preferred,... I really don't want the cheap replacements that read low. Thanks Jim N4BE

From mikea@mikea.ath.cx Wed Jan 2 20:52:18 2002
Subject: [R-390] Need Meters

wrote: > Sometime last year I purchased a NOS carrier level meter from someone on

I saw a pair on eBay last night. Don't remember whether they were 390 or 390-A. IIRC, they were pulls. Mike Andrews

From beral@videotron.ca Thu Jan 3 01:35:32 2002
Subject: [R-390] Re: 12BW4 substitute for 26Z5

Tom, Thanks for coming back with your suggestion. I have a down load of an article by Dexter Francis, N0YJL, describing the 12BW4 change in detail. This is most likely the wa I will go. So thanks again. Al

From ba.williams@charter.net Thu Jan 3 01:38:20 2002
Subject: [R-390] Kilocycle Dial Tightness (after cleanup)

>> BTW I was sold this radio with the understanding that it was in very >> good condition. Did not get a chance to try it when I picked it up. >> Al

Sorry to hear about your 'deal' Al. Thanks for letting us know. I guess I've been very lucky with my radios so far. Barry

From nextgen@nextcentury.com.au Wed Jan 2 21:59:20 2002
Subject: [R-390] Help

Hello Folks, I am in need of a complete rf chassis with xtals and counter for the R-390A. If any of y'all has one please hollar, I REALLY need one, only one. Regards, Lee.

From Joe" <joe.amp@verizon.net Thu Jan 3 03:39:13 2002
Subject: [R-390] Fw: looking for David Medley

>Hi! > Anyone know Dave's new mail box? I have sent the message to him, but >bounced, and I found his web site is unusuable > 73! Xu >

From JamesMiller20@worldnet.att.net Thu Jan 3 03:43:08 2002
Subject: [R-390] Fw: looking for David Medley

http://www.davemed.info/

From ezeran@concentric.net Thu Jan 3 04:07:39 2002
Subject: [R-390] Facts of life 2

> >>I there fore challenge you to an R-390(*) toss off. > >>What say you??????? > > > >Ok, if I can throw the 51S-1.....not much of a receiver anyway.

Yo! I have a 51S1 which is an ok gen'l coverage RX. Have never been able to booger out why the high price cult following of the 51S1 though it is OK I guess. Any answers? I have a grunch of Hammarlund, Hallidrifter, R390/R390A, National, HRO, and mil stuff like RAK/RAL, RBL, TCS and all that work fine. Willing to take some flack but.. I'm happy to say that an SB-301 with all the filters is also a balls up RX, about as good as the 51S1 RF wise, though the hardware is weak. As the old Chief said, "Stay low, move fast, check six"....I be duckin'!

From billsmith@ispwest.com Thu Jan 3 04:09:18 2002
Subject: [R-390] Facts of life 2

Ed, does that mean if you really want to listen to an old-time radio show, that you fire up the SB-301 first? 'Course think that is a ham-band only receiver. Which one do you find you use all the time? Or are you organized well enough (translated: shack is cleaned up enough so you can get to the sets) so that each receiver is reserved for a favorite frequency? (GB Grin)... 73 de Bill, AB6MT billsmith@ispwest.com

From redmenaced@yahoo.com Thu Jan 3 04:26:06 2002
Subject: [R-390] Help

ME TOO!!!

From JamesMiller20@worldnet.att.net Thu Jan 3 04:53:31 2002
Subject: [R-390] Help

America Trans Coil http://www.atc-us.com/ATCSHOP/ Has RF chassis for $35 but without coils. Fair Radio Sales http://www.fairradio.com/hfrece.htm Has 390a RF chassis and other modules for sale. Not sure of their operational condition. Chances are they will not be plug and play, but they may be a good start. Rick Mish may also have replacement modules. http://www.dxing.com/r390/mish.htm Also check http://www.r390a.com

From w5or@home.com Thu Jan 3 07:06:50 2002
Subject: [R-390] Turn off HTML

Here is a comprehensive list of how to set various email programs for plain text. It does not yet include AOL 7.0 defanging. http://www.nethawk.com/1113/swap/nohtml.htm Don Reaves W5OR R-390 list manager

From genet@flash.net Thu Jan 3 07:34:03 2002
Subject: Fwd: [R-390] Fw: looking for David Medley
>
> >Hi! > > Anyone know Dave's new mail box? I have sent the message to him, but > >bounced, and I found his web site is unusuable New web page address is http://www.davemed.info/ Requested info is on that web page. the page works, just checked it. Gene AJ5S

From ea2ig@tiscali.es Thu Jan 3 09:11:01 2002
Subject: [R-390] Fw: R-390 Manuals Help

Happy New Year to al the members I am new on the list, excuse me for any trouble that I can mede. I am the proud owner of a R-390 (non A model) made by Collins
Have the following original manuals.
TM 11-856
TM 11-5820-357-20
TM 11-5820-357-35

Now I am loocking for the following manuals (Originals or in electronic format ,PDF)
TM 11 5820-357-10
TM 11 5820-357-35P

Did any of yours give me some info or help about? Thanks in advance and Best Regards Pedro EA2IG

From nextgen@nextcentury.com.au Thu Jan 3 10:48:53 2002
Subject: [R-390] Help

Hello Walter The units Fair Radio have are not complete, for one they do not have a counter. Any alternatives? Someone with a spare? 73's Lee.

From JamesMiller20@worldnet.att.net Thu Jan 3 13:27:18 2002
Subject: [R-390] Fw: R-390 Manuals Help

Look at: http://www.r-390a.net/faq-refs.htm You can download some manuals there. The "Y2K" manual is excellent.

From goode@tribeam.com Thu Jan 3 14:44:40 2002
Subject: [R-390] AGC operation question

Thanks to all who replied to my question on the AGC operation. It is good to know that I do not have to look for a fix for another problem. Thanks, Steve Goode, K9NG

From craigmc@pacbell.net Thu Jan 3 14:49:42 2002
Subject: [R-390] Help

ATC has them, with counter but without RF transformers (and lists the crystal oven separately): http://www.atc-us.com/ATCSHOP/ Fair Radio has them with RF transformers but without counter (and lists the counter separately): http://www.fairradio.com/hfrece.htm Craig

From tbigelow@pop.state.vt.us Thu Jan 3 15:16:48 2002
Subject: [R-390] Facts of life 2

I agree with you about the 51S-1, Ed - great little general coverage receiver. Sure - it doesn't have as many knobs or switches as an R-390 or many other rigs, and it might not be able to hear a bee fart in Bolivia, but for what it is, it's great. Considering the timeframe it was designed in and the size, I'd bet it was top of the heap back then for an over-the-counter commercial rig. This was before the R-390 became available to the guy on the street. It's small, simple to operate, and has more than adequate selectivity and sensitivity. I like the simplicity of its layout and the limited number of controls. Certainly not a knob-twiddler's dream, but it takes care of business and you can tote it around pretty easily, too.

Why the nosebleed prices? The snob-appeal of the name and emblem, of course. And it matches the S-Line. Look at what some are willing to pay to get a late model 75S-3C! Some of those prices make the 51S-1 look like a steal. When you consider what is available today for new gear and look at the prices the KWM2-A brings, a kilobuck and a half probably isn't so far out of line. Still, when you can get a decent R-390* and other great rigs for $300-$500, it does seem a bit ridiculous. I'd put it in the same price range as the average R-390*, but demand over supply really seems to drive them higher. That and the fact that they were designed and built by the same folks who brought us the R-390.

Of course, it all depends where one shops for such items as well. I've seen a couple at hamfest for under $500. I've seen them online for 3 times that amount. Convenience and bragging rights can be pretty

pricey. ;) Ed Zeranski wrote:

From twleiper@juno.com Thu Jan 3 15:51:20 2002
Subject: [R-390] Help

writes: > Hello Walter > The units Fair Radio have are not complete, for one they do not have > a counter. Any alternatives? Someone with a spare?

I wonder if the counter is the same as the R-392 counter... I have an R-392 RF deck with everything. Tom

From pha@pdq.com Thu Jan 3 17:02:39 2002
Subject: [R-390] Help
> America Trans Coil http://www.atc-us.com/ATCSHOP/ Has RF chassis for > $35 but without coils. > Fair Radio Sales http://www.fairradio.com/hfrece.htm Has 390a RF > chassis and other modules for sale. > Not sure of their operational condition. Chances are they will not be > plug and play, but they may be a good start.

I'd look to Fair Radio for a RF chassis - they are more complete and a better deal for the $$$.

I bought a pair of them a few years ago, and the two that I got were out of a set of ex-military inventory aside from the blue stripers. That is, they weren't stored outside, so they looked nicer. However, one of them that I got had a slipping gear and a broken band switch wafer, as well as some undocumented military modifications, so it really would have been better just for parts. It looked so nice I fixed it anyway. Still not 100% working, though.

Anyway, if going to Fair Radio for an RF deck there, you might want to ask for a pull from one of the blue stripers - it would be in worse cosmetic condition, but stand a better chance of being a working (or more readibly repairable) RF deck. Paul

From richardlo@devax.admin.athabascau.ca Thu Jan 3 16:47:45 2002
Subject: [R-390] Facts of life 2

wrote: > I agree with you about the 51S-1, Ed - great little general coverage receiver. > Sure - it doesn't have as many knobs or switches as an R-390 or many other rigs,

But the 51S1 was always an expensive radio, it went for about twice the price of a 75S* and the S line was more expensive than any other amateur offering of the time. So... The 51S has kept its position, it was very pricey new and its very pricey old. That being said, price is obviously not related to performance - if that was all it took then a 75A3 would not cost more than a Drake R4 or (of course) an R-390. I like the 51S1 but I am a cheapskate and won't pay what they ask for them. --- Richard Loken

From cbscott@ingr.com Thu Jan 3 17:23:45 2002
Subject: [R-390] Help

I got an RF deck from Fair a couple of years ago. I specifically wanted a Motorola. The deck was a bit rough, but it appears to be complete and not modded. I've used it as a transformer donor. The counter did not come with it. If someone is interested, I don't really need it any longer. Barry - N4BUQ

From KK5VR@ARN.NET Fri Jan 4 17:55:17 2002
Subject: [R-390] Texas instrument calculator manuals

To all Is there a site that offers user manuals for the different TI calculators? Thanks GT

From mikea@mikea.ath.cx Thu Jan 3 17:48:12 2002
Subject: [R-390] Help

wrote: > > Fair Radio Sales http://www.fairradio.com/hfrece.htm Has 390a RF

I've bought three from Fair: one around the first of last year, and two more about August of last year. The first came with counter and tubes, but they apparently changed to not shipping tubes or counter before I got the next two. I think a phone call telling them exactly what you want would get pretty good results. -- Mike Andrews

From wy6k@yahoo.com Thu Jan 3 18:24:35 2002
Subject: [R-390] Facts of life 2

I'm pretty sure that the 51S1 was more expensive only because it was aimed at the government, who would pay the higher price. But a lot of them were made and there is now really no good reason for them to be more expensive than the other S line members. But the psychology among collectors is such that the price stays way up.

I have a very nice condition 51S1 that I paid $800 for. It's probably not really worth that much, much less some of the higher asking prices that we've seen over the last couple of years. I prefer the 51S1 over my R390A's for SSB listening. It's easier and faster to tune, sounds better, and the AGC works a lot better on SSB. But, I don't have a SSB converter for the R390A. If I did, I might revise my preference.
Michael

From cbscott@ingr.com Thu Jan 3 19:53:22 2002
Subject: [R-390] Tool holders

I've been looking at the picture of the back of another R390A and just realized something. At some point, it appears the design no longer included the metal "fins" that were bradded to the rear panel to hold the Bristol wrench and screwdriver. My '56 Motorola has them, but this newer one does not.

When was this done? Was it it along the time they put the extra fuse holders to accomodate the change to the 3-fuse layout? Just curious... Barry - N4BUQ

From multerj@bytehead.com Thu Jan 3 22:20:00 2002
Subject: [R-390] Tube Extenders

I am looking for 7 and 9 pin miniature tube extenders to make work easier on my R-390 IF deck. I remember a athread about these some time ago but can't fine it. Fair Radio does not have any at present.

From David_Wise@Phoenix.com Thu Jan 3 23:18:39 2002
Subject: [R-390] The other favorite signal generator

Some of you like the HP 8640B signal generator. Here's my story. But since some may not read to the end :-) I'll ask my question first. Does anybody have a manual newer than the one on logsa? Logsa's manual for the 8460B Option 001 has change notes covering S/Ns up to 15-something. They also have a manual for 8460B Option 004, which goes up to 16-something. I wonder maybe the two variants shared the same serial number stream, but in any case, my instrument is 17-something and I've already found discrepancies.
On to the report.

I looked for 606Bs on *that place* for a few weeks and never saw any. Eventually I cast my net wider and immediately found an 8640B, "as-is". Looked slightly rough. I got it for $215 + $25 shipping and insurance. Options 001 (variable frequency modulation oscillator) and 003 (reverse power protection). As advertised, it lit up, but it was not usable. The main tuning knob was spinning loose on the shaft, a button and a knob were missing, and another was a generic replacement. Every skirt was loose, an important thing because they all have numbers! PROBLEM 1: GUM

When I tightened the tuning setscrews (get spare .050 screws and wrenches), I found the real problem: the shaft was frozen. The oil had gone sticky. The guy had worked the knob until the setscrews scored a groove. Lucky he didn't break off the crank. I filed off the burrs and added a flat for each setscrew. I removed the oscillator, worked off the frozen-solid stack of turn-stop washers, and, ignoring the "Factory Repair Only" tag, put it in a vise and applied a spanner and almost my entire supply of elbow grease to the large locking ring. Just before the pain in my fingers would have made me desist (wear gloves!), it gave. I unscrewed it, and the oscillator fell apart in two halves.

One half carries a shaft which is threaded similarly to (obR390) our favorite PTO. It slides an aluminum slug that occupies the entire housing, with just a one-inch hole down the center. The other half is a gold-plated snout that pokes into this hole.

I cleaned out the bearing with brake cleaner. The shaft and the plastic 8-turn stop too. I washed the stop washers in soap and water afterward so the cleaner wouldn't melt them or something.

The guy had damaged the stop, but it wasn't fatal: one tab had rounded-off corners. There was enough material left that I could trim it back square with an X-Acto knife. This increased the stop range, but it's adjustable.

Got it back together, lubricated the shaft with one small drop of Mobil 1 on a toothpick. I did not lubricate the stop at all. Ahh, smooth tuning.

But when I went from the 8MHz band to 16, the display went from 8 to 2. Someone recently posted this same problem. Here's the diagnosis:

PROBLEM 2: BANDSWITCH

The bandswitch proper was ok; that's a bunch of cams inside a casting that operate lever switches in the Divider/Filter module. The 8640B's oscillator runs in the VHF, from 256MHz to 512MHz. This gets digitally divided down and filtered back to a sine wave. The cam-operated switches set the divider ratio for the output but the counter hears the oscillator directly, and a different switch tells it what to divide it

by before displaying. This is a planar rotary PCB switch, where the stator contacts are pads on a circuit board and the moving contacts are tiny bifurcated fingers projecting from a plastic disk. There are four in the 8640B, three on the Bandswitch/Deviation shafts and one on the attenuator. The fingers came off. There are also stress cracks all around the shaft holes. Most gears are cracked as if they shrank. One gear was bad enough to stop the show. The Bandswitch/Deviation gear assembly can be removed without opening up the bandswitch casting. That shaft is driven off the front shaft via an oldham coupler (more R-390). After removing the problem gear (in a differential -- still more R-390!), I epoxied a washer to the back after forcing out the brass insert, ground down the insert slightly, and epoxied it back in. JB-Weld is thick enough that you can just plunk the fingers into it and they won't drift around while it sets. The main trick is getting them located right, since JB-Weld is opaque. I used The Force. Got it together next day and it worked. I played with other controls, and noticed that if I turned on FM the frequency shifted.

PROBLEM 3: FM

Using a manual I tracked this down to the FM deviation amplifier, which drives a varactor in the oscillator. It was pinned. It turned out to be an open resistor with no evidence of violence. Almost all the resistors around here are 1%, but I cobbled up a replacement out of the 1% junk box.

PROBLEM 4: KNOBS

On the existing knobs, I just glued the skirts back on with contact cement. The FM Deviation knob was missing. Thank goodness the skirt was still dangling there. The knobs at Radio Shack are too small or too large.

But someone had previously lost the Band knob and replaced it with one just right for Deviation. Since it was already loose from its HP skirt, I moved it to Deviation and used a 1-inch RS knob for Band. Since Deviation has a concentric vernier, I had to drill the ex-Band knob. I also had to cut down both foreign knobs with my Dremel to make room for the skirts. Works great, but they don't match their neighbors. OTOH I don't see how anyone could have turned the originals. I removed two of the four (!) detent leaf springs and they're still kind of tight.

That's it for now. I know there's other stuff lurking, including some things that I threw off by disassembling the oscillator.

The 8640B is advertised to cover 500kHz to 512MHz, but the spec includes enough overlap to do at least 450kHz to 550MHz. I've seen posts where the unit went down to 440-something and faded out. Mine keeps going right to the absolute mechanical limit of the oscillator, with the 8-turn stop removed. At that point it's around 427. With the stop, it does 445. Just enough for my R-390A... I'm a happy camper, Dave Wise

From David_Wise@Phoenix.com Thu Jan 3 23:29:42 2002
Subject: [R-390] Kilocycle Dial Tightness (after cleanup)

wrote: > I can now can use one finger to tune Kilocycle's I also > feel the counter > rolling now. > Is this Spec or to loose ?

I'm happy for you and trying not to be too envious. Mine's pretty smooth, but it takes a stiff finger to do that.

You might want to check for backlash. Put a dial indicator on the leftmost rack. Tune one way. How

far do you have to go the other way before the rack moves again? I went to some lengths to minimize this and I get around 15kHz. 73, Dave Wise

From David_Wise@Phoenix.com Thu Jan 3 23:56:58 2002
Subject: [R-390] AGC operation question

snip > of the AGC switch. In this radio, if I start at the slow AGC > position and > switch to the medium position, the radio is muted for about > two seconds and

You've already been told this is normal. Here's why it happens:

In SLOW, C551 is between plate and grid of the AGC time constant tube and gets a big charge. In MED, the end of C551 that was on the plate (the positive end) is moved to ground. The negative end stays on the grid, which is also the AGC line. This pushes it very negative (20-200V, depending on signal strength), effectively muting the receiver until it discharges. C551 is 2uF so the time constant is about 0.8 seconds. If they had used a switch with one more pole, they could have reversed the charge, which instead of muting would give you a short burst of loud sound, like you get when switching from MED to SLOW. Either they didn't think it was worth it or they didn't think it through. It's not mentioned in the R-390 Final Engineering Report or the Cost Reduction Report.

Or, they could have used two 2uF caps, one for SLOW, one for MED. This was out of the question for cost and space reasons, but hmm, I wonder if we could do it. The second cap would only have to be rated around 25V. Check the schematics... nope. Unless you change S107 from one pole, three position to two pole, three position. Then it would be trivial. Who's going to be the first on the block to have an R-390A that doesn't observe the "Moment of silence"?
* * *
I thought so. They were right, weren't they? :-) Dave Wise

From R390rcvr@aol.com Fri Jan 4 00:12:33 2002
Subject: [R-390] Tool holders

Dear Barry and list: According to the info I have culled from various kind list members, while working on a R-390A spotters guide, the last contract to have tool holders was 23137-PC-60, the 1960 EAC contract. The one known exception to this is the 5 Fowler units produced in 1986. They apparently were based on an earlier standard, and had tool holders. I would be more than happy to hear from anyone who has more info on this point. Randy Stout

From Joe" <joe.amp@verizon.net Fri Jan 4 00:34:13 2002
Subject: [R-390] Kilocycle Dial Tightness (after cleanup)

I have less then I can steady the gauge on the left rack, (looks like zero) The tuning knob has about 1/3 of a degree play, before everything moves. I cant tell, -Joe

From mikea@mikea.ath.cx Fri Jan 4 00:49:51 2002
Subject: [R-390] The other favorite signal generator

wrote:> Some of you like the HP 8640B signal > generator. Here's my story. But since > some may not read to the end :-) I'll > ask my question first. Does anybody > have a manual newer than the > one on logsa?

I found a manual on bama t'other day, and have printed all but the last few pages. My Acroread barfs on the big pages full of graphics, so I need to try ghostscript on them.

I _HEART_ my 8640B. It has options 1, 2, and 3, and went out of calibration New Year's Day. *sigh*. It is S/N 2717A29773, which I expect makes it late in the stream. -- Mike Andrews

From bill@iaxs.net Fri Jan 4 01:05:08 2002
Subject: [R-390] AGC operation question

Actually, the 390 and 390A use the same single pole switch circuit with its "moment of silence". So it wasn't done to the A version as a cost reduction.

Remember when Value Engineers appeared in the sixties? They cheapened the products so the bottom line got bigger.

Remember the Victorian Engineers and their massive engines of brass and steel? Can you imagine a Value Engineer telling a Victorian that polishing the brass just wasted money 'cos the engine would still produce the same power if tarnished? Those heartless bottom line folks sure have proliferated ...
Regards, Bill Hawkins

From mikea@mikea.ath.cx Fri Jan 4 01:21:39 2002
Subject: [R-390] AGC operation question

wrote: > Actually, the 390 and 390A use the same single pole switch > circuit with its "moment of silence". So it wasn't done to > the A version as a cost reduction.

Well, to be honest, the officers of a corporation have a legal duty to maximize profits by any lawful means. Because of this and some suits of officers who didn't do their legal duty, the news got around that TheLawyers would pull ypu down and eat you if you screwed up. -- Mike Andrews

From R390rcvr@aol.com Fri Jan 4 01:38:02 2002
Subject: [R-390] Eureka!

I think it finally worked. I changed the global settings for AOL 7.0, rather than the single time settings, and it came through well. Wow. Thanks a lot Steve!!

From organic@cyberlane.net Fri Jan 4 02:22:39 2002
Subject: [R-390] R-392 Newcomer to the Club

Greetings to all, just joined the R-390 mail forum. Not sure if there is one for the 392. I am anxiously awaiting my R-392 (wife calls it the Green Monster after seeing a pic of one. Read the TM twice and found a great power supply (28V) to feed the monster on eBay. Looking for help on finding a supplier for the power IN connector. The TM only mentions a Government Issue Power Cable. with a 14s insert in the connector. Thanks

From mikea@mikea.ath.cx Fri Jan 4 02:44:10 2002
Subject: [R-390] R-392 Newcomer to the Club

wrote: > Greetings to all, > just joined the R-390 mail forum. Not sure if there is one for the 392. > I am anxiously awaiting my R-392 (wife calls it the Green Monster > after seeing a pic of one. Read the TM twice and found a great > power supply (28V) to feed the monster on eBay. Looking for help > on finding a supplier for the power IN connector. The TM only mentions > a Government Issue Power Cable. with a 14s insert in the connector.

Failing some other 392-herder telling you what, you might take careful measurements, note number of pins, size, location, and spacing of pins, thread diameter on the socket (well, it's fixed; the plug is on the cord), and shell diameter.

Then hit www.alliedelec.com and ru,,age through the 6 or so pages of MS connectors. Shouldn't take more than a few weeks, between bouts of recovery in the most convenient place to get over mental breakdowns. The 14s may be a _big_ help. -- Mike Andrews

From ranickel@mwci.net Fri Jan 4 02:35:45 2002
Subject: [R-390] The other favorite signal generator

Speaking of the H-P 8640, I have one for sale. It's the mil version, 8640 option 323, covering 500 khz to 512 mhz, but as Dave Wise noted, the actual coverage is a bit beyond that range. It has a nice calibrated attenuator and calibrated AM and FM modulation. I removed the transit case long ago, so it sits nicely on a benchtop with a black front panel that is slightly larger than the commercial HP version. $200 plus shipping. Great for aligning R-390s or any other HF or VHF receiver, very stable and typical HP quality. Thanks and 73, Bob W9RAN

From Llgpt@aol.com Fri Jan 4 02:53:34 2002
Subject: [R-390] R-392 Newcomer to the Club

writes: << Greetings to all, just joined the R-390 mail forum. Not sure if there is one for the 392. I am anxiously awaiting my R-392 (wife calls it the Green Monster after seeing a pic of one. Read the TM twice and found a great power supply (28V) to feed the monster on eBay. Looking for help on finding a supplier for the power IN connector. The TM only mentions a Government Issue Power Cable. with a 14s insert in the connector. >> Fair Radio Sales usually has them. Les

From ezeran@concentric.net Fri Jan 4 04:00:08 2002
Subject: [R-390] Facts of life 2

>I'm pretty sure that the 51S1 was more expensive only >because it was aimed at the government, who would pay >the higher price

Last year I hauled home, saved from the dump, QST from 1934 'til the '70s. There are ads for the 51S1 that seem to be aimed at commercial HF users. I think the RX was for that market but got jumped on by the military in the Vietnam era when the Military was going to SSB.

I prefer the 51S1 over my R390A's for SSB listening. >It's easier and faster to tune, sounds better, and the >AGC works a lot better on SSB. But, I don't have a >SSB converter for the R390A. If I did, I might revise >my preference. > >Michael >--- Richard Loken The 51S1 makes a neat chairside listening radio, which is how I use mine.

From beral@videotron.ca Fri Jan 4 18:48:05 2002
Subject: [R-390] [Fwd: Confirm Stock]

Joe, The attached is answer from Radio Electric Supply to my request for 26Z5 availability. You are right. There is most likely little if any stock for the 26Z5 anywhere. The only options is solid state diodes or a sub for the 26z5. Al

Radio Electric Supply wrote: Sorry, no stock available at his time on 26Z5 tubes.

From ea2ig@tiscali.es Fri Jan 4 19:13:02 2002
Subject: [R-390] RE R-390 Manual Help

Tanks to all that has given me information about the Manual for the R-390 tha I have requested. Secially to John W4NET, which has sent me the TM 11-5820-357-10 in a PDF format file . Best regardas Pedro EA2IG

From ai2q@adelphia.net Fri Jan 4 21:16:30 2002
Subject: [R-390] Off topic?

Maybe it's off topic, but then again, given the fact that this list is populated by RF communicators, and communications will prove useful as events unfold, where is the discussion about what we can do to help when terrorists strike again (and most experts agree that they will). In particular, doesn't it behoove us to consider how weapons of mass destruction such as crude nuclear bombs that can cause EMP (to destroy radios) impacts owners of EMP-resistant tube-type equipment? AI2Q, Alex in Kennebunk, Maine

From mikea@mikea.ath.cx Fri Jan 4 21:38:59 2002
Subject: [R-390] Off topic?

wrote: > > Maybe it's off topic, but then again, given the fact that this list is > populated by RF communicators, and communications will prove useful as I would be much happier if this question never came to the test. I suspect that we would:
a) Be very popular; or
b) Find our tube rigs suddenly in use by whatever gov't happened to survive; or (a remote chance, I hope)
c) Find that someone else took the rig(s) by force.
A worrisome corollary question is where to get replacement tubes under these circumstances. -- Mike Andrews

From rbethman@home.com Fri Jan 4 21:43:48 2002

Subject: [R-390] Off topic?

Yep, IMHO it is off topic. Mind you a crude nuke would be huge, wouldn't make a big pop, and would do more to crap up the area. If you read the Manhattan Project history, Little Boy was considered crude. It was made from refined U-235. Stealing used fuel rods is pretty well out of the question. They give off something like 25,000 Rads. 450 Rads is the lethal dose for 50% of the population, 600 being the lethal dose for 100% of the population. They'd never get six feet with it. Bob N0DGN

From cbscott@ingr.com Fri Jan 4 21:50:55 2002
Subject: [R-390] Off topic?

I wonder if your sand-state equipment were to be destroyed by such an EMP event, would your tube-based gear be the first thing on your mind? Barry - N4BUQ

From Barry Hauser <barry@hausernet.com> Sat Jan 5 00:03:49 2002
Subject: [R-390] Off topic?

wrote: > I wonder if your sand-state equipment were to be destroyed by such an EMP event, would your tube-based gear be the first thing on your mind?

Maybe not the first thing, but possibly the 2nd or 3rd as we tend to go for the TV or some kind of radio when there's a big noise -- or no noise. The sandstate stuff would be NG, and most likely local broadcasters will be out of commission. Forget about the phone and email. So, a short wave (AKA HF) tube radio might be the only thing that will work -- to find out what happened and what to do -- from over the horizon. But remember, kids! Duck 'n cover. That'll do it. Not to be confused with .... runnin' 'n duckin' Barry

From twleiper@juno.com Sat Jan 5 00:54:01 2002
Subject: [R-390] Off topic?

writes: > Anotherbarry wrote: > > I wonder if your sand-state equipment were to be destroyed by such > an EMP > event, would your tube-based gear be the first thing on your mind? > > Maybe not the first thing, but possibly the 2nd or 3rd as we tend to > go for > the TV or some kind of radio when there's a big noise -- or no > noise.

Actually, with all the major metropolitan areas reduced to glass or iron, most of the RF emitters would be gone. Just think about the DX possibilities !!! I can't wait...

From kd9kc@elp.rr.com Sat Jan 5 01:36:24 2002
Subject: [R-390] [Fwd: Confirm Stock]

I am the tube bank custodian for NM Army MARS. We have dozens of 26Z5s in the bank. I cannot sell them, or give them away. BUT if you are a member of ARMY MARS, perhaps you can get your SMD to contact our SMD and do a transfer. It is a slim chance, but it is something .... Mike.

From mikea@mikea.ath.cx Sat Jan 5 01:46:20 2002

Subject: [R-390] [Fwd: Confirm Stock]

wrote: > I am the tube bank custodian for NM Army MARS. We have dozens > of 26Z5s in the bank. I cannot sell them, or give them away. BUT > if you are a member of ARMY MARS, perhaps you can get your SMD > to contact our SMD and do a transfer. It is a slim chance, but it > is something ....

Does it have to be _Army_ MARS? Can you xfer to Navy MARS? Mike Andrews

From wb6orz@pacbell.net Sat Jan 5 04:20:51 2002
Subject: [R-390] Anybody know LS-474-U speaker please?

Found one here. Nice military, gray colored enclosed box. Tag: "Mfg. for Defense Electronic Suppy Center by contractor Tabet Mfg. Company, Norfolk, VA." Specs (Impedance)? Cord is cut, haven't even had a chance to open the enclosure. What sets was this used with? Vintage? Thanks! (((((73))))) Les

From w7itc@hotmail.com Sat Jan 5 04:48:39 2002
Subject: [R-390] great site for SWL

RE: stir-fried eyeballs, I'll bet you forgot to put the dash between the hard and the core. The Antennas seen at hardcore are resonate at a different frequency8^) I put the full link address all you should have had to do is click on the address. Ken

From billsmith@ispwest.com Sat Jan 5 04:56:55 2002
Subject: [R-390] Anybody know LS-474-U speaker please?

Hi, Les, Have a couple Type 12CA 12" speakers in enclosures here. Think they are 600 ohm (have a transformer inside). Unfortunately, think the cones were built to be explosion resistant and as a consequence, frequency response is "somewhat limited".

Built in 1944. Enclosures are wall mount and feature a volume control in the lower right corner. Will likely bring them up to Hamilton, possibly replace the speakers with Jensen types, even though the thought of that makes my insides twitch a little. 73 de Bill, AB6MT billsmith@ispwest.com

From w7itc@hotmail.com Sat Jan 5 05:14:13 2002
Subject: [R-390] K9AY Loop - any experience

There are several Hams in Cheyenne area who put this antenna together. As I recall I worked ok, not much better then other designs a lot easier to build. Keep in mind we look at the transmitting properties of an antenna as well as the receive. I remember the brethren saying a delta loop is a delta loop.... For receive it's hard to beat a receiving loop for low QRN.

From rstetrault@attbi.com Sat Jan 5 05:38:09 2002
Subject: [R-390] great site for SWL

I was joking. Last winter my wife was looking for some ski clothing outfit that went by the name of Hard Corps. We DID make the mistake then and trulygot an eyeful...

From butrosg@bellatlantic.net Sat Jan 5 05:45:41 2002
Subject: [R-390] Tube Extenders

I sympathize.....I made some myself. There are probably better ways, but this is what I did.... You need two 7 pin and two 9 pin tube sockets, and a couple of trashable tubes.

1. Remove the attachment skirts from all of the the sockets, and clip off and completely remove the pin connectors from one each of them.

2. Carefully break the vacuum of the tubes by clipping off the evacuation tip, then with a pair of dikes break off all of the envelope down to the button base (this is easier to do, and less dangerous than it sounds....).

3. Clip off the connections to the internal electrodes, leaving the base with the pins and their internal extensions.

4. Cut 7 (or 9) 3 inch lengths of stiff bare copper hookup wire.

5. Solder these to the pins of the uneviscerated sockets, then bend them all down so that they are parallel.

6. Push the free ends of the wires through the open pin holes in the other socket. - doesn't matter which way round the socket is, since it just acts as a spacer and support. Let them protude through the other side by about 1/2 an inch.

7. Trim the wires to equal length, and carefully solder them to the internal pin extensions on the tube base (the pins are usually iron, so they'll solder easily)...

8. Apply clear Duco cement or something similar to the spacer socket to hold everything firmly in place. You end up with an extension with a tube socket at the top, and a genuine tube base at the bottom... plugs in easily, and you can clip leads to the bare wires.. Good luck...!

From VARailfan@R390A.com Sat Jan 5 13:50:45 2002
Subject: [R-390] Rear panel "Fins"

I see that change beginning pretty much with the 1960 EAC builds. The addition of the 2 B+ fuses are mentioned at the very bottom of the "Government mods" document on the www site: http://www.r390a.com/html/g_mnt_modifications.html Chuck Rippel, WA4HHG

From VARailfan@R390A.com Sat Jan 5 14:24:11 2002
Subject: [R-390] Rear Panel "fins"

I see that change beginning pretty much with the 1960 EAC builds. The addition of the 2 B+ fuses are mentioned at the very bottom of the "Government mods" document on the www site:

http://www.r390a.com/html/g_mnt_modifications.html

From maritimus49@yahoo.com Sat Jan 5 15:19:39 2002
Subject: [R-390] SSB for R-388

Hello Evryone - I have looking at the old Capt. Paul Lee article on converting the BFO of the R-390A to a product detector. Does anyone know of a similar article or information about doing the same thing to the R-388? Thank you. Regards, Bruce

From R390rcvr@aol.com Sat Jan 5 15:59:47 2002
Subject: [R-390] Fuses and tool holders

My information states that the switch to 3 fuse holders occurred with #2683 in the 56 Motorola contract. The tool holders were present at least into the 60 EAC contract, since I have specs from #1 unit in that contract, which was not messed with, and it had the tool holders, while the Capehart contract that followed did not. It is possible that the change to no tool holders occurred later during the 60 EAC run, but I don't have any late rigs from that run to confirm that fact.

It seems to me that most changes occurred between contract runs, but obviously not all, since the 3 fuse change was made mid contract. Always happy to get any additional info people might have on this subject. Thanks Randy Stout

From courir26@yahoo.com Sat Jan 5 16:28:46 2002
Subject: [R-390] Rear Panel "fins"

It is interesting that the Fowler radios used the "old" drawing set, i.e. did not incorporate the EAC improvements.

From courir26@yahoo.com Sat Jan 5 16:32:16 2002
Subject: [R-390] Fuses and tool holders

Gentlemen? The drawing for the back panel has a revision date indicating deletion of tools. I guess they figured the depots could supply their own tools! I got a set from Wally's Wacky Tooltime World for my Collins. They will remain on the back panel until my son discovers them and uses them on his bike just like GI's likely did!

From vibroplex@mindspring.com Sat Jan 5 17:23:57 2002
Subject: [R-390] 26Z5 tubes

Dear All, A friend of mine (Mike - WB0SND) has a vacuum tube business. I called him after I saw the postings about 26Z5s. He says he has a few in stock. A couple of thoughts:

* These aren't cheap tubes as they are very hard to find
* He's a little on the grumpy side but his merchandise is very high quality

Here's his web site: http://www.vacuumtubes.com/

I'm posting this for the guys who absolutely want the tube and don't know where to get one. Hopefully, someone will find something they need from him. Happy new year to everyone! Derek Cohn

From ba.williams@charter.net Sat Jan 5 19:11:37 2002
Subject: [R-390] Off topic?

> Yep, IMHO it is off topic. Mind you a crude nuke would be huge, wouldn't make a big pop, and would do more to crap up the area. If you read the Manhattan Project history, Little Boy was considered crude. Bob,

Did they change the 4-6-10 rule? Wasn't it 400 rads: 50% sick, 600 rads: 100% sick & 50% dead, and 1000 rads: 100% sick and 100% dead? Maybe it was the 2-6-10 rule. It's been a long time since I knew that stuff, did nomograms and crossing computations. Barry

From rbethman@home.com Sat Jan 5 21:01:54 2002
Subject: [R-390] Off topic?

Barry, These are right from the Radiological Health Handbook. It is also what I was taught in Nuclear Reactor Engineering and Health Physics. Bob - N0DGN

From Joe" <joe.amp@verizon.net Sat Jan 5 21:09:15 2002
Subject: [R-390] [Fwd: Confirm Stock]

Thanks everyone, I located one and it arrived today. Cheers , Joe

From kherron@pop.voyager.net Sat Jan 5 22:13:23 2002
Subject: [R-390] 26Z5 tubes

Hi Guys (and Gals!!) >A friend of mine (Mike - WB0SND) has a vacuum tube business. I called him >after I saw the postings about 26Z5s. He says he has a few in stock. > >* These aren't cheap tubes as they are very hard to find >* He's a little on the grumpy side but his merchandise is very high quality > >Here's his web site: > >http://www.vacuumtubes.com/

Mike's a good friend of mine, also. Now, I've never considered him grumpy. Determined, yes...grumpy...NAH!! He does indeed have good tube stock and it is very much more reasonably priced than several other sources. He also has a lot of tube tester info for the fellow who lucky enough to get that elusive TV-2 only to find it has NO info with it. He can even supply you with the calibrated 6L6 to calibrate your very own Hickok tester. Yessir, Mikey is GOOD people im W8ZV

From R390rcvr@aol.com Sun Jan 6 00:51:16 2002
Subject: [R-390] Attribution

I forgot to mention that much of my detailed info on when various changes were made in the R-390A series, has come from Tom Marcotte, N5OFF. He has generously shared his data. Other pieces have been gleaned from nice folks off the list who have sent in details about their rigs.

One of the things I hope the "spotters guide" will help with is buying a rig long distance. Most of the sellers don't now the subtleties of different versions, can't tell a Collins from a Capehart, and just go by the tag, if there is one. Its nice to be able to do some basic identification from photos. Even the simple things like # of fuses, dimple in the mechanical filter cover, etc., helps pin it down. Thanks to everyone who has contributed time and information. Randy Stout

From ba.williams@charter.net Sun Jan 6 01:52:08 2002
Subject: [R-390] 26Z5 tubes

I don't mean to be bad mouthing friends of people, but I just got an answer on his price for 26Z5s. Are you ready? $35 each. Not a set, but each. I was feeling a bit bad about finding 3 of them for $11 each a while back, but not anymore. He can keep his stock of 26Z5s as far as I'm concerned. Barry

From nryan@intrex.net Sun Jan 6 01:56:29 2002
Subject: [R-390] Spook Run Amok

Guys, Some of us are former spooks, so there likely is strong interest in spy craft on the R-390* list. Go to these links ASAP for a terrific article on Robert Hanssen, ex-FBI, who is about to begin serving a life sentence for betraying us. The article is long, so if you download and save the article intending to read it later, be sure to download "page two" as well. This SOB did damage on an incredible scale. Outrageous! 73... Norman

<http://www.washingtonpost.com/wp-dyn/articles/A59130-2002Jan3.html>
<http://www.washingtonpost.com/wp-dyn/articles/A975-2002Jan5.html>

From ba.williams@charter.net Sun Jan 6 02:13:33 2002
Subject: [R-390] Off topic?

Bob, It must have changed since my days dealing with it. Besides, I always thought some of the crossing data (troops crossing radioactive areas) was crap anyway. Things like leukemia were never discussed.
Barry

From mikobrien@att.net Sun Jan 6 02:15:59 2002
Subject: [R-390] calibration for simpson 260 6 series

Hi All, Does anyone have or know the calibration procedure for the simpson 260 6 series VOM. Thanks Mike mikobrien@att.net

From anchor@ec.rr.com Sun Jan 6 02:30:47 2002
Subject: [R-390] Re: [BoatAnchors] calibration for simpson 260 6 series

Hi Mike, I've got a manual for a 260, series 5, if that'll help. I can scan & send the cupla pgs that cover the calib. procedure after replacement of rectifiers, and the other svc stuff. 73, Al, W8UT

From Llgpt@aol.com Sun Jan 6 02:41:41 2002
Subject: [R-390] 26Z5 tubes

writes: << I don't mean to be bad mouthing friends of people, but I just got an answer on his price for 26Z5s. Are you ready? $35 each.

Pretty soon, you will all become witches and have to use solid state diodes.....<grin> Same with the 3TF7 Ballast Tube.....time to convert!!!! Les

From mikea@mikea.ath.cx Sun Jan 6 02:51:28 2002
Subject: [R-390] 26Z5 tubes

wrote: > I don't mean to be bad mouthing friends of people, but I just got an answer > on his price for 26Z5s. Are you ready? $35 each

Classic economics. A glut means low prices, scarcity means high prices, in most cases. This certainly holds true for most tubes, darn it! -- Mike Andrews

From howard@cconnect.net Sun Jan 6 02:52:41 2002
Subject: [R-390] Spook Run Amok

Shhhhhhhhhh, Norman, don't tell the other guys about us spooks. By the way, our old "organization" is still active here in NC. I accidentally discovered some evidence which seems to indicate that there are on-going missions right here in the tar heel state. I have posted this evidence on my webpage. You will have to scroll around some - it's a big picture. **The URL is: http://www.cconnect.net/stuff/** Howard ;-) ;-) ;-)

From pha@pdq.com Sun Jan 6 03:03:33 2002
Subject: [R-390] R-391 positioning head

Hi, I've got an R-391 multi-turn positioning head in my hand, and have a couple of questions.

After soaking it for awhile in kerosene and cleaning the mud wasps nest out of various parts of it, it seems to behave itself and be in reasonable condition.

However, the locking pin does not snug all the way up to the big tuning knob. Is it normal for some R-391's to do this?

Also, I've noticed that I can get it into a position where the main tuning knob is locked (this is with the unit out of the radio), and I can see that the pawls on one of the levers seem to be what is hanging it up. With a little careful jiggling and twidling, I can free it up, and then it appears to resume a reasonable behaviour. Is this, too, normal, and just an indication of how the mechanism works?

Thanks for any advice. I know this is a delicate part, and am being very careful not to force anything. Paul

From Barry Hauser <barry@hausernet.com> Sun Jan 6 03:14:02 2002
Subject: [R-390] 26Z5 tubes

I don't think you'll have to be concerned for long -- the $35 26Z5W's will probably soon sell out, along with $45 NOS 1L6's for the Zenith T/O's (wherever they are). Either somebody better take up glass blowing, or break out the silicon diodes, like Les says. Unless you can find some used 26Z5W's - with some tread left on 'em. I suppose they would only cost around $10-15? How about a 25Z6? 25Z5? Double or nothin'? Barry

From ba.williams@charter.net Sun Jan 6 03:09:53 2002
Subject: [R-390] 26Z5 tubes

> Pretty soon, you will all become witches and have to use solid state > diodes.....<grin> > > Same with the 3TF7 Ballast Tube.....time to convert!!!! > > Les

Yeah, I think you are right. I have one with the ballast and one without. The without came jumpered and with 12BA6s. I can't tell the difference. Barry

From Barry Hauser <barry@hausernet.com> Sun Jan 6 03:43:33 2002
Subject: [R-390] R-391 positioning head

Hi Paul & list: > > I've got an R-391 multi-turn positioning head in my hand, and have a > couple of questions.

Put it down verrrrry slowly and back away! Just kiddin'

> > After soaking it for awhile in kerosene and cleaning the mud wasps nest > out of various parts of it, it seems to behave itself and be in reasonable > condition.

How can you tell -- I've got two 391's with not-quite-working autotunes. Still haven't gotten around to fixing them. But the description in the manual is a duesy. The R-105/ARR-15 is similar and a bit easier to follow.

> > However, the locking pin does not snug all the way up to the big tuning > knob. Is it normal for some R-391's to do this?

That much I can tell you -- yes -- the wingnutty head on the locking key/screw should not snug up to the knob, there's some space there. It doesn't work by locking it there, but inside someplace. You should be able to see that with it apart.

> > Also, I've noticed that I can get it into a position where the main tuning > knob is locked (this is with the unit out of the radio), and I can see > that the pawls on one of the levers seem to be what is hanging it > up. With a little careful jiggling and twidling, I can free it up, and > then it appears to resume a reasonable behaviour. Is this, too, normal, > and just an indication of how the mechanism works?

This is where I get lost. Looks like the mechanism is a job for a locksmith -- it's what I'd expect to find in a complicated (8-number?) combination lock for a safe. While you have it out, I'd suggest experimenting with different lubes. I don't know if the usual Mobil One would be good here. The pawls are all sandwiched together and the surface drag of a regular lube might mess it up. Also, it's the type of

situation where, should the oil attract the slightest bit of dust, it might cause the pawls to stick. Might be an application for that very thin silicone lube or even graphite. I suspect either the wrong lube or hardened lube is the reason why many of the autotunes don't work. However, there could be secondary damage as a result of jamming that occurs when they stick and allow the autotuner to run "past the end" and crash against the 10 turn stop, or worse.

> > Thanks for any advice. I know this is a delicate part, and am being very > careful not to force anything.

Jot down some notes as you go along -- might help the rest of us. (Got a digital camera?)

Did you check the other modules -- the controller with the rotary switches & "1-8" dial, relay, etc? Be sure to check that transverse drive shaft (worm drive). There are four or five sintered bronze ("oilite") bearings pressed into the casting. On one of mine, the two on the left were so badly worn that the mating gear bounced off the motor drive gear when it started up. Little puddle of bronze dust underneath the bearing is a telltale. See if they're fairly snug. I think there are all sizes of these bearing available, but might be tricky to press them out and new ones in. I wouldn't want to hit that casting with anything too hard. Barry

From w5kp@swbell.net Sun Jan 6 06:27:59 2002
Subject: [R-390] Semi-blasphemy

Well, I think my 390A's have finally met their match. Been playing with an RF-590A for a few weeks. Incredible receiver, hats off to good old American made Harris equipment, the Collins of the modern age. Of course, all those Navy ships I used to ride and fix 390A's and 1051's on have been using the 590/590A's for years now, this is just the first time I've personally had a chance to try one out. My Navy did well when they replaced the 1051's with these things! The only thing I can find wrong with it is it's only half the size and weight of a 390A, and after running it for 12 hours you still can't tell by putting your hand on top of the cabinet if it's been on or not. Which means the baseboard heat in my shack has to work harder. Can anything that runs this cool actually be good? :-) Coming soon from Harris (and maybe others): A new-age general purpose military HF receiver that will be totally software defined and reconfigurable on the fly, from front end to output. Some interesting stuff on the DoD and Harris web sites about that project, much of which is apparently not classified. 73, Jerry W5KP

From JamesMiller20@worldnet.att.net Sun Jan 6 04:48:11 2002
Subject: [R-390] Semi-blasphemy

As a Harris employee, I thank you! Although I don't work for RF Comms. Division... Yes a lot of neat stuff going on. But I still wouldn't part with my BAs! Jerry Kincade wrote:

From organic@cyberlane.net Sun Jan 6 05:43:59 2002
Subject: [R-390] Anti-Stickum Lubricant

Just a thought, after reading the post about the problem with making sticky auto-tune mechanism behave.

There is a possible neat solution I cam across during my current restoration of an 150-year old grand piano. I came across a graphite solution that after application leaves a micro-thin coat of

graphite on the surface of any material its applied to. Should not gum up delicate and tight tolerances between sliding metal parts. Its called DAG Graphite Lubricant. Dries quickly and is sold by International Piano Supply. 1-888-668-3788 http://www.pianosupply.com/ips

Their part number is 8E02016 Not cheap at $12.20, but the 4oz jar should go a long way Nice people to deal with

From john_finigan@yahoo.com Sun Jan 6 07:19:18 2002
Subject: [R-390] R-220

Does anyone know anything about this 40+ tube beast, other than it's a VHF set? Must have been pretty high end, as I've read it was used alongside R-390's to listen to Sputnik. John Finigan

From bill@iaxs.net Sun Jan 6 08:42:51 2002
Subject: [R-390] R-391 positioning head

Barry Hauser said, "I think there are all sizes of these bearing available, but might be tricky to press them out and new ones in. I wouldn't want to hit that casting with anything too hard."

Yes, the bearings have to be pressed out and new ones pressed in. That last sentence should read, "I wouldn't want to hit that casting with anything!" A pretty good press can be cobbled up if you've got a bench vise and some round and flat bar stock. You'll need a micrometer to get the right diameter for new bearings. Use a hammer and you will cock the bearing going in or scratch the housing bore going out.

If the bearings are just dry and not worn, you can cobble up a "recharger" for sintered bronze bearings. Take the shaft out of the bearing and immerse the bearing and housing into a small jar or can of light oil. Now comes the tricky part. Pull a vacuum on the contents of the jar, perhaps using a vacuum hose from the carburetor of a running engine. Try not to suck oil into the engine, lest bad things happen to expensive machinery. If you can see the bearing, you'll see air come out of it. Wait for it to stop bubbling, then break the vacuum slowly. Oil will run into the pores in the bronze. Works better if oil and bearing are warm to hot. Good idea to test your vacuum chamber first, lest you get hot oil and broken glass all over everything.

We made sintered bronze bearings from bronze powder in shop class, and oiled them using vacuum after they'd cooled from sintering. Great stuff. But that was the fifties - too dangerous now.

Disclaimer: Forget everything I just said. If you don't have a bearing press and micrometer, take it to a pro. They may still make bearings, but they don't make housings anymore. Regards, Bill Hawkins

From howard@cconnect.net Sun Jan 6 15:04:03 2002
Subject: [R-390] R-220

I seem to remember working on R-220's back at Herzo Base during '56 - '59 . My memory is they were very nice receivers when they were working right (and they were very dependable) but were difficult to do any alignments on. Everytime you put the covers back on, everything changed. We usually just sent

them on up to higher level of maintenance. Still, I would like to have one, if ever I see one cheap enuff ;-) . Howard AA4HR New Bern, NC

From ba.williams@charter.net Sun Jan 6 16:53:34 2002
Subject: [R-390] R-220

> I seem to remember working on R-220's back at Herzo Base during '56 - '59 . > My memory is they were very nice receivers when they were working right (and > they were very dependable) but were difficult to do any alignments on. Howard,

You were at Herzo Base? I was there in 1975 to visit a German girlfriend. I took a taxi thru Erlangen from the train station on a Friday evening. There were millions of college aged girls in that town. I have never seen anything like it. I later found out that there were half a dozen or more schools for nursing, etc and that the ratio of female to male was 9:1. I always envied those soldiers stationed up the road at Herzo Base! Barry

From organic@cyberlane.net Sun Jan 6 16:55:43 2002
Subject: [R-390] Anti-Stickum Addendum

Did not mention that the colloidal fine graphite particles are in an organic solvent type that evaporates without leaving anything behind but a thin coat of graphite. Powder would be cheaper but also much messier

From organic@cyberlane.net Sun Jan 6 17:04:44 2002
Subject: [R-390] How to Reply to a selected message

Silly me Looked everywhere but could not find the way to replay to just one post. I see these with the original lines preceded by '>'s "sunt pueri, puerilium tractum"

From mikea@mikea.ath.cx Sun Jan 6 17:52:56 2002
Subject: [R-390] How to Reply to a selected message

wrote: > Silly me Looked everywhere but could not find the > way to replay to just one post. I see these with > the original lines preceded by '>'s > > "sunt pueri, puerilium tractum"

"They're boys, drawn into boyishness", or "They're children, drawn into childishness", or somethnig very much along those lines.

Well, that depends on whether you see the group as a digest aggregation of multiple messages or as individual messages.

If you get the digest, then you're condemned to using an editor to extract the message you want to reply to, changing the "To:" and "Subject:" lines, and only then do you get to add your reply.

That's why I subscribed in individual-message mode. -- Mike Andrews

From David_Wise@Phoenix.com Sun Jan 6 18:19:11 2002
Subject: [R-390] Tube Extenders

Peter Cade gives instructions for making a tube extender from a socket and a junk tube.

TM11-856A contains instructions for an even easier roll-your-own, using two sockets. The solid-core wires extend through the bottom socket to act as pins.

Until I need to do a global voltage check, I'll just put a length of wire-wrap wire on the pin I want to probe. Regards, Dave Wise

From redmenaced@yahoo.com Sun Jan 6 18:50:50 2002
Subject: [R-390] R-391 positioning head

Just as a guess from reading this it may be that the kerosene is too thick to clean it thoroughly, Ya need some better chemicals like in the old days, and heat it up! Joe

From w7itc@hotmail.com Sun Jan 6 20:09:42 2002
Subject: [R-390] yet another SSB adapter

I have a ELDICO SBA-1 sideband adapter. It has signal corp stamps on it my question is what was it's military nomeclature. There is a site that list all of them but i can't remember where it's at Ken

From Bob Camp <bob@cq.nu> Sun Jan 6 21:17:54 2002
Subject: [R-390] Semi-blasphemy

Hi, Well if you want a true Harris boatanchor grab an RF-550. They are at least as big and heavy as a '390A. Pretty nice radio. At least on a par with a '390A except for the toggle switch tuning. The RF-590 was a cost reduced 550. Enjoy! Bob Camp

From butrosg@bellatlantic.net Sun Jan 6 21:21:43 2002
Subject: [R-390] Tube Extenders

Yes Dave...I tried it using the solid core wires as the pins..... found it not easy to plug/unplug, and not very reliable contact, (probably due to me using the wrong gauge of wire. Seemed easier to use an actual socket - there's nothing like an actual tube base for plugging into a tube socket.

From hardiem@intergate.ca Sun Jan 6 21:46:06 2002
Subject: [R-390] Problem, Noise Limiter, R-390A

As the noise limiter control is turned from "off" to "1" there is no change in the audio, but past "1" to "2" there is a brief pause then the audio disappears. There isn't any change from there to fully clockwise. The process is reversed as the control is moved back to "off". There isn't much RF noise here but I'd like to get it working. Before tearing into the radio does anyone have a suggestion on where to look? Mike at: hardiem@intergate.ca

From butrosg@bellatlantic.net Mon Jan 7 00:26:32 2002
Subject: [R-390] Re: Choice of Components

RE: Recent discussion of the appropriate choice of resistor.... A very good discussion of the properties, relative merit and reliability of electronic components - principally "passive:" ones (capacitors, resistors, etc..) is to be found in a 3 part series of articles in AudioXpress - (Oct/Nov/Dec 2001) .... www.audioxpress.com Oooh...I love the way the link comes alive when I type it in ! Pete

From w7itc@hotmail.com Mon Jan 7 00:49:55 2002
Subject: [R-390] Problem, Noise Limiter, R-390A

Doesn't sound like there anything wrong to me. Mine more or less behaves the same way. But if I leave one of My light dimmers on low, or electric motors going the R390's noise limiter nails them. Ken

From bill@iaxs.net Mon Jan 7 01:10:35 2002
Subject: [R-390] Re: Choice of Components

Could you be more specific? The link is an ad for a magazine.

From ba.williams@charter.net Mon Jan 7 01:18:26 2002
Subject: [R-390] Re: Choice of Components

Pete, Where on that site is the 3 part series? I've been clicking everything and can't seem to find it? Barry

From rkolarik@neb.rr.com Mon Jan 7 03:16:29 2002
Subject: [R-390] Re: **K9AY loop**

Try this site, yeah I know it looks like a porn site, they have a lot more info and field tests.
http://www.hard-core-dx.com/nordicdx/antenna/loop/k9ay/ Ron K0IDT

From butrosg@bellatlantic.net Mon Jan 7 03:42:32 2002
Subject: [R-390] Re: Choice of Components

Sorry folks...didn't mean to mislead....that's just a link to the magazine website... Anybody interested could probably get reprints.... Also, I goofed..it's Nov/Dec 2001, Jan 2002.

From bill@iaxs.net Mon Jan 7 07:51:34 2002
Subject: [R-390] Re: Choice of Components

Eight years ago I worked for a medium sized process control company that had been forced to merge with one twice their size by our parent company. After assimilating us, some Exxon control guys were given a presentation by the new guys. It was full of object-oriented this and that, and the Exxon guys just shook their heads. When it was over, the ranking Exxon guy turned to our president and said, "John,

you've got to take away their magazines."

So I took home the lesson that if I didn't need something before I read the magazine, I probably still don't need it. I'll not be chasing down those audio magazine articles. The R-390 manual tells me all I need to know. Regards, Bill Hawkins

From w7itc@hotmail.com Mon Jan 7 08:55:48 2002
Subject: [R-390] Re: Choice of Components

Over the years on this list most all topics concerning the bits and pieces have been discussed. I have learned a great deal. The re-do of a real nice HQ-129X is going smoothly and I hope to have it finished in a week or so. It is a real treat working on stuff I don't have to wear grounded cuffs on my arms, and a grounding strap around an ankle. Big powerful soldering guns and pencils, and WIRE!!! The HQ is going to be the receiving half of a vintage 1950's station. The transmitter will be a Viking II, which I will totally rebuild this time, I have all the parts now. The repair of My R390 has sparked a rebuilding binge. What I find so interesting is the fact parts are easier to find for the old stuff then many of the 70's and 80's sand state equipment, I have a IC-551 who's CPU is shot, this chip was only made for ICOM and they are unavailable, the unit is un repairable, at least with the old stuff there are work arounds for most anything. Ken

From jbrannig@optonline.net Mon Jan 7 12:36:48 2002
Subject: [R-390] yet another SSB adapter

Interesting, My SBA-1 was clearly marketed as a "HAM" radio. It would be interesting to "A-B" it with my CV-591. Jim

From cbscott@ingr.com Mon Jan 7 16:13:53 2002
Subject: [R-390] Off-topic IF question

I was just looking at an interesting transceiver on Fair's site (Canadian #19 Mark II): http://www.fairradio.com/0mk2.htm The thing that caught my eye is the 465kc IF. Is this possibly a typo? Their site is pretty good about details, so I think it may be correct (especially since they went to the trouble to point it out). Were there common IFs on 465kc? It seems odd to be so close to the defacto standard, but not quite there. Thanks, Barry - N4BUQ

From win.308@R390A.com Sat Jan 5 13:41:53 2002
Subject: [R-390] 51S-1

I have a 51S-1 with the 6kc AM mechanical filter kit installed. Nice receiver but won't touch the R390A on AM performance though. The 51S-1 does SSB/CW quite nicely.

From bern@ppdmail.nrl.navy.mil Sun Jan 6 21:17:03 2002
Subject: [R-390] R-220

The R-200 was manufactured by Motorola with Order Number 116-PHILA-52-93 (1952). I have three of the receivers. They are difficult to repair when because of all the connections to the turrets in the RF

unit. Motorola Incorporated put out an instruction book for Radio Receiving set AN/URR-29 and Radio Receiver R-220/URR dated 21 June 1954. Addenda to the Instruction Book were published on 1 February 1955, 6 June 1955, 15 July 1955, and 26 September 1955. The Army version was TM-11-882 published in November 1955. The weight of the receiver is 96 pounds with an additional 38 lbs for the CY0959/URR case. Frequency coverage was 20 to 230 MHz in 7 bands. Cheers, Paul Bernahrdt

From mikea@mikea.ath.cx Mon Jan 7 16:54:56 2002
Subject: [R-390] R-590

Does anyone have any leads on getting an R-590? Web searches came up dry. It sounds like an interesting piece of gear, from the little I've seen about it. -- Mike Andrews

From twleiper@juno.com Mon Jan 7 17:08:31 2002
Subject: [R-390] Re: Choice of Components

> ...What I find so interesting is the fact parts are > easier to find for the old stuff then many of the 70's and 80's > sand state equipment, I have a IC-551 who's CPU is shot, this chip > was only made for ICOM and they are unavailable, the unit is un > repairable...

Very true. I have thrown out a lot of SS equipment over the years because of non-repairability due to lack of parts or sufficient documentation. The only tube equipment I have ever thrown out was due to lack of usefulness. Tom

From beral@videotron.ca Mon Jan 7 17:20:05 2002
Subject: [R-390] Off-topic IF question

Barry, FAir Radio has it correct. See the following site for conformation. It is a very good site with all the info on the 19 Set that you would ever want to know. Http://www.qsl.net/ve3bdb/index.html Enjoy. Al VE2TAS

From tbigelow@pop.state.vt.us Mon Jan 7 17:23:26 2002
Subject: [R-390] 51S-1

Hi Chuck and group - I've yet to use a rig that compares to the R-390* series for it's versatility, stability, sensitivty, selectivity, and overall fun. The 51S-1 is excellent IMHO for all it does in such a small package(for late 50s/early 60s technology), it's rock-solid stable and overall very good. It's simple to use and portable, too! There are many sets that sound better, like the old Hallis and Nationals with their push/pull audio output. The original R-390 sounds nice too, as does the A model when you open it up a bit.

I flip on the SP-600 for casual crusing around, I can cover a more spectrum faster if I'm looking for something in particular. I'm sure it misses stations that the R-390 would grab, though.

SS gear is of no interest to me, so that leaves the R-390* for the serious, down-to-business searching and listening. Since I only have a certain amount of hours to enjoy radiotime, so I prefer to use stuff that heats my house at the same time. Nothing like actually *operating* a piece of radio gear....
73 de Todd/'Boomer' KA1KAQ

From twleiper@juno.com Mon Jan 7 17:27:07 2002
Subject: [R-390] R-590

> writes: > Does anyone have any leads on getting an R-590? Try looking for an "RF-590"....and then take out your wallet. Tom

From richardlo@devax.admin.athabascau.ca Mon Jan 7 17:07:45 2002
Subject: [R-390] 26Z5 tubes

On Sat, 5 Jan 2002, Barry Hauser wrote: > Either somebody better take up glass blowing, or break out the silicon > diodes, like Les says. Unless you can find some used 26Z5W's - with some > tread left on 'em. I suppose they would only cost around $10-15?

The news only gets worse. The 26Z5's are not that hard to toast when you are restoring a receiver. I recommend becoming at least a partial witch and using solid state subs until the radio is fully restored and then put the revered 26Z5's back in but keep a pair of spares on hand (not one spare, two spares...)

I have a pair on NIB 26Z5's around here that I bought from Fair for a fair price some five years ago. Guess I will use them to pay for a year of my retirement in a decade or two. :)

6082's on the other hand... I would not mind finding at least two of those under a table some place. It would be worth while to design a solid state regulator for the R390 and put those hot and uncommon 6082's on a shelf. --- Richard Loken VE6BSV,

From s-biddle@ti.com Mon Jan 7 18:16:31 2002
Subject: [R-390] 26Z5W - 12BW4 replacements

There is a good article on using the $4 12BW4 in place of the 26Z5W on http://www.mines.uidaho.edu/~glowbugs/r390_psmod.htm 73 de Richard, KB5WLH

From LAVICWI@mail.northgrum.com Mon Jan 7 18:52:17 2002
Subject: [R-390] 26Z5 tubes

Rich, Lowell Thomas (k6kc@lightspeed.net) was selling NOS JAN 6082's a while ago for about $4.50 each. You might give him a try. He is a real gentleman to deal with. He didn't have any 26Z5's the last time I dealt with him. Bill Lavick WA2SMF

From billsmith@ispwest.com Mon Jan 7 19:53:18 2002
Subject: [R-390] Off-topic IF question

In a word, yes. The 455 KHz as a standard (one I grew up with) is "recent". Probably a variant among manufacturers, or style, or preferences, but receiver manufactures have used a wide range of IF frequencies. 445, 455, 465, 485 among others, seem to be related to the use of crystal filters. (Is this true?) Early supers used frequencies as low as 185 KHz. 73 de Bill, AB6MT billsmith@ipswest.com

From cbscott@ingr.com Mon Jan 7 20:07:04 2002
Subject: [R-390] Off-topic IF question

My thinking is that if it uses crystal filtering, 465kc crystals might be harder to find that 455kc. True? Barry - N4BUQ

In a word, yes. The 455 KHz as a standard (one I grew up with) is "recent".

Probably a variant among manufacturers, or style, or preferences, but receiver manufactures have used a wide range of IF frequencies. 445, 455, 465, 485 among others, seem to be related to the use of crystal filters. (Is this true?) Early supers used frequencies as low as 185 KHz. 73 de Bill, AB6MT billsmith@ipswest.com

From beral@videotron.ca Mon Jan 7 20:24:10 2002
Subject: [R-390] Off-topic IF question

Bill, Your right. IFs are and varied. I have a Transceiver made by Canadian Marconi in 1942, Model ATR5, Freq 3.0 - 6.3 Mc in any 2 crystal controlled channels. Used in fighter A/C of the day. The IF is 456. It will be restored next winter. Also have a Philco Model 38-10. The IF is 470. Al VE2TAS

From cbscott@ingr.com Mon Jan 7 20:26:58 2002
Subject: [R-390] R502 and R503

I notice in the Y2k manual that the values for R502 and R503 apparently were selected for an optimal value within an appropriate range. Can someone tell me what factors control(led) the selection of these values. It appears that R503 might not be one I would care as much about as I rarely if ever use a 100 cycle bandwith, but R502 might be a useful one to optimize. Any comments? Thanks, Barry - N4BUQ

From David_Wise@Phoenix.com Mon Jan 7 20:31:31 2002
Subject: [R-390] R502 and R503

> I notice in the Y2k manual that the values for R502 and R503 > apparently were selected for an optimal value within an > appropriate range. Can someone tell me what factors > control(led) the selection of these values.

Different crystals have different activity levels, so you pick the resistor to trim the circuit Q, i.e., bandwidth. If your 100Hz and 1kHz bandwidths are on-spec, the resistors are right. Regards, Dave Wise

From richardlo@devax.admin.athabascau.ca Mon Jan 7 19:36:45 2002
Subject: [R-390] Off-topic IF question

> My thinking is that if it uses crystal filtering, 465kc crystals might be > harder to find that 455kc. True?

You will look long and hard in a 19 set to find any crystal filters and casual listening will confirm their

absense. IMHO the 19 set was a crummy radio even in 1940 but it was a true transceiver which was very innovative when Pye designed it in the late 1930's. It is loaded with single letter G tubes like 6K7G's and they frequently used the unused shell ground pin for a tie point so don't go willy nilly subbing in 6K7's for 6K7G's.

The US army went to 10M FM for field communications (I think it was around 10M? No?) and armour communications in WWII but the commonwealth stayed on 2 - 8MHz AM and on a good day they could almost hear each other. --- Richard Loken VE6BSV

From ai2q@adelphia.net Mon Jan 7 20:17:27 2002
Subject: FW: [R-390] Off-topic IF question

I have a nice 465-kc rock here that would be used in an IF strip xtal filter. I'd be happy to swap it for a 455/456 xtal that I need for an HRO restoration. Vy 73, AI2Q, Alex .-.-.

From john_finigan@yahoo.com Mon Jan 7 21:39:57 2002
Subject: [R-390] Re: R-220

Thanks to everyone who answered my questions. I guess that next time I'm looking for a new radio, I'll have to look for one of these...with a S-36A and an Eddystone, I've come to the conclusion that VHF receivers tend to follow me home <g>. John

From Barry Hauser <barry@hausernet.com> Mon Jan 7 22:20:21 2002
Subject: [R-390] 26Z5 tubes

wrote: > > regulator for the R390 and put those hot and uncommon 6082's on a shelf. Check out Issue #52 of the Hollow State Newsletter -- reversable SS mod for 6082's in the non-A. Barry

From billsmith@ispwest.com Mon Jan 7 22:25:01 2002
Subject: [R-390] Off-topic IF question

Not sure if you are speaking of today, or when the receivers were manufactured. In manufacture, I would expect that crystals were built to order and manufacturing a specific crystal frequency wouldn't have been an issue. Manufacturers such as Gilfillin, Philco, Hallicrafters used different IF frequencies in different models. Don't know why.

From cbscott@ingr.com Mon Jan 7 22:39:13 2002
Subject: [R-390] Off-topic IF question

I was thinking of today; however, as someone else has pointed out, the receiver in question does not use crystal filtering so the point becomes moot (at least for that radio). 73, Barry - N4BUQ

From w5kp@swbell.net Tue Jan 8 00:42:21 2002
Subject: [R-390] R-590 (RF-590)

Mike, I presume you are talking about the Harris RF-590 and RF-590A. See www.torontosurplus.com . They are the only ones I know who seem to have a reliable supply of 590's, and once in a while they have a 590A. I like my RF-590A very much. It is an outstanding receiver, and my favorite over all the others in my shack (Racal 6790/GM, R-390A's, SP-600 JX-17, Drake R8A, etc.). They are also pretty proud of them. 73, Jerry W5KP

From w5or@home.com Mon Jan 7 23:00:57 2002
Subject: [R-390] 26Z5 tubes

Speaking of HSN... Wonderful job, Barry! I just received a batch of back issues missing from a lapsed but now restarted subscription, and these include the start of your stewardship. Lots of good stuff to read on that old fashioned media called paper. The 6082 ss sub might be essential when no more 6082's are to be found.

From Llgpt@aol.com Mon Jan 7 23:17:38 2002
Subject: [R-390] Off-topic IF question

writes: << I was just looking at an interesting transceiver on Fair's site (Canadian #19 Mark II): http://www.fairradio.com/0mk2.htm The thing that caught my eye is the 465kc IF. Is this possibly a typo? Their site is pretty good about details, so I think it may be correct (especially since they went to the trouble to point it out). Were there common IFs on 465kc? It seems odd to be so close to the defacto standard, but not quite there. Thanks, Barry - N4BUQ

465 kc was quite common, some older national and the SP-200 series of hammarlund Super-pro's come to mind. I'm sure there are lots of others. Les

From rodney_bunt@yahoo.com Mon Jan 7 23:45:02 2002
Subject: [R-390] 6080 in place of 6802 ....

R-390 people, 6080's can be used in place of 6082's in the R-390 (NON A), if you series the filament for both tubes....OR you could put a single Diode in series with the filaments if you have no aversion to "sand state" devices in your R-390 (NON A) Rodney Bunt VK2KTZ

From rodney_bunt@yahoo.com Tue Jan 8 00:08:29 2002
Subject: [R-390] 6802 - and heat dissipation...

The reason that the 6082's are HOT is that they are dropping the input voltage to 285v x the current consumed by the R-390. Therefore power dissipated is (325 - 285) * .3A 12Watts. This amount of heat would have to be dissipated in the "solid state regulator" anyway. I agree that the heat from 4 filaments would not be introduced into the receiver with a solid state regulator. Remember that when the R-390 is in "standby" there is no current being drawn from the HT, so the input voltage would rise to approx 360v+, that is 75v across the "collector - emitter" a big ask for a Transistor, then again Power MOSFET could be used .... PS: Just think of the ZENER chain to get 285v for the "series regulator" !!! Then again you could use tubes for that! Rodney Bunt VK2KTZ

From w7itc@hotmail.com Tue Jan 8 00:47:50 2002

Subject: [R-390] 26Z5 tubes

I look at My tube collection and I have some of the oddest odd's and ends. I have a bunch of a cute little tiny 6K4's, then some Acorn tubes 12-955's, etc, etc. All of these devices are the brain child of some electronics engineer. Ken

From rodney_bunt@yahoo.com Tue Jan 8 01:16:06 2002
Subject: [R-390] 6802 - and heat dissipation...+ standby

Quite right, the HT is 185v, that is a lot of watts.... My understanding of "not using standby" is the "poisoning" of the cathode, with filament current and no HT to "pull away" the electrons. Note also how bright the "regulator" tubes glow when in standby, NOT GOOD ! The Hallicrafters SX-101A has the VFO tube fillament "ON" AND a "heater resistor" under the circuit at all time even when the "power" switch is in the OFF position, they use a series resistor in the filament to drop the heater current. Is there a message for us, in this circuit design ???? Rodney VK2KTZ

From tgrieco@optonline.net Tue Jan 8 01:29:53 2002
Subject: [R-390] sp-600-jx-17

Recently purchased this unit and seems to be drifting. I do not leave it on 24/7. How long should it take to stabilize from off? Any particular tubes that may need looking at? Tim k1syn

From Llgpt@aol.com Tue Jan 8 02:27:38 2002
Subject: [R-390] sp-600-jx-17

writes: << Recently purchased this unit and seems to be drifting. I do not leave it on 24/7. How long should it take to stabilize from off?

Try replacing the OA2 voltage regulator tube, a weak one will cause drift. Also, look at the bottom of the power supply transformer, if your voltage is over 117 volts, I would suggest moving it to the 139 volt tap. Les Locklear

From ba.williams@charter.net Tue Jan 8 02:37:53 2002
Subject: [R-390] sp-600-jx-17

writes: > > << Recently purchased this unit and seems to be drifting. I do not leave it on > 24/7. How long should it take to stabilize from off? > > Try replacing the OA2 voltage regulator tube, a weak one will cause drift. > Also, look at the bottom of the power supply transformer, if your voltage is > over 117 volts, I would suggest moving it to the 139 volt tap. > > Les Locklear

Mine stopped most drift when you told me that a while back. Then, it started drifting when the BFO was used. It did that for a month and then stopped drifting for some reason. I usually turn it on early and let it warm up with CW selected when I think I'm going to use it. Barry

From ba.williams@charter.net Tue Jan 8 02:40:17 2002
Subject: [R-390] 26Z5W - 12BW4 replacements

> There is a good article on using the $4 12BW4 in place of the 26Z5W on Has anyone actually done this? If so, how does it work? Barry

From twleiper@juno.com Tue Jan 8 02:46:31 2002
Subject: [R-390] sp-600-jx-17

> writes: > > << Recently purchased this unit and seems to be drifting... > > Try replacing the OA2 voltage regulator tube, a weak one will cause > drift. > > Les Locklear

Add to that regulator issue...make sure the dropping resistor is within spec. They often drift high and cause poor regulation. You should have little to no drift on that rig, however it is not unusual for the BFO to move around a bit making SSB a little tough on a long term basis. But the rest should be solid. Tom

From r390auser@home.com Tue Jan 8 04:22:50 2002
Subject: [R-390] 26Z5W - 12BW4 replacements

Barry and All, I have done this conversion and it works just fine. The B+ voltages are within three volts of the published values. Kurt Holbrook

From rodney_bunt@yahoo.com Tue Jan 8 05:14:15 2002
Subject: [R-390] 6802 - standby

Harry, I knew that you shouldn't do it, but never really knew why. This is the best explanation of the phenomenon I have ever heard. Fills in a gap in my knowledge that I have had since 1968. Rodney VK2KTZ

For what its worth, here is what I was told when doing yeomans/apprentice work at TeKaWe (Telephon-Kabel und Draht Werke) in postware Nuremberg, way-way back in 1948. I was working in the vacuum tube department. Getters (the silvery-shiny deposit on the inside of the tube, is used to absorb or trap any heavy molcules that might otherwise bombard the coating on the cathode. Electrons themselves cannot damage the function of the cathode coating. With no B+, they just form a cloud, loitering so to speak, around the cathode. The impurities caused by outgassing or sputtering of metallic molecules is what is deadly for the cathode. Anything emitted from a hot metal surface like the anode will, due to its positive charge be hurled toward the cathode and gradually "poison' it. Golly, how I remember these exciting days. Having a dozen new, one-of the kind miniature tubes mounted up on the vaccum manifold. Learning the delicate touch of glass blowing. After evacuation, I had to slip a 5 turn 1/2-inch copper coil hooked to a 1000W LF transmitter (I got zapped more than once by absentmindedly touching the coil) ... over each tube in turn to get it red-hot to drive out any impurities, then finally getting the getter pill to evaporate and leave the silver halo. At that point, any clumsy move or jerking would break the small glass stem and air would rush in. In a millisecond a weeks work of the lab guyes in the white coats would be trashed. They were not amused when this happened.

Hope you dont mind a little reminiscing

From billsmith@ispwest.com Tue Jan 8 05:31:38 2002

Subject: [R-390] 6802 - standby

Thanks, Rodney for the follow-up. I never received the original message. Yes, Harry, am, for one, fascinated by such stories. 73 de Bill, AB6MT billsmith@ispwest.com

From w7itc@hotmail.com Tue Jan 8 07:51:24 2002
Subject: [R-390] The SBA-1 and the CV-591

RE: My SBA-1 was clearly marketed as a "HAM" radio. It would be interesting to "A-B" it with my CV-591

I may have the answer to this question. I have an original manual for the SBA-1, as I was running a copy for Bruce I noticed on the schematic a small part of it was circled with the caption "omitted in Air Force version" This isn't a hand written addition this is orignal with the printing of the schematic. What was omitted was the S-meter. This explains why in my unit the wiring for the meter installed is different from everything else, it's clear the S-meter was added later. Ken

From BRingwoo@csir.co.za Tue Jan 8 12:39:41 2002
Subject: [R-390] Off-topic IF question

Hi all and a prosperous 2002 to you all, The WS 19 Mk II was my first short-wave receiver - it cost 65/- (shillings) brand new, so mention of it brings on some nostalgia. It also prompted my first electronics project - namely building a 500 Volt power supply. Alas, I took it apart one day to build something else, as sub-teenagers often did then. Occasionally, parts of it still turn up in my junk box. Many of the sets in the UK had a 465 kc/s IF - probably still do. At one time you could get 85 kc/s IF transformers. Other oddities being the B40's 500 kc/s and 5.2 Mc/s of some VHF receivers.

Regards. Had to get it off my chest...

PS Will try to use kHz from now on, since some find kc/s offensive.
PPS Had to resend - my .vcf got added by mistake

From ba.williams@charter.net Tue Jan 8 13:47:22 2002
Subject: [R-390] 6802 - standby

> Thanks, Rodney for the follow-up. I never received the original message. > Yes, Harry, am, for one, fascinated by such stories. > > 73 de Bill, AB6MT > billsmith@ispwest.com

Same here. Very interesting to know about getter pills dissolving into a halo. Barry

From ba.williams@charter.net Tue Jan 8 14:08:36 2002
Subject: [R-390] 26Z5W - 12BW4 replacements

> Barry and All > I have done this conversion and it works just fine. The B+ voltages are > within three volts of the published values. > Kurt Holbrook

Kurt, Thanks for the info. That sounds good to me unless anyone sees a problem with this method. I

checked my inventory and I don't have any 12BW4s. I thought I would have a few around here. I checked for subs for the 12BW4 on NJ4P's tube database website at http://hereford.ampr.org/cgi-bin/tube. There are no subs for this tube. I guess we should start hoarding them before the word gets out and they reach the $35 price of 26Z5s. Barry

From tbigelow@pop.state.vt.us Tue Jan 8 16:10:18 2002
Subject: [R-390] sp-600-jx-17

wrote: > Try replacing the OA2 voltage regulator tube, a weak one will cause drift. > Also, look at the bottom of the power supply transformer, if your voltage is > over 117 volts, I would suggest moving it to the 139 volt tap. This is some of the best advice I ever got on here, mainly because it was so *easy* and it made such an improvement.

Les, I still can't thank you enough for the tidbit about checking the transformer taps - what a difference it made for me. 73, Boomer KA1KAQ

From cbscott@ingr.com Tue Jan 8 16:20:46 2002
Subject: [R-390] sp-600-jx-17

I don't have an SP600 so I don't know, but I assume you're talking about changing the input tap effectively reducing the output voltages of the transformer. If this is the case, why does this help with drift? Is the OA2 unable to regulate properly if the voltage it sees is too high? Also, is that SP600 drifting towards North Alabama by any chance? >;-) Barry - N4BUQ

From metzd@intelos.net Tue Jan 8 17:31:01 2002
Subject: [R-390] 26Z5W 6V4 also works

In the Hollow state newsletter #17, there is a way to use 6V4's. I used it once and it works fine. The only negative is that this tube is a bit taller and while it still clears the bottom cover, it's close. Looks to me like there are several good alternatives to this increasingly scarce tube. 73's dave

From rlruszkowski@west.raytheon.com Tue Jan 8 16:33:47 2002
Subject: [R-390] Re: My R390A

The most delicious thing about the transmitters of the 50's is the feeling you have when you tune them up for the first few times. On the one hand you have a feeling you are messing with a bomb ready to detonate at the first mistake made in the tune-up, on the other is the exhilaration you feel when you key it on the air for the first time and watch as the needle on rf watt meter climbs to 200, 300, 400, 1000 watts. What a tingly feeling Ken

---
Ken, That tingly feeling is caused by RF in the shack. A Kilo watt of that will excite any living thing. Roger.

From Llgpt@aol.com Tue Jan 8 16:50:01 2002
Subject: [R-390] sp-600-jx-17

writes: << This is some of the best advice I ever got on here, mainly because it was so *easy* and it made such an improvement. Les, I still can't thank you enough for the tidbit about checking the transformer taps - what a difference it made for me. 73, Boomer KA1KAQ >>

Just send your money to.....heh!!..heh!!!

Seriously, that is what this hobby is all about, sharing info and helping others out. Les

From courir26@yahoo.com Tue Jan 8 16:52:14 2002
Subject: [R-390] JRC copy of R-388

Gentlemen? Take a gander at this. Scroll down to see this item.
http://www.coara.or.jp/~mieko/990704musen/990704musenj.htm 73 Tom N5OFF

From Llgpt@aol.com Tue Jan 8 16:55:25 2002
Subject: [R-390] sp-600-jx-17

writes: << I don't have an SP600 so I don't know, but I assume you're talking about changing the input tap effectively reducing the output voltages of the transformer. If this is the case, why does this help with drift? Is the OA2 unable to regulate properly if the voltage it sees is too high? Also, is that SP600 drifting towards North Alabama by any chance? >;-) Barry - N4BUQ

Hi Barry, The SP-600 has multiple voltage taps, depending on the voltage in your area. Most are connected to the 117 volt tap. That was fine when they were built, but most of us these days have 125 + VAC. The taps are, 95,105,117,130,210,234 and 260. Everyting seems to satbilize with the 130 volt tap connected. Plus the OA2's are notorious for being flaky even when they test good in a good tube tester. Les

From rlruszkowski@west.raytheon.com Tue Jan 8 17:06:36 2002
Subject: [R-390] Kilocycle Dial Tightness (after cleanup)

I can now can use one finger to tune Kilocycle's I also feel the counter rolling now. Is this Spec or to loose ? , Joe
---
Good Job, Roger.

p.s. stop putting the admin in you mail. leave this one off. r-390-admin@mailman.qth.net Do you have any idea how long it takes to weed these out of the admin mail every day?

From w5or@home.com Tue Jan 8 18:44:26 2002
Subject: [R-390] sp-600-jx-17

Les is right. Found my Mot. R-390A at 92V instead of nominal. OA2 culprit checks good on TV-7. Don

From twleiper@juno.com Tue Jan 8 18:55:03 2002
Subject: [R-390] JRC copy of R-388

writes: > Gentlemen? > > Take a gander at this. > > Scroll down to see this item. > > http://www.coara.or.jp/~mieko/990704musen/990704musenj.htm > > 73 Tom N5OFF

That's why I have never been worried about those guys. They've never been able to make anything that we didn't make first... Tom

From KK5VR@ARN.NET Wed Jan 9 19:24:21 2002
Subject: [R-390] My R390A

To all: My R-390A puts out nothing but static. The RF and Local do control the volume of the static but no signal. Not even from the strong local AM stations. Speaker and antenna are working fine. The unit was receiving just fine until I turned the volume up and noticed the static. The unit was usually kept on all the time. Any comments on where to start looking? Thanks for your time GT

From cbscott@ingr.com Tue Jan 8 19:35:29 2002
Subject: [R-390] My R390A

Ballast tube? Barry - N4BUQ

From Richard.McClung@Dielectric.spx.com Tue Jan 8 19:29:03 2002
Subject: [R-390] My R390A

You took the words right out of my mouth..... RICH @B> }

From cbscott@ingr.com Tue Jan 8 19:55:54 2002
Subject: [R-390] My R390A

That's assuming all those pertinent little MB connectors are still in place. It only takes one to fall off (e.g. the PTO) and the radio will act the same way. Barry - N4BUQ

From KK5VR@ARN.NET Wed Jan 9 20:02:31 2002
Subject: [R-390] My R390A

Richard: So where is it located in the unit? GT

From DAVEINBHAM@aol.com Tue Jan 8 20:51:22 2002
Subject: [R-390] 26Z5 tubes

writes: It would be worth while to design a solid state regulator for the R390

Has not someone not already done that ? Dave

From tbigelow@pop.state.vt.us Tue Jan 8 20:55:07 2002
Subject: [R-390] JRC copy of R-388

Hmmm.....a Japanese copy of a Collins receiver. Now, why doesn't that surprise me? Well, it does say it was made under license. I get a chuckle out of the shot right above it. Looks like a RAL or RAK? Caption reads in part: "Both of them weren't aware of the fact that the machine was the highest-class masterpiece of US Navy in that time." I always thought these rigs were designed in the mid-late 30s? Even if they got ahold of this rig in the 40's, I'm thinking it wasn't the top-of-the-line rig that the description implies?

From Llgpt@aol.com Tue Jan 8 21:10:34 2002
Subject: [R-390] JRC copy of R-388

writes: <That's why I have never been worried about those guys. They've never been able to make anything that we didn't make first... Tom >> LOL.....Or smaller! Les

From organic@cyberlane.net Tue Jan 8 21:25:41 2002
Subject: [R-390] Any URM-25F for Sale?

Thanks to Murphy's ;aw I just lost a bid on a nice URM-25 on eBay (line disconnected before I could make the last bid). If any of the esteemed members on this list has one or know about where to get one, I would appreciate a contact. Harry PS: The is a corollary to Murphy's Law that I take credit for: "Murphy was an optimist!"

From R390rcvr@aol.com Tue Jan 8 21:33:31 2002
Subject: [R-390] Service Monitor vs. Stand alone equiptment

Dear List folks: I have a chance to pick up a Ramsey Service Monitor. As a general question, how do people like the service monitor approach to radio servicing, alignment, etc, vs individual pieces of test equipt? One other question, somewhat in the same vein. Did HP ever make a 8640, or was the 1st one the A, followed by the super popular B? I have someone trying to sell me a 8640(non A, non B). I haven't seen it yet, wonder if they are just confused. Or perhaps its me. Thanks all Randy

From R390A@R390A.com Tue Jan 8 20:51:15 2002
Message-ID: <3C3B2383.20164.6652F4D@localhost>

Here is another person who's e-mail is infected. Yet another good reason not to use Outlook Express as your mail client...

From: "Allen (marty) Martin/kg7da" <_kg7da@foxinternet.net>
Subject: Re: [R-390] New R390A WWW Site URL

From w7itc@hotmail.com Tue Jan 8 21:46:02 2002
Subject: [R-390] My R390A

OH-Oh another 3TF7 bites the dust. Ken

From tbigelow@pop.state.vt.us Tue Jan 8 21:58:26 2002
Subject: [R-390] Virus

Helmet Usbeck is as well, I've dropped him a note to let him know.

From mikea@mikea.ath.cx Tue Jan 8 22:34:43 2002
Subject: [R-390] Virus

wrote: > Helmet Usbeck is as well, I've dropped him a note to let him know. And I. Hope he takes my advice: pull the netplug and run current AV software, in that order. Gee, but I'm glad this is a FreeBSD box! Mike Andrews

From rodney_bunt@yahoo.com Wed Jan 9 00:15:18 2002
Subject: [R-390] sp-600-jx-17

I run my SP-600-jx-17 on the 260v tap, for use in AUSTRALIA. We nominaly have 240v. But I haven't seen it that low for some time. In Western Australia it is nominaly 250v but often seen way over 265v where most commercial equipment has a melt-down. PS: if the input volts are too high, then the 0A2's get very hot, and very bright !!! No wonder they drift, and stop regulating.... Rodney VK2KTZ

From Llgpt@aol.com Wed Jan 9 00:19:05 2002
Subject: [R-390] sp-600-jx-17

: << PS: if the input volts are too high, then the 0A2's get very hot, and very bright !!! No wonder they drift, and stop regulating.... Rodney VK2KTZ >>

Exactly, the power is 124 volts, with the 130 volt tap connected, drift is almost non existent on mine. Plus, as you said, the OA2's run cooler. Les Locklear Gulfport, MS.

From ornitz@tricon.net Wed Jan 9 00:35:00 2002
Subject: [R-390] 6080 in place of 6802

wrote: > 6080's can be used in place of 6082's in the R-390 > (NON A), if you series the filament for both tubes.... > OR you could put a single Diode in series with the > filaments if you have no aversion to "sand state" devices > in your R-390 (NON A).

The 6080's filament is rated for 6.3 volts at 2.5 amps while the 6082 filament is rated at 26.5 volts at 0.6 amps. Two 6080 tubes with the filaments connected in series would require 12.6 volts to run the filaments - not 24 to 28.

Adding a single diode in series with the filaments will not do the trick either. For the umpteenth time, the RMS voltage of half-wave rectified AC is 0.707 times the RMS of the original waveform. The misconception that adding a diode in series will allow a 6 volt tube to run on 12 volts appeared in several early tomes on the R-390 receivers and sadly it still persists today.

In the case Rodney suggests, the 6080 tubes would have over 9.3 volts RMS on the filament of each tube leading to very short life. Dr. Barry L. Ornitz WA4VZQ ornitz@tricon.net

From ba.williams@charter.net Wed Jan 9 00:48:26 2002
Subject: [R-390] sp-600-jx-17

< PS: if the input volts are too high, then the 0A2's get very hot, and very > bright !!! No wonder > they drift, and stop regulating.... > > Rodney > VK2KTZ >> > Exactly, the power is 124 volts, with the 130 volt tap connected, drift is > almost non existent on mine. Plus, as you said, the OA2's run cooler. > Les Locklear > Gulfport, MS.

Or with a variac set to 110 volts and using the 117 or 130 volt tap? I think I have a variac on the way and I plan to use it on both R-390As and the SP. Barry

From w7itc@hotmail.com Wed Jan 9 01:09:23 2002
Subject: [R-390] Virus

Let me turn you all onto what I consider the best anti-virus software in the universe, Pc-cillin. I was turned on to Micro Trend by a couple of net-work managers at a couple of high-tech companies in colorado. Pc-cillin doesn't have a bunch of cute little windows and icons etc. They use push technology for updates, in other words the undates come looking for you not the other way around. I like the fact Pc-cillin is 1.5 meg's in size where Norton, and Macafee is a 5 meg plus file. According to these two manager's PC-cillin saved their servers more then once. You can get what they call a house call. Their site can scan your system for viruses, you can also get a free 30 day fully functional demo. go here you won't be sorry. http://www.antivirus.com/free_tool Ken

From rodney_bunt@yahoo.com Wed Jan 9 01:09:56 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Two 6080 tubes with series fillament would require 12.6v at 2.5A. If they were connected to a 25v source with a single diode in series, then they would receive every posative (or negative as the cas may be) half of the AC wave form. That is 25v for half the time or 12.5v Average To obtain the RMS voltage one multiplies the Peak Voltage by 0.707 to arrive at the RMS voltage. When talking about the AC voltages out of a transformer we ARE talking about the RMS voltages! NOT the Peak Voltages. So ther is no RMS conversion necessary. Rule of thumb is, if you apply the voltage for half the cycle, then you get half the current over a full cycle (AVERAGE). So a pair of 6080's wired in series with a single diode, work on a 25v AC supply and draw 2.5A for half a cycle or 1.25 amps AVERAGE over a full cycle, the R-390 (non-A) 25v heater circuit can take the extra 0.6A current. Rodney VK2KTZ

From anchor@ec.rr.com Wed Jan 9 01:06:08 2002
Subject: [R-390] sp-600-jx-17

Barry, I believe the tap in your SP-600's been changed, unless you changed it back. 73, Al, W8UT
http://www.thecompendium.net/radio/

From redmenaced@yahoo.com Wed Jan 9 01:18:37 2002
Subject: [R-390] sp-600-jx-17

Yeah! You do should be there very soon, too. I didn't test it so let me know how/if it works. Joe

From redmenaced@yahoo.com Wed Jan 9 01:25:10 2002
Subject: [R-390] 6080 in place of 6802

Thanks, Barry, But the 6080's work nice in the Tek scopes so they're worth the $2 each I paid for mine! hehehe Joe

From ba.williams@charter.net Wed Jan 9 01:30:47 2002
Subject: [R-390] sp-600-jx-17

> Barry, I believe the tap in your SP-600's been changed, unless you changed > it back. > 73, > Al, W8UT Al,

I couldn't remember if you had said you changed it or not. I've hardly done a thing to the radio after getting it from you after the work you did. I did DeOxit contacts, tube pins, etc. I just put it in a rack, so I'm not looking forward to yanking it out any time soon. I think I changed either the VFO tube or the 0A2. I can't remember now what I changed to correct drift. Barry

From tgrieco@optonline.net Wed Jan 9 01:38:03 2002
Subject: [R-390] SP-600-JX-17

I want to thank you ALL for all the great suggestions. Changed the OA2 last night and will try the AC next. 73's Tim k1syn

From ornitz@tricon.net Wed Jan 9 01:39:40 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Rodney, You need to go back and understand the true meaning of RMS - root mean square. You have to square the waveform before the averaging, then take the square root of the result. Adding the diode in series gives half the power, but you have to take the square root to get the equivalent voltage. Thus the figure 0.707 or the square root of one half.

> Rule of thumb is, if you apply the voltage for half the > cycle, then you get half the current over a full cycle > (AVERAGE).

This is correct. You get half the power. But remember that RMS is the voltage that produces the same power as if it were DC. But power is V*V/R. Note the squaring.

Half-wave rectified 26.5 volts AC produces the same filament temperature as 18.74 volts DC or 18.74 volts RMS. Feel free to look this up in any electrical engineering text. Dr. Barry L. Ornitz WA4VZQ ornitz@tricon.net

From Llgpt@aol.com Wed Jan 9 01:40:24 2002
Subject: [R-390] sp-600-jx-17

ba.williams@charter.net writes: << Al, I couldn't remember if you had said you changed it or not. I've hardly done a thing to the radio after getting it from you after the work you did. I did DeOxit contacts, tube pins, etc. I just put it in a rack, so I'm not looking forward to yanking it out any time soon. I think I changed either the VFO tube or the 0A2. I can't remember now what I changed to correct drift. Barry

Barry, I think you replaced the OA2 after I suggested it. Les

From tadashi@a3.ctktv.ne.jp Wed Jan 9 01:40:53 2002
Subject: [R-390] Access Counter on R-390A

Everybody thought, but nobody realized.
http://www3.ctktv.ne.jp/~tadashi/R390_CNT_E/R390_CNT_E.html Sorry, other pages are written in Japanese. JK1VXE Taddy

From tetrode@worldnet.att.net Wed Jan 9 02:00:26 2002
Subject: [R-390] Access Counter on R-390A

I like it!

From w5or@home.com Wed Jan 9 02:19:31 2002
Subject: [R-390] error message from ithink

Dave, Thanks for sending along that message. I have concluded there is a misconfigured mail server 'out there' somewhere at ithink.com and we just have to ignore those error messages until some harried system administrator at ithink fixes the problem. This error affects all of the qth.net lists, not just r-390.

You've already contributed all I need, Dave, by your acknowledgment. The real kudos for support for the hardware, servers, high speed internet bandwidth, and the donated labor go to Al Waller, K3TKJ, and his band of technical wizards who provide all this to us for free. Like you, I get more out of the list than I put into it. I just wrangle the email problems and with the new software my job is much easier. And here is the rest of the story, for those interested.

<http://www.newszap.com/archives/index.inn?locdetail&doc/2000/July/30-119- news04.txt>

If you can't make your mail+browser read the above web address, just surf on over to newszap.com, search the arhives and put ham and radio in as the two search words. The article is in the July 30, 2000 archive. By the way, Al has been nominated as the Dayton 2002 Ham of the Year for his qth.net service to the radio community. I will forward my reply back to the list so that others who get this ithink message will know they can ignore it as well. Don Reaves W5OR R-390 list manager

From howard@cconnect.net Wed Jan 9 02:55:47 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Hey Rodney, I used a diode to drop half the filament voltage on the 6ba6's in my R-390A.....it worked

so good I forgot it was in there.....and just recently changed it.....after over 20 years of trouble-free service.Absolutely no problem with short tube filament life. Of course, if you are after really really really looooonnnnnggg life, I guess it is a bad idea, like the fellas say. ;-) . Howard

From ba.williams@charter.net Wed Jan 9 03:06:14 2002
Subject: [R-390] sp-600-jx-17

> I couldn't remember if you had said you changed it or not. I've hardly done > a thing to the radio after getting it from you after the work you did.

Yep, I think you are right. Changing the 0A2 did help the drift. Al said that he changed the tap to 130v befoe he sold it to me. He made good notes of everything he did. Thanks to both of you. Barry

From tadashi@a3.ctktv.ne.jp Wed Jan 9 03:19:05 2002
Subject: [R-390] Access Counter on R-390A

Ken, Thanks for visiting to my Web page. You can get some information for 51J-5 without Japanese-English dictinary at... http://www.collinsra.com/cra_album/0009/cra_0009.html Taddy

From redmenaced@yahoo.com Wed Jan 9 03:24:37 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

wrote: > Hey Rodney, I used a diode to drop half the filament > voltage on the 6ba6's > in my R-390A.....it worked so good I forgot it > was in there.....and > just recently changed it.....after over 20 years of > trouble-free > service.Absolutely no problem with short tube > filament life. Of course, if > you are after really really really looooonnnnnggg > life, I guess it is a bad > idea, like the fellas say. ;-) . > Howard
+++++++++
Ok, so let's say that from the theoretical considerations of this that Dr. Ornitz et al. are right.

I have no postition to argue that anyway, he knows more about it than I do.

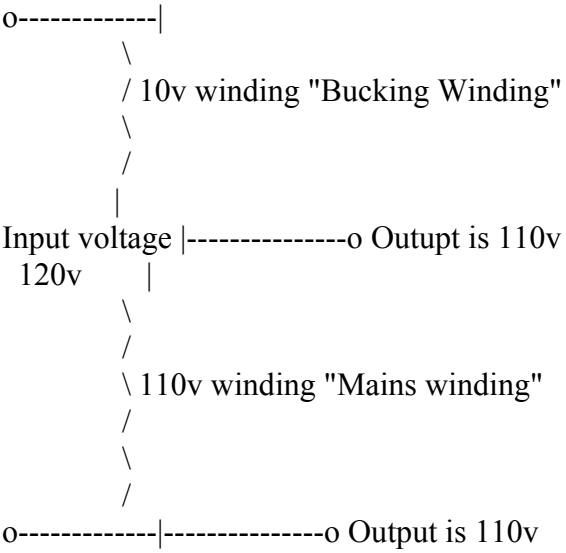
BUT, is it possible that that theory doesn't take into account the varing resistance of the partially cooled filament, it did cool some between pulses where it would have been reheated in the opposite polarity voltage if used with AC.

Also, because of the 1/2 wave DC there is a possibility that the structure is able to dissipate heat just as effectively at the higher voltage for the shorter period of time as it would at AC.

Or does RMS power explain it exactly in practice? Just how do they establish the rated voltage/power? Duty cycle at rated voltage, guys? Um,..... sorry,..... I'm an industrial construction/maintenance electrician.

From rodney_bunt@yahoo.com Wed Jan 9 04:09:14 2002
Subject: [R-390] sp-600-jx-17 - bucking transformer - How to....

You can use a "bucking transformer...



To calculate the Output Voltage

Output Input Voltage*("Bucking Winding" Volts+"Mains Winding" Volts)/"Mains Winding" Volts

PS: make sure the Bucking Winding has a current capability equal to, or greater than, that which is drawn by the Output Load. A lot cheaper than a Variac... Rodney VK2KTZ

From Barry Hauser <barry@hausernet.com> Wed Jan 9 04:24:32 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

> Um,..... sorry,..... I'm an industrial > construction/maintenance electrician.

You guys have been known to bend Ohm's Law -- while still observing local codes, of course. ;-) Also able to work on live circuits, whereas an engineer risks electrocution with more than a couple of flashlight batteries. I suspect it's all in the shoes. Either that, or you work with a different kind of 'lectric -- bigger electrons, the size of basketballs, and more rubbery. Or no electrons at all -- "juice".

Naw -- I think it's the same ol' 'lectrons -- but they behave differently around 'lectricians. Fer instance, a couple jillion close-knit 'lectrons come careening out of a wall outlet, up the power cord through the microswitch into the transformer, round and round they go ..."wheeeeeeeee!!!!"... etc, ... "Oooooh lookie! A 6080 where a 6082 is supposed to be! Let's trash it, gang! Yeah (big crowd noises). Whoaaaa, wait a minute -- get a load of those shoooooes!!! Hey, paisan!! (crowd cheering sounds). OK, it's one of our own, gang, let's give him break. Careful goin' through that filament -- slow down if it gets to hot. An' put your snowshoes on, I think they're gonna be some leaky caps up ahead." "I wonder if he knows where we can find that Ohm guy so we can fry his keester. 'magine -- tryna' tell us what to do! Uh oh! -- row harder men -- there's a drifted-up resistor ahead."

Now, this theory of 'lectric is not quite scientific, true... but it at least helps to explain why a fix works for one guy, but the next one has no luck with it at all. Know what I mean? ;-) Too tired to run 'n duck -- just hit me... Barry

From tadashi@a3.ctktv.ne.jp Wed Jan 9 04:33:22 2002

Subject: [R-390] Access Counter on R-390A

Hi Steve, 51J-5 is the most interesting receiver in all of the Collins's lineup for me. I think their only failure is having not put 51J-5 on the market. Hi. I've seen some 51J-4 has a meter with semicircle window like R-388. Anyway, there is too little information about this receiver. Taddy

From bill@iaxs.net Wed Jan 9 06:07:46 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Barry Ornitz (there's several Barry's here),

This group has changed. It isn't like other groups we've been on where people want to learn, and would be willing to open a book to do it. They've run off several people who seemed to know what they were doing, like Dr. Jerry. Presently we have some really good people who no longer say anything (like Les, Chuck and Nolan) and some good people who have adjusted their messages to fit in better, like Barry Hauser and David Wise.

The way I figure it, these guys ask a question hoping that someone with Authority will tell them what to do in terms they can understand, and without looking like they are any smarter than the guy who asked the question. Nothing wrong with that, but it does put a damper on learning anything.

I don't expect anyone else to read this, because I've been put in most people's kill files even though I don't have an advanced degree. I did see one way of explaining the falsity of the diode job a while ago: Take two 6080's and put them in series at 12 VAC. They draw 2.5 amps and the heaters dissipate 30 watts. Now double the voltage with no diode. They will briefly dissipate 120 watts (24 VAC x 5 amps). Take a new pair of 6080's and add a 5 amp diode. The power is cut in half to 60 watts. Wait, this is twice the rated power of 30 watts for two tubes. Maybe, just maybe, cutting the power in half with a diode isn't the right thing to do. We need to cut the 24 volt power by a factor of 4. I know, use TWO diodes ... but how?

Even if you ignore the math and do it anyway, you are cooking your R-390 audio deck with 60 watts instead of 30. It could barely survive 30 watts, judging by the condition of the parts near the base of the tubes.

If you want to substitute 6080's for 6082's, and if you care about the survival of your R-390, then wire in a 12 volt 3 amp transformer for the 6080's. Regards, Bill Hawkins

From maritimus49@yahoo.com Wed Jan 9 06:17:11 2002
Subject: [R-390] 51J/R-388 series cabinet

Hello All - I am purchasing a beautiful R-388 in excellent condition, a 9+ with the matching cabinet. I would like to offer the cabinet for sale but I'm not sure what price to ask. I have seen two messages on the Collins archives going back 2 years that offered this cabinet for sale and both people were asking $250 plus shipping. The cabinet I have looks like new and has not been repainted. I would like to offer the cabinet to this user group before possibly putting it on ebay. Any comments would be appreciated. Thank you. 73, Bruce K6RQR

From twleiper@juno.com Wed Jan 9 06:10:52 2002

Subject: [R-390] sp-600-jx-17 - bucking transformer - How to....

A good idea. I power two six foot racks full of BA equipment with a 12V .5KVA buck/boost transformer. Knocks it down to 110V. You can pick them up by the scores for about twenty bucks at any good scrap yard that has electrical/electronic junk. Tom

From twleiper@juno.com Wed Jan 9 07:01:39 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

writes: ... > Presently we have some really good people who no longer > say anything (like Les, Chuck and Nolan) and some good > people who have adjusted their messages to fit in better, > like Barry Hauser and David Wise.

And some good people who are crackpots, like me.

... > I don't expect anyone else to read this, because I've been > put in most people's kill files

Their loss...

From laffitte@prtc.net Wed Jan 9 11:38:53 2002
Subject: [R-390] 26Z5!!

Yipeeee!! I found one solitary 26Z5 in my miniature tube box and is mine mine mine HA HA HA!!! Well, its true I found it but lets face it guys, the 26Z5s are over, done for and basically nonexistent unless of course you want to pay more than what they are worth and I mean a lot more. So the next time a 26Z5 goes out, give it an honorable burial in the trash can and do what the Navy did many years ago. Go SOLID STATE. My first R390A had already been through this mod when I got it from Fair back in 1979. If you have replaced all the problem caps, the increment in voltage will be well tolerated. My EAC tolerated it for over 20 years until recently it found a new owner. So from now on repeat after me " I will not try to replace my 26Z5s" many times. I will keep my find though as a nostalgia item :>).
Best 73s to all Guido Santacana KP4FAR

From courir26@yahoo.com Wed Jan 9 13:04:04 2002
Subject: [R-390] Page Won't Open: Access Counter on R-390A

What am I doing wrong? The picture won't come up for me.

From tadashi@a3.ctktv.ne.jp Wed Jan 9 14:50:25 2002
Subject: [R-390] Access Counter on R-390A

Hi, Thanks y'all visiting to my Web page. More than 200 explorers came to see the counter last 12 hours and it's a new record of course. 73's Taddy

From twleiper@juno.com Wed Jan 9 16:48:34 2002
Subject: [R-390] Page Won't Open: Access Counter on R-390A

writes: > What am I doing wrong? > > The picture won't come up for me. Add "www." to the link...

From R390A@R390A.com Wed Jan 9 16:52:32 2002
Subject: [R-390] Dead R390A

Check and see if the ballast tube is getting warm, V505 on the IF deck and the PTO tube filaments are lighting up. If not, the ballast tube is open and its time to replace it with solid state like I did Les' radio.

If not, take a scope an start by checking the outputs of the various oscillators. They should all beat at least 2V p-p. Chuck Rippel, WA4HHG

From R390A@R390A.com Wed Jan 9 16:44:13 2002
Subject: [R-390] SP600JX17

One thing to keep in mind is that SP-600's, even after recapping and taking the extra step of adding the mod which regulates the filament voltage to the top 4 tubes, still drift quite a bit until the entire chassis heat saturates.

As to setting the input line voltage, the best way to determine the correct A/C Line input voltage (@60 cycles!!!!!) is to monitor the tube filament voltage at your tube of choice other than the rectifier, regulator or the (12AU7??). Set the line input voltage to a value that yields 6.3VAC at the tube filaments. That puts the other voltages right about where they need to be.

From R390A@R390A.com Wed Jan 9 16:59:00 2002
Subject: [R-390] Service Monitor

We have one stashed away here at work and with good reason. In a word, they suck, in my opinion anyway. We changed to Marconi's some years ago. Beyond that, for working on vintage equipment, there is little utility in a service monitor. They are very expensive and are mostly aimed at the 2-Way FM market. Pick up an HP606B or and 8640B and you'll do just fine.

From R390A@R390A.com Wed Jan 9 17:11:51 2002
Subject: [R-390] HP-8640B Part Needed

Anyone have a junker HP-8640B around? A mechanical coupler in mine broke and not all the attenuator steps are working right. I need to get down to the lowest level to do noise floor checks and I simply can't get there. I could go inside to repair it but those are very precision and I am not too quick to do that. Any help out there?

From rlruszkowski@west.raytheon.com Wed Jan 9 18:22:31 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Fellows, I follow all the logic in these arguments and see Zero Point Energy Here. If we push an AC voltage across a diode to develop a positive pulse we get more than 1/2 the available power on the far side of the diode. If we push the same AC voltage across a second diode to develop a negative pulse we get more than 1/2 the available power on the far side of the diode. If we filter the positive pulse to a DC average and If we filter then negative pulse to a DC average the working power potential between the

two DC voltage is more than the input power. Put all the good miss applied math away and understand you do not get more out than you put in. If you argue that the DC pulsed power out of diode is greater than 1/2 in a positive polarity then you must accept that the DC pulsed power out of diode is less than 1/2 in a negative polarity If you apply 12.6 volts to a diode and 6.3 volt filament in series the filament sees the correct power whether the diode provides a positive or a negative pulse to the filament diode junction. If you apply 25.2 volts to a diode and two 6.3 volt filaments all in series the filaments see the correct power whether the diode provides a positive or a negative pulse to the filament diode junction. The tube change in the R390 power supply regulators works. Using a diode in the 3FT7 socket with two 5749's works. In each case two 6.3 volt filaments are placed in series with a diode and powered from 25.2 volts (or what ever it says in your text). The diode blocks 1/2 the power. 1/4 of the power is dissipated in one tube filament. 1/4 of the power is dissipated in the second tube filament. The thermal cycle of the tube is longer than 1/60 of a second and the filament yields a near stable source of heat for the tube cathode. The one 1/2 of the power blocked by the diode is a true power not used. In the original circuit the power was converted to heat. For the 3FT7 ballast tube the heat provided a voltage regulation function. For the R390 series regulator tube the heat was wasted in a pair of tubes that did not work by design to the tubes full capability. Roger KC6TRU

From billsmith@ispwest.com Wed Jan 9 18:30:17 2002
Subject: [R-390] 26Z5!!

I wonder if I haven't thrown some away... I don't throw ANYTHING away except... 26Z5? Who would use that except in a one-off application inside a 1970's television set? :-(((((73 de Bill, AB6MT billsmith@ispwest.com

From David_Wise@Phoenix.com Wed Jan 9 18:25:47 2002
Subject: [R-390] 26Z5W - 12BW4 replacements

Another possible replacement is the 12CT3 or 25CT3. Like the 6V4 it's a little taller than the 12BW4 (2-7/8" vs 2-3/8") but should fit.

To use a pair of 25CT3s, move 1 to 2 and {3,8} to 9. That's it. To use a pair of 12CT3s, do the above and rewire 4/5 to put the heaters in series. Pins 1, 3, 7, and 8 are labeled "IC" (Internal Connection) and can't be used as tie points. If you're willing to inspect your 12CT3s to confirm that 1 and 7 are actually NC or plate, jumper 1-2-6-7, move {3,8} to 9, and put the heaters in series. This arrangement will accept 12BW4s and _those_ 12CT3s. Obviously this merits a big CAUTION in the radio's maintenance book.

The xCT3 may have an availability advantage, as RCA Receiving Tube Manual RC-29 (1973) lists them as "active" while 12BW4 is "replacement only".

If you do any of these mods, PLEASE put a big warning on the PS not to install 26Z5s. Otherwise the next poor schmuck will Do The Right Thing and... BOOM. Regards, Dave Wise

From ornitz@tricon.net Wed Jan 9 18:44:42 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

> brought up some interesting questions on the subject: > Ok, so let's say that from the theoretical > considerations of this that Dr. Ornitz et al. are > right. > I have no postition to argue that anyway, he knows > more about it than I do. > BUT, is it possible that that theory doesn't take into > account the varing resistance of the partially cooled > filament, it did cool some between pulses where it > would

have been reheated in the opposite polarity > voltage if used with AC.

The thermal time constant of the 6080's filament is on the order of 10 seconds. Any variations in filament temperature due to pulses occurring 60 times a second will be pretty negligible (close to 30 dB down).

> Also, because of the 1/2 wave DC there is a > possibility that the structure is able to dissipate > heat just as effectively at the higher voltage for the > shorter period of time as it would at AC.

> Or does RMS power explain it exactly in practice?

Again the thermal time constant determines this. The temperature the filament reaches will be determined by the RMS value of the waveform applied as long as the period of the waveform is much shorter than the thermal time constant. The thermal time constant of many small receiving tubes is on the order of 20 seconds.

> Just how do they establish the rated voltage/power?

>From the needed temperature for proper electron emission...

At low filament temperatures, a tube's emission is solely determined by the filament temperature (the principle behind temperature limited diodes used as noise generators for testing receiver noise figure). With oxide coated cathodes, like those used in the 6080 and most modern tubes, cathode emission is far more than adequate for normal operation. So the cathode temperature is chosen as a compromise of high electron emission versus filament life and excessive "boil-off" of the oxide emitters.

Because tube filaments operate at lower temperatures than do the filaments in incandescent lamps, tube life versus filament voltage is not quite as sensitive as it is in lamps. However the relationship between lamp life and lamp voltage is well documented and is a good thing to understand. Chicago Miniature Lamp, Inc. gives the
following relationship:

$$\frac{\text{Life at Operating Voltage}}{\text{Life at Rated Voltage}} = \left(\frac{\text{Rated Voltage}}{\text{Operating Voltage}}\right)^{12}$$

[Doing equations in ASCII is difficult, but the second ratio is raised to the 12th power. The voltages are all expressed as RMS. Read this in a fixed width font.]

Basically this says that raising the voltage by 10 percent shortens the life to less than a third the normal life. Likewise, dropping the voltage by 10 percent more than triples the lamp life. [As an electrician, I am sure Joe realizes that 130 volt bulbs last far longer than do 120 volt bulbs.] This is also why those 24 volt bulbs are better replaced by 28 volt bulbs in the R-390 series.

This improvement in life is not without its costs though. The rated light output drops with operating voltage. In the case of a 10 percent reduction in voltage, the light output is only about 70 percent of what it was at full voltage. The light is somewhat more yellow due to the lower filament temperature.

But as I said earlier, this equation does not directly apply to tube filament voltages with their lower operating temperatures (at least with oxide coated cathodes; it holds fairly well with high-power directly heated filaments). However it does show that excess filament voltage is not a good thing.

Deviations of the filament voltage in small receiving tubes of up to 10 percent are generally acceptable, but for transmitting tubes, especially directly heated filament types, it is best to keep the deviations within 5 percent. 73, Barry WA4VZQ ornitz@tricon.net

From rlruszkowski@west.raytheon.com Wed Jan 9 19:03:52 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Barry Ornitz, I agree with This group has changed. You are right.

Take two 6080's and put them in series at 12 VAC. They draw 2.5 amps and the heaters dissipate 30 watts. The effective resistance is 12Vac / 2.5 amps 4.8 ohms. OK The effective power is 30 watts (12 VAC x 5 amps).

Now double the voltage with no diode. Take two 6080's draw 5 amps and the heaters dissipate 120 watts. The effective current is 24 vac / 4.8 Ohms 5 amps The effective power is 120 watts (24 VAC x 5 amps).

Now add the diode. What ever happens now happens 1/2 the time. Barry said so. 1/2 the time it will work. 1/2 the time it will not work. This is a half wave rectifier. 1/4 the power. 120 watts is back to 30 watts.

The applied voltage is 24 volts 1/2 the time. This averages to 12 volts. The applied current is 5 amps 1/2 the time. This averages to 2.5 amps. An average 12 volts time and average 2.5 amps is an average 30 watts.

Before you leap on that RMS average and .707 and PI pile again, Remember that if you turn that diode around and get a half wave rectifier of the opposite polarity you do not get more or less power out of the circuit. Therefore the final results is either way the diode goes in the circuit the output must be equal and by logic 1/2 of the input.

Fellows have operated these circuits for years, with or with out math and understanding. The Provda is and it is us who must come to understand nature. Roger KC6TRU

From twleiper@juno.com Wed Jan 9 19:19:30 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

writes: > This is a half wave rectifier. 1/4 the power. > 120 watts is back to 30 watts.

Just pray that the diode doesn't short out... Might be a good place for a fuse... Tom

From gkaufman@the-planet.org Wed Jan 9 19:36:53 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Tom - When I received my R390 someone had put in 6080's. They were running extremely hot and were rather scorched. I assumed that they were there in error and substituted 6082's. These ran poorly, with the B+ never rising fully. After much headscratching I ultimately discovered that the filaments were in series and the diode shorted! Apparently neither 6080's or 6082's like 12.6v ... - Gary

From rlruszkowski@west.raytheon.com Wed Jan 9 19:38:32 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

> This is a half wave rectifier. 1/4 the power. > 120 watts is back to 30 watts. Just pray that the diode doesn't short out... Might be a good place for a fuse... Tom
---

Tom, You got it, this sand state stuff can never be trusted. You know you can not protect the sand state diode with a fuse. Murphy says the diode will always fail first to protect the fuse. We just have to live with some risk in our life. I am using 12BY7 myself for the 3TF7. I did have a jumper in the socket and used 2 12BA6's for the BFO and PTO. But a diode poked into that socket would much simpler to install. **I do like the 6BA6 5749 tubes better than 2 12BA6's. When I when through my last noise reduction drill over Christmas, I found I had no way to judge the noise of the 12BA6's in the PTO and BFO circuits. By using the 6BA6's, I was able to select 2 very quiet 6BA6 tubes and use one in the PTO and one in the BFO. Selecting 6BA6's in the first IF tube socket for best noise is more sensitive than using the BFO or PTO socket.** Roger.

From cbscott@ingr.com Wed Jan 9 19:48:42 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Of course, you could use a spare 26Z5W in place of that solid state diode and you wouldn't have to worry about it shorting... Barry - N4BUQ

From redmenaced@yahoo.com Wed Jan 9 20:45:46 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

wrote: > writes: > ... > Presently we have some really good people who no > longer say anything (like Les, Chuck and Nolan) and some > good > > people who have adjusted their messages to fit in > better, > > like Barry Hauser and David Wise. > > And some good people who are crackpots, like me.
+++++++
HEY! I've been on this list for years, too. I pre-date ALL of the Barry's.

> > I don't expect anyone else to read this, because > I've been > > put in most people's kill files
+++++++
Wow, where's that leave me?

> Their loss...
>
> > Take two 6080's > > [correct analysis of elementary power calculations > redacted] > > > If you want to substitute 6080's for 6082's, and > if you care > > about the survival of your R-390, then wire in a > 12 volt 3 amp > > transformer for the 6080's. > > Or wire two more in series and use them as sock > warmers...
+++++++
Hey, not a bad idea! I was thinking of some sort of cup holder though. Joe

From twleiper@juno.com Wed Jan 9 20:55:27 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

> writes: > Of course, you could use a spare 26Z5W in place of that solid state > diode and you wouldn't have to worry about it shorting...

HAH!

From twleiper@juno.com Wed Jan 9 21:07:46 2002
Subject: [R-390] sp-600-jx-17 - bucking transformer - How to....

writes: > How I identify a buck/boost transformer if I start cruising through > the local scrap dealers?

It'll be about 4X5X6 inches (for proper rating), usually painted gray, and will have a terminal diagram that shows connections for 120/240 on the primary and 12/24 on the secondary. Usually they mount to the wall, with connection covers on the top and/or bottom.

Here's one: http://www.grainger.com/Grainger/productdetail.jsp?xixi&ItemId161160342 8

What you will be doing is hooking the secondary in SERIES with the the load to boost or buck the voltage depending upon which polarity you hook up either the primary or secondary. Tom

From r390a@enteract.com Wed Jan 9 21:28:18 2002
Subject: [R-390] Access Counter on R-390A

and check out his movie file of a TT-4: http://www3.ctktv.ne.jp/~tadashi/TT4/DSCF0144.AVI

From twleiper@juno.com Wed Jan 9 21:26:56 2002
Subject: [R-390] Correction

Correction on that buck/boost transformer link:
http://www.grainger.com/Grainger/productdetail.jsp?xixi&ItemId161160342 8 Sorry

From twleiper@juno.com Wed Jan 9 21:57:46 2002
Subject: [R-390] Corrected Correction

Weird, keeps trimming the line length. Just put that "8" on the end...

From ornitz@tricon.net Wed Jan 9 22:41:15 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Unfortunately I must agree with Bill Hawkins and the several people who sent me private email. The dumbing down of Amateur Radio is amply demonstrated by this group. Few seem to understand even the most simple relationships between voltage, current, and power.

One more time. We have two 6080 tubes with their filaments in series hooked to a 25.2 volt RMS AC source with an ideal diode in series with both. But since the RMS seems to be confusing people, let us say we have 25.2 volts DC and a switch that opens and closes very rapidly with a 50 percent duty

cycle. The result is the same.

The tube can be viewed as a resistance of 2.52 ohms (6.3 volts divided by 2.5 amps). With 6.3 volts applied to the tube filament, the heater develops 15.75 watts (6.3 volts times 2.5 amps).

Now with the first half of the AC cycle (the switch is closed), the voltage is divided between the two tubes and each tube sees 12.6 volts. From Ohm's law, it draws 5 amps (12.6 volts divided by 2.52 ohms). Now this power is 63 watts (12.6 volts times 5 amps). Note how this is exactly 4 times the power the filament is rated for.

You could also calculate this by using the total voltage and the total resistance. 25.2 volts divided by 5.04 ohms equals 5 amps. 5 amps times 25.2 volts equals 126 watts for both tubes.

With the next half cycle (switch open), the tubes receive no voltage. So the heater power is zero.

Average the two and you see each tube filament is heated with 31.5 watts (63 watts divided by two). This is twice what the filament is designed for. For both tubes, the combined heater power is 63 watts (126 watts divided by two).

Now ask what would be the steady voltage that would produce the same heater power if the current flowed continuously. The answer is 8.909 volts. Calculate this by the following:

V^2 31.5 watts * 2.52 ohms 31.5 volt-amps * 2.52 ohms
31.5 volt-amps * 2.52 volts/amp 79.38 volt-volt

Take the square root and you get 8.909 volts.

Knowing this, calculate the tube current as 3.535 amps (8.909 volts divided by 2.52 ohms).

Multiply the two together to get the filament power and you get 31.5 watts as we calculated earlier.

This is twice the rated filament POWER for the 6080, and you _will_ damage the tube. Will it burn out instantly? Probably not, but the tube life will be severely degraded.

Between the explanation Bill Hawkins wrote and this, if you still do not understand, you really need to go back and study. 73, Barry L. Ornitz WA4VZQ ornitz@tricon.net

From JamesMiller20@worldnet.att.net Wed Jan 9 22:49:47 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

And what about the changes in filament resistance as a function of temperature caused by pulsating filament current? Would the filament be cooler on average, hence having a lower resistance on average, further compounding the problem?

From anchor@ec.rr.com Wed Jan 9 22:52:23 2002
Subject: [R-390] Corrected Correction

if you type it like this: <http://www.grainger.com/Grainger/productdetail.jsp?xixi&ItemId1611603428 >
I think it'll work -- use the < and >

From David_Wise@Phoenix.com Wed Jan 9 23:02:20 2002
Subject: [R-390] HP-8640B Part Needed

There are several parts sets on eBay right now.

From hankarn@pacbell.net Wed Jan 9 23:14:39 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Barry O, You still have redesign engineers who do not know how to spell engineer let alone be one. They forgot what MR. OHMs law is all about. Talk about wasting bandwidth. Hank KN6DI

From rodney_bunt@yahoo.com Wed Jan 9 23:26:43 2002
Subject: [R-390] SP600JX17 - drift

Chuck, The 6C4 Oscillator at V4 is "braced" to the the chassis with a "thumb" screw, "brace" and "sheild" combination. If you move this tube the oscillator frequency moves. I have seen this tube shield and "brace" arrangement replaced with "heat dissipating tube shields" without this "brace" arrangement. This is not recomended, unless the "mechanical stability" of the "Brace" is reinstated somehow. This also is a potential source of "drift" before "warm up" has stabalised. Rodney VK2KTZ

From mikea@mikea.ath.cx Wed Jan 9 23:35:23 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

wrote: > And what about the changes in filament resistance as a function of > temperature caused by pulsating filament current? Would the filament be > cooler on average, hence having a lower resistance on average, further > compounding the problem?

A simple (though perhaps rough on the gear) experiment will demonstrate how long is required for the filaments and cathodes f most tubes to cool down. Simply power it down, count three seconds, and apply power again. It'll probably come right up.

Another way is to view the filaments by the light of a TV set, at 30 (or is it 60) half-frames per second. If the filaments appear to get brighter and dimmer, it's due to stroboscopic effect, as the power line frequency isn't going to be exactly 60 Hz, though it may be within a few parts in 10K. At any rate, if there _is_ a stroboscopic effect, the filaments are cooling down near the zero crossings.

Betcha you won't see it. -- Mike Andrews mikea@mikea.ath.cx

From ornitz@tricon.net Wed Jan 9 23:37:29 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Hi James, The resistance of tungsten goes up with temperature. The actual temperature achieved would be slightly less than that predicted from assuming a constant resistance. However the effect is not nearly large enough to protect the tube.

You would see more of an effect with direct filament tubes where the higher temperature would mean more heat loss by radiation (visible light and infrared). However oxide coated cathodes would show little increase in radiation heat transfer. And remember that in vacuum, radiation and conduction are the only means of heat transfer.

Since the thermal time constant is so much longer than the period of the pulsations, the pulsations themselves would have no effect. 73, Barry WA4VZQ ornitz@tricon.net

From JamesMiller20@worldnet.att.net Wed Jan 9 23:51:26 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

You know I just tried this (threw my back out again, darn it) and I see the strangest effect when viewing the ballast tube in the glow of the color TV. The long slender filament actually seems to be vibrating, like a wave. Yes the phase locked TV scan frequency is a little different than the line frequency, so this aliasing effect is clearly noticable. Could this 60 Hz vibration of ballast tube filaments be the cause of premature failures?

From Barry Hauser <barry@hausernet.com> Thu Jan 10 00:09:01 2002
Subject: [R-390] SP600JX17 - drift

I suppose this really belongs on the Hammarlund list, but here's my 2 cents worth anyway:

As heavy as the SP-600's are, the chassis are not all that solid. If you've ever picked one up wrong, you may have noticed that they can twist a bit.

In addition to the "brace" on that tube shield (why all the quotations marks, Rod?), there are possibly some other sources of drift as the receiver warms up, or from vibration. For example, the RF strip is right over the turret with all those spring contacts. If something is loose or that strip is missing some screws, I suppose that could be a factor -- and lead dress under there after a repair or recapping job.

Also, the gauge of the sheet metal is not quite as thick as that with the '390x's which also benefit from the H-frame/modular design. Even the front panels on the SP-600's are thinner -- from the half dozen I've seen.

The chassis has six heavy-gauge corner supports -- don't know what else to call them -- which should be good and tight. Many of these rx's are missing their bottom covers -- a medium gauge rectangle of aluminum with six holes for the screws that mount up to the ends of those supports. The chassis is a lot stiffer with the cover in place. (Hank Arney may still have repro covers available).

Just theorizing, but it stands to reason, if that tube shield with the brace is important, then some of the bigger parts underneath it might be too. Barry

From bill@iaxs.net Thu Jan 10 00:04:31 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Group, I sincerely apologize for making a private irritation public. It's a stupid mistake to make, because irritations are personal and will not be shared by the group. Each one to his own taste. Besides, I forgot to mention other valuable contributors who either add to the knowledge we need to keep these

fine old sets running, or keep the list going with some comments or banter.

Worse, the first time I heard about the diode trick, I was sure the voltage was cut in half and gave the guy no end of grief. But I was young then, maybe 56. The thing that finally convinced me was two 60 watt bulbs, a diode and a variac. Light one bulb with the diode from 120 VAC. Adjust the variac to light the other bulb to about the same brightness. The reading will be closer to 85 volts than it is to 60. Truly, a diode only cuts the *power* in half. Voltage and current get cut by about 70%.

Maybe there's something about having a cold for ten days in Minneapolis that makes a man grumpy at age 64. R-390s - gotta love 'em, gotta help the people who have 'em. Regards, Bill Hawkins

From gwmoore@moorefelines.com Wed Jan 9 23:38:58 2002
Subject: [R-390] Capacitor replacement when restoring

Ok, I realize that this is a simple question, and I should already know this, but WHICH caps beside the electrolytics should be replaced when doing a total rebuild/restoration? I am now doing an Eico 753 but will be following shortly thereafter with my R390A.

Do I have to worry about the ceramic disks? They all test good with the Fluke DVM , and otherwise look ok. What I sm conserned about, besides the electrolytics are the silver mica, the molded silver mica, and the mylar ones.

Any info here is appreciated...also, if someone has a male Amphenol MC2M plug, or prefably 2 of them...I wouldnt complain if they had the matching receptacle as well, let me know.... I do want to get this thing back on the air ASAP. Yes I do have a second, and works reasonably well, but I am doing a complete teardown and restore on the first. 73 es tnx Greg WA3IVX

From mikea@mikea.ath.cx Thu Jan 10 00:14:06 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

wrote: > You know I just tried this (threw my back out again, darn it) and I see > the strangest effect when viewing the ballast tube in the glow of the > color TV. The long slender filament actually seems to be vibrating, > like a wave. Yes the phase locked TV scan frequency is a little > different than the line frequency, so this aliasing effect is clearly > noticable. Could this 60 Hz vibration of ballast tube filaments be the > cause of premature failures?

Ah, a truly adventurous soul! I'm sorry about your back, maybe next time you should try it with an All-American 5, not a BA. ;)

They do in fact vibrate, yes indeedy, and I would not be at all surprised if this were one of the failure factors. I also rather suspect that the vibration frequency for the ballast isn't quite 60 or 120 Hz, due to mechanical inertia. Did you see any strobe effect between glowing filaments and TV? -- Mike

From Llgpt@aol.com Thu Jan 10 00:37:51 2002
Subject: [R-390] SP600JX17 - drift

writes:<< I suppose this really belongs on the Hammarlund list, but here's my 2 centsworth anyway:

Barry & Group, I have owned 18 of these fine receivers. The ones which exhibited little or no drift were the three John R. Leary Remanufactured SP-600's. Why???

Just as you stated above, the chassis flexes. John noticed this and in most of the 40 odd SP-600's be custom rebuilt, he added cross bars for strengthg and stability. One that Chuck Rippel aligned for me a couple of years ago sat for hours on 10mc's and after a two hour warm up drifted 10 cycles over the next hour...I'd say that's pretty stable.

The present one I own was one of John's earlier efforts and doesn't have some of the braces the later ones had. It drifts a little more than the previous one. But, I have replaced the hf oscillator tube with a IERC tube shield and noticed no difference whatsoever. Les Locklear

From rlruszkowski@west.raytheon.com Thu Jan 10 00:58:33 2002
Subject: [R-390] SP600JX17 - drift

But, I have replaced the hf oscillator tube with a IERC tube shield and noticed no difference whatsoever. Les Locklear

What tube is a Sp600 can be swaped out with a tube shield with out a change in the Sp600 performace? I thing this is another Zero Point Energy Source here <:). Roger KC6TRU.

From ba.williams@charter.net Thu Jan 10 00:58:16 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Bill, Thanks for saying that. As a beginner I was starting to feel like I did on the 'pay' list where questions weren't tolerated with I read your first message. The big things that appeal to me on this list is the knowledge base, the willingness of those knowledgeable to help the less knowledge, the great personalities of the members, and wide range of topics. Anyway, I guess that cold is kicking your butt pretty good. Have you tried the Wild Turkey treatment plan yet? Barry Williams

From twleiper@juno.com Thu Jan 10 01:07:32 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

writes: But since the RMS seems to be confusing people, let us say we have 25.2 volts DC and a switch that opens and closes very rapidly with a 50 percent duty cycle. The result is the same.

Really? I beg to differ. The area under the half square wave is equal to the area under the FULL sine wave, so you actually have to switch your DC on at a 25% duty cycle (relative to the full AC cycle) if you want to achieve the same effect as the diode. Remember, a square wave has twice the power of a sine wave of equivalent peak voltage. On the other hand, the peak AC voltage is much greater than the RMS value, so why doesn't the filament nuke out on the AC peaks? Scrap all this crap.

Let's try a simpler explanation than even the switch example:

However we want to calculate it, RMS, ohm's law and PEI aside, we should be able to agree that the power consumed is directly proportional to the quantity of electrons flowing...regardless of direction and potential. Furthermore, in the AC circuit we are talking about, we know that half the electrons flow one direction and half the other, and at equivalent and opposite rates. If we put in a diode, we eliminate half

the total flow of electrons at various potentials, thus half the power delivered. If one agrees that the circuit WITHOUT the diode consumes four times the normal power (120 watts instead of 30), then WITH the diode it will be half of the 120 watts or 60 watts...twice the original.

If diodes could do the job, why do the utilities use transformers? Why not just put a giant triac dimmer switch on the pole? More grist for our ever grinding mill... Tom

From KS1U@prodigy.net Thu Jan 10 01:10:23 2002
Subject: [R-390] Re: [Eico] Capacitor replacement when restoring

Greg: Hello. If you're going to all the trouble of a complete rebuild, I would replace all the caps unless expense is a concern. The ceramic caps are probably ok but there is no way to tell if the are becoming brittle due to heating and cooling cycles, and for the same size components you can get a higher voltage rating and probably tighter specs. You might get some opposing views, but my vote is to replace everything and make it better than it was. George

From rlruszkowski@west.raytheon.com Thu Jan 10 01:25:16 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

One more time. We have two 6080 tubes with their filaments >in series hooked to a 25.2 volt RMS AC source with an ideal diode in series with both. But since the RMS seems to be confusing people, let us say we have 25.2 volts DC and a switch that opens and closes very rapidly with a 50 percent duty cycle. The result is the same.

This is not true. Close but no cookie.

>The tube can be viewed as a resistance of 2.52 ohms (6.3 >volts divided by 2.5 amps). With 6.3 volts applied to the >tube filament, the heater develops 15.75 watts (6.3 volts >times 2.5 amps).

This passes the logic test.

>Now with the first half of the AC cycle (the switch is >closed),

Changed subject here in logical argumnet. It was DC with a 50 percent duty cycle.

>the voltage is divided between the two tubes and >each tube sees 12.6 volts. From Ohm's law, it draws 5 >amps (12.6 volts divided by 2.52 ohms).

For the 1/2 duty cycle in which DC power is applied.

>Now this power is >63 watts (12.6 volts times 5 amps). Note how this is >exactly 4 times the power the filament is rated for.

This logic mixes AC and DC and is not true. The math is fine (but) the logic is in error.

>You could also calculate this by using the total voltage >and the total resistance. 25.2 volts divided by 5.04 ohms >equals 5 amps. 5 amps times 25.2 volts equals 126 watts >for both tubes.

>With the next half cycle (switch open), the tubes receive >no voltage. So the heater power is zero.

>Average the two and you see each tube filament is heated >with 31.5 watts (63 watts divided by two). This is twice >what the filament is designed for. For both tubes, the >combined heater power is 63 watts (126 watts divided by >two).

This hypothetical problem is logically correct but nothing I would ever implement in tubes and hardware and then apply power to.

>Now ask what would be the steady voltage that would produce >the same heater power if the current flowed continuously. >The answer is 8.909 volts. Calculate this by the >following:

Another hypothetical problem. Getting to the Diode part current flow is only 50% of continuously.

With the tubes and diode all in series.
Apply twice the voltage across the proper filament resistance for 1/2 the time and the power comes out correct.

The AC is 1/2 wave rectifed by the diode.
The voltage is pulsed.
The current is pulsed.
The filament resistance limits the power flow.
The average results works.

Diddle this math all day. But other people report their circuits have worked for years.

Barry, Where did you miss the diode in this thread? Roger KC6TRU.

From JamesMiller20@worldnet.att.net Thu Jan 10 01:52:04 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

I did not see the strobe effect between the filament glow and the TV scan rate. Frankly, I think you're pulling our legs about that factor, since the glow is a heating effect and would probably not dissipate that rapidly (60 Hz). You are pulling our legs, aren't you? But the slowly walking "standing wave" seen in the vibrating filament illuminated by the TV flicker was awsome to watch. So that begs the question. It seems to me that using DC rather than AC would create less mechanical stress on the filaments, I wonder why they didn't do that. By the way, where in the 390a is this 6080 tube used?

From David_Wise@Phoenix.com Thu Jan 10 03:15:24 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

<snipped for brevity> > With the tubes and diode all in series. > Apply twice the voltage across the proper filament > resistance for 1/2 the time and the power comes out > correct.

With all due respect, Roger, for what it's worth, I'm weighing in with those who say it's wrong. This has been hashed hard, but we haven't exhausted the ways of saying the argument. Let me try.

Your error above (and it's subtle if you read it quickly) is in thinking that power is proportional to voltage. It's not, it's proportional to voltage squared. So, if you apply twice the voltage for half the time,

what you get is four times the power for half the time, which is the same as twice the power all the time. Those 6080s that went for years, were sizzling at 8.8V (i.e. sqrt(2) * 6.3V). That they went the distance is a credit to the robustness of their design, but they being abused.

From billsmith@ispwest.com Thu Jan 10 03:31:34 2002
Subject: [R-390] Capacitor replacement when restoring

My understanding is it varies with manufacture of the unit. Others can give you better details. For example, my R-390 is filled with "Vitamin Q" caps, which are reputed to be of excellent quality and generally do not need replacement. I have tested a few and have found this to be the case. Thus most of the caps in this receiver are original.

In the R-390 (non-a) here, which is apparently a late Motorola model, S/N 4700, I have had problems with mica capacitors. Micas are generally very reliable, but the "pink, square" style in this receiver look like they are candidates for further examination. I have replaced three, and believe there are others needing replacement in the RF stages.

The AVC caps, C546 and C547 (1 mfd, located in the IF section near V511 on the schematic) have a reputation for leakage. I disconnected one (they are in parallel) and gutted other case and replaced the insides with a 2-Mfd. cap.

Generally, many capacitors in the .0005-.5 MFd range are constructed of paper and aluminum foil. They become leaky and/or open with age. Bath-tub capacitors (not in an R-390 as far as I know, but popular in other receivers) are now showing up leaky. Performance really depends upon manufacture, with Sprague paper "Black Beauties" notorious as requiring replacement. Any wax covered capacitors are known offenders as are many molded plastic capacitors

As another general statement, one should NEVER turn on any equipment that has been on the shelf for 5 or more years without bringing up the set using a variac. Hitting the set with 120 VAC is a good way to guarantee that electrolytic capacitors in the power supply will need replacement.

In short, capacitors can be generally considered suspect. In most receivers replacement of all cylindrical capacitors is appropriate, with a watch on micas. Filter electroytics may often be recovered by reforming using a variac. While you are at it, make sure to test resistors. Typically, 10% or more of the carbon types in the set will have drifted 20% or more higher in value and should be replaced. I found several open resistors in the R-390 power supply circuit. The power supply was non-operational until the resistors were replaced. 73 de Bill, AB6MT

From mikea@mikea.ath.cx Thu Jan 10 03:56:02 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

wrote: > I did not see the strobe effect between the filament glow and the TV scan rate. Frankly, I think you're pulling our legs about that factor, since the glow is a heating effect and would probably not dissipate that rapidly (60 Hz). You are pulling our legs, aren't you?

No, I definitely was not pulling your leg. I was demonstrating by experiment, in the manner of all good empiricists, that the tube cathode and filament could not possibly cool down enough that the resistance would change materially.

Probably the mechanical stress on the filaments isn't very much: they're insulated, and pushed as a bundle into the cathode, or so I remember from my dissections of dead 6SN7s and 12A(U,V,X,Y)7s. Really low-noise gear tends to use DC on the filaments to reduce the possibility of AC hum leaking thorugh from the filaments and the filament power supply.

IIRC, there is a preference for AC over DC (or vice-versa) in tubes in which the filament is also the cathode. IIRC, it's DC, but I could be wrong. Certainly the most negative part of the filament would "wear" (lose emission) faster if it were DC-heated, while an AC-heated filament would be more likely to lose emission more evenly.

Barry Ornitz may have a better idea of what happens here, and I'd be happy to hear what he has to say on the subject.

Ah! A short Google search on `"power tube" filament supply yields lots of relevant hits. One of the more interesting ones is about the Burle S94000E Power Tube, Its filament supply must provide 3.5 VDC at 4200 Amperes. Yes, that's Four Thousand Two Hundred Amperes to heat the filament. This is a _big_ tube: it weighs 325 pounds out of its crate, and 870 pounds crated. The tube's data sheet says:

A DC filament supply is required. Filament excitation with an AC supply may generate mechanical resonances in the filamen structure. A three-phase, full-wave rectifier supply is recommended.

The operating region on the voltage-current chart tops out at about 90 A with a drop across the tube of 20 KV. At 30 KV, the current is reduced to "only" 65 A or so.

This is typical of large power tubes, judging by what else I found on Google. Still, I hope Barry O. will give us the benefit of his education and experience. Mike Andrews

From David_Wise@Phoenix.com Thu Jan 10 04:01:10 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Sorry for the big quote after my post; I fat-fingered this little laptop keyboard and sent by accident.

If you want to run 6080s, I see three ways to handle the heaters.

1. Transformer. Just a 6.3 or 12.6V filament transformer on 120. If there's room, JUST DO IT. It wins on simplicity, cost, effectiveness, RF noise, and heat. IMO it's the only way to go, but I don't know the realities of the R-390. Somebody give me one and I'll try it :-)

If a transformer won't fit, or you [lunatic :-)] insist on a diode:

2. Diode + resistor. My off-the-cuff numbers here are wrong, but they make a reasonable starting point for cut-and-try. I said that the tubes get 8.8Vrms each, so you need to reduce it to 6.3, that's 5V . The tubes pull 2.5A, oof! so I'd try a 2-ohm 20W resistor and see how it goes. This solution generates more heat than the 6082s.

3. Diode + Zener diode. The zener reduces the peak voltage to one that results in the right power. I haven't calculated the required zener voltage, and it's actually somewhat involved if you want an exact answer (integration of trig functions over less than 90 degrees). Much easier to cut and try until you get the right brightness. To measure the power you'd need a true wattmeter because the waveform is weird. Start with a 7- or 8V 20W zener. It needs to be heat-sinked. This solution also generates more heat than

the 6082s. Regards, Dave Wise

From Bob Camp <bob@cq.nu> Thu Jan 10 04:06:25 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Hi, High power tubes do sometimes use direct heated filaments with DC on them. It's not to common but it is done. In that case standard operating practice is/was to reverse the filament leads once a month to even out the "wear" on the filament. One interesting place it's documented is in a series of ads that RCA ran in QST at the opening of WWII. Enjoy! Bob Camp KB8TQ

From David_Wise@Phoenix.com Thu Jan 10 04:43:13 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

> > High power tubes do sometimes use direct heated filaments with DC on them. It's not to common but it is done. In that case standard operating practice is/was to reverse the filament leads once a month to even out the "wear" on the filament. One interesting place it's documented is in a

I suspect that the wear is electromigration. Anything with DC going through it moves, atom by atom. Wherever the current density is the highest, this effect is the most pronounced, resulting in a progressive necking down of the wire. This is why lamps run much longer on AC than on DC. Regards, Dave Wise

From JamesMiller20@worldnet.att.net Thu Jan 10 05:00:13 2002
Subject: [R-390] [Fwd: Re: [Collins] Multi Receiver Coupler]

To: Chris Kepus <ckepus@mindspring.com>
CC: "'collins@mailman.qth.net'" <collins@mailman.qth.net>,bsh@willinet.net

This just showed up on a microwave mailing list:

> There's a US Army logistics site on the web that has many manuals for older gear, like the 141T/8852/8553, and the 8640B, among many others - all in pdf format and ready for downloading: http://www.logsa.army.mil/etms/find_etm.cfm It requires a recent browser for access.
73, Jerry, K0CQ
--

From Barry Hauser <barry@hausernet.com> Thu Jan 10 05:23:30 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Dave, guys .... As JFK used to say at his entertaining press conferences .. "Let me say this about that." Of course, I'm no JFK, but .. Notwithstanding all the theoretcal controversy (I'm not into that stuff - too political for me) ...

In the most recent issue of HSN -- which isn't all that recent anymore due to a lack of author-contributors (hint) -- the 6082 situation is dealt with -- BTW , it's 6082, not 6802 as the subject line would indicate.

The approach runs along the lines of Dave's #3, and I think it's more elegant than wiring an additional filament transformer to run 6080's. Here's the gist of the article:

I acquired an R-391, which is electronically the same as the non-A, the autotuner is elecro-mechanical and not involved. Turned out to have a solid-stated P/S and audio amp. The audio module, from which normally "hang" the 6082's upside down so as to better cook the works, was almost completely gutted -- only one tube left in the thing.

In place of the 6082's was a piece of blue perfboard with a fairly simple circuit on it. I'm no engineer, so I enlisted the assistance of Dr. Jerry Johnson to figure it out -- basically reverse engineer the thing. It then became his remote assistant (a la Igor) in preparing the article (in addition to being editor of HSN). So, it was as if the NIH Frankenstein monster was already alive, and the good doctor set out to determine why. Not a cookbook article.

Basically, the circuit consisted of a Darlington pair with a pair of zener diodes. Now, this thing had apparently been put together some years ago and the exact same transistors are probably not easy to find, but I don't think there was anything all that special about them. There were no markings on the tiny zeners.

Some of the list members might remember that I called for '390/'391 owners to help out with an experiment -- to use a variac to replicate low/hi AC power levels (about 95 up to 125) and track the B+ which is supposed to be regulated at a nominal 180 volts. What we found is that the solid state circuit performed equivalently to the stock modules. (There were one or two Motorola non-A's that were better -- dead on 180 no matter what, but the Collins's were similar with about a +/- 1 volt variation from 95 to 125 vac supplied.

We wanted to also check on the effects of loading -- mostly that would be audio power consumption -- but couldn't really do that as this modified '391 also has one of those ECG inline flat pack audio amp modules, so it's not drawing any B+.

Now both Dave and Dr. J. expressed some concern over how to mount the zener(s) and/or transistors to dissipate heat, but this radio runs stone cold in that area. Not only that, but the tab mount transistor isn't even sunk to anything -- just floating up from the perfboard. It looks like (to this homebrew forensic specialist) that the tab mount transistor was originally mounted to one side of the shield/baffle as there's a hole with residue of heat sink grease there.

I probably should point out that this rx is running on diodes, not 26Z5W's and has a resistor where the ballast tube used to do it's lava lamp impersonation. ;-)

This was published a few months ago with the hopes that someone would replicate the circuit with new or at least more identifyable parts. Haven't heard anything yet.

The advantage with this approach is a great reduction in heat vs. the 6082's which tend to cook the audio module. I don't understand why the circuit doesn't throw much heat -- but if your design requires it, you can heat sink the zener or transistor(s) right on the side panel. However, it will probably be necessary to use mica insulators and teflon feed-throughs with heat sink grease as the tab on a tab mount or body of a TO-3 would be hot.

Dr. J. was at first surprised that it worked as well as it does. The parts needed, including the perfboard, would fit in your shirtpocket with room left over for a deck of cards and a cell phone.

Will somebody please take a look at the article and whip up a new circuit? It's possible to build it on a piece of board that will fit in where the 6082's go and hook right up with an octal plug into one of the 6082 sockets, so it can be done reversably. Also -- I need author-volunteers. So, c'mon now .. hey .... Barry

From gwmoore@moorefelines.com Thu Jan 10 07:13:02 2002
Subject: [R-390] Re: [Eico] Capacitor replacement when restoring

George,, My feelings exactly. Do 'em now and save time and harassment later. The total cost is very low, and at least you know that you have the original specs back in operation. Since I have the unit pretty well broke down, replacement is not a problem. 73 es tnx de Greg WA3IVX

From gwmoore@moorefelines.com Thu Jan 10 07:17:18 2002
Subject: [R-390] Capacitor replacement when restoring

Bill, that is the course which I am taking. I have found the same problems which you have faced. Do 'em all, and you have an xcvr worth running and aligning. I also am not letting the resistors slip by...they are all getting checked for resistance as some of those older multiwatt ones do cause problems, 73 es tnx de Greg WA3IVX

From tadashi@a3.ctktv.ne.jp Thu Jan 10 11:00:23 2002
Subject: [R-390] Access Counter on R-390A

Hi, I've just added an easy explanatory note for someone who wants to build an Access Counter. Please come to see how they run. I hope this helps you. If you have further questions, feel free to ask me by e-mail. Taddy

From pha@pdq.com Thu Jan 10 13:13:21 2002
Subject: [R-390] Capacitor replacement when restoring

When doing replacement of caps be aware that the heat on the leads to posts that also go to resistors can cause the carbon comp resistors to drift. When I replace bad resistors, I check before and after and frequently have noted an additional 10% drift after removal. So, check resistances after replacing other components. I haven't done an exhaustive study or anything, but they certainly can change value quickly! Paul

From cbscott@ingr.com Thu Jan 10 13:36:06 2002
Subject: [R-390] Access Counter on R-390A

Hmmm, I think Taddy's radio has a problem. Every time I go back an look at it, it's drifted up a few kc... Barry - N4BUQ

From tadashi@a3.ctktv.ne.jp Thu Jan 10 14:45:56 2002
Subject: [R-390] Access Counter on R-390A

Barry, I've transplanted the AUTOTUNE system from 391 to my 390A. The only fault is cannot move downward. :-(Taddy

From tadashi@a3.ctktv.ne.jp Thu Jan 10 14:55:55 2002
Subject: [R-390] Access Counter on R-390A

Barry, And it's just chasing the signal from your old transmitter!! ;-)

From jlap1939@yahoo.com Thu Jan 10 15:17:43 2002
Subject: [R-390] R-390

Friends, If some would learn to use the 390 and other mil. units in proper form and set-up for side band, they would find performance on a par with many converters, ('tho certianly not all)...

I am tempted to argue the matter of bfo neut. and the lowest pitch (or "0") setting of the bfo again, as well as the "center" listening point for AM that so many insist is correct, but I would again, bore those who believe themselves correct, having spent not a day in military use of the equipment...

I will be leaving the group, in all likelihood; I can't bear the new server. Regards, John

From ai2q@adelphia.net Thu Jan 10 15:46:36 2002
Subject: [R-390] Capacitor replacement when restoring

Hi Greg: I second Bill's observations. I just finished restoring a Collins KWM-1 of 1958 vintage, and one of the pink block-style mica capacitors in the set's product detector was operational, but noisy as all get-out. In this circuit, in Standby mode, audio from the product detector is still fed into the set's AF amplifier string, along with sidetone when on CW, and I could hear that puppy crackling away like mad in the loudspeaker when I was transmitting. I zeroed in on it using a signal tracer and scope. It was a satisfying feeling to clip it out and see all the noise go away. Finding it was relatively easy; replacing it was tricky (very tight quarters), but now all's well in KWM-1 land.

From mikea@mikea.ath.cx Thu Jan 10 16:14:39 2002
Subject: [R-390] R-390

Friends, > > If some would learn to use the 390 and other mil. > units in proper form and set-up for side band, they > would find performance on a par with many converters, > ('tho certianly not all)...

True, though I do like my PD-1 (or whatever it is. The little black box with the wallwart, anyway), because it's Dead Simple. Even so, I grew up and got into radio just as SSB was taking off (1960-62), and had to learn to do it the hard way on sets about as stable as the second hand on my wall clock. It's doable, but it's not all that easy.

> I am tempted to argue the matter of bfo neut. and the > lowest pitch (or "0") setting of the bfo again, as > well > as the "center" listening point for AM that so many > insist is correct, but I would again, bore those who > believe themselves correct, having spent not a day in > military use of the equipment...

Couldn't agree more.

> I will be leaving the group, in all likelihood; I > can't > bear the new server.

What differences between the old and the new servers are causing you difficulties? If you'll articulate them, it's possible that they can be fixed, or that one or more of us can provide a work- around. There aren't so many of us that we can afford to chase someone off, troop! -- Mike Andrews

From cbscott@ingr.com Thu Jan 10 16:30:19 2002
Subject: [R-390] R-390

Don't know why, but I noticed today that our spam (Trand Microsystems) filter here is trapping John's posts (traps it as "sensitive content"). Barry - N4BUQ

> Friends, > <snip> > I will be leaving the group, in all likelihood; I > can't > bear the new server.

What differences between the old and the new servers are causing you difficulties? If you'll articulate them, it's possible that they can be fixed, or that one or more of us can provide a work- around. There aren't so many of us that we can afford to chase someone off, troop! Mike Andrews

From David_Wise@Phoenix.com Thu Jan 10 16:37:50 2002
Subject: [R-390] [Fwd: Re: [Collins] Multi Receiver Coupler]

Good to hear from you Jerry! I'm sure there are some people here who didn't know about logsa. It's stuffed with manuals. I've downloaded the HP 8640B manuals. They're about as good a scan as they could do, but HP used such fine lettering that they're still marginal. Way better than nothing though. BTW, a lot of these manuals find their way onto CDs on eBay; understand that you're buying something free, but like Linux, sometimes it's worth it for the convenience.

The site seems to be down pretty frequently, but the help desk people get right on it every time.
Regards, Dave Wise

From David_Wise@Phoenix.com Thu Jan 10 16:38:19 2002
Subject: Recall: [R-390] [Fwd: Re: [Collins] Multi Receiver Coupler]

David Wise would like to recall the message, "[R-390] [Fwd: Re: [Collins] Multi Receiver Coupler]".

From David_Wise@Phoenix.com Thu Jan 10 16:39:32 2002
Subject: [R-390] [Fwd: Re: [Collins] Multi Receiver Coupler]

oops Sorry guys for the false alarm.

From beral@videotron.ca Thu Jan 10 16:52:32 2002
Subject: [R-390] R-390

Hi Barry and All, Please excuse the ignorance, but I would like to know what a Spam is. In simple terms please for a simple person. Thanks a lot. Al

From w2ec@attglobal.net Thu Jan 10 17:08:01 2002
Subject: [R-390] R-390

Am I the only one getting double posts of everything? I'm seeing it on several of the lists that just switched over to mailman.qth.net, not on all the lists, but more than just one or two. 73, Ray W2EC

From cbscott@ingr.com Thu Jan 10 17:13:45 2002
Subject: [R-390] R-390

Al, It's a GenX term for something that's generally unwanted or unsolicited. The word is taken from the "meat" product of the same name from the Hormel company. John, this is in no way a reflection on the content of your posts! It is something with our spam filter. Barry - N4BUQ

From mikea@mikea.ath.cx Thu Jan 10 17:16:30 2002
Subject: [R-390] R-390

> Please excuse the ignorance, but I would like to know what a Spam is. In simple terms please for a simple person.

That's an area where I have more expertise than I want to have. I used to run the abuse desk at a backbone provider; we handled all the complaints. Too many of them.

Here at the Oklahoma Department of Transportation, a major part of my job is fighting spam.

Spam is generally defined as Unsolicited Bulk (or Commercial) E-mail. I prefer the bulk version of the definition, since it includes unsolicited mail from political parties and candidates, religious organizations, and the like. Spam is content-neutral: it's not that you don't want to get porn ads or make money fast newsletters or whatever; it's that you don't want people using your resources, which you pay for, to do their advertising.

Everyone has seen one of the "Five Reports" or "Make Money Fast" letters that constitute somewhere around 30% (yes, three bytes out of every ten) of the traffic on the internet. That's one form of spam; there are others.

A good start on learning more about this issue, which is a real danger to the viability of the entire Internet[1], is available at <http://www.mail-abuse.org>, where I used to work. There also is a Usenet newsgroup, news.admin.net-abuse.email, which deals with spam killing, and another, news.admin.net-abuse.sightings, which deals with the actual spam that people receive, where it comes from, and the like. CAUTION: The S/N ratio on these groups often is rather poor.

Questions? Really. Ask them -- on the list, please, so everyone sees the question; I'll reply to them on-list as well. -- Mike Andrews

From cbscott@ingr.com Thu Jan 10 17:26:30 2002
Subject: [R-390] R-390

Am I the only one on the list whose spam filter is trapping John's posts? Mike, any idea why John's are being caught by our system? Barry - N4BUQ

From R390A@R390A.com Thu Jan 10 16:26:09 2002
Subject: [R-390] SP600JX17 - drift

All very true and good points Barry. A good bit of the drift problem may be caused by the chassis expanding with heat. The SP-600 chassis is not the most robust on on the block and not near as immune to flexing as say, the R390/or the "A" variant.

The regulator I install keeps the filament voltage dead on and even compensates for resistance changes in the actual tube filaments to maintain the same current flow value. The radios still drift. I would suspect they would drift if you regulated every voltage applied as the problem does not appear to be electrical in cause.

The radio still drifts. Les Locklear pointed out in a conversation we had last night that you can pass your hand over the VFO tube on top and if the BFO is on and a station tuned it, the receiver will "pull" just a tad.

I accept the drifting as a part of the personality of the SP-600 family of receivers. BTW having the special tube shield on the VFO oscillator tube that anchors to the main chassis has little effect on drift. That the original is there or its been replaced with an IERC makes little difference.

I didn't get the "quotes thing" either. Chuck Rippel, WA4HHG

From Barry Hauser <barry@hausernet.com> Thu Jan 10 17:09:29 2002
Subject: [R-390] Logsa site

Hi Dave & list: I've been having trouble with the LOGSA site lately. It used to be that I'd be able to download any file not requiring an ID/password. Now, I just get a fragment of the pdf files -- goes through really quickly, but he file doesn't download. Or I'd get an access forbidden message if I just click on the file as if to open it into acrobat right off.

Yet more curious -- one one of my computers, running IE 5.5, I think, I can't right-click/download, but I can open the smaller files directly into acrobat and do a save-as from there.

I posted an inquiry to the LOGSA people. Reply said that you need to be accessing from an army or gov't. system or need an account. There are ways to get an account without re-enlisting ;-), but you need a sponsor.

Incidentally, one of those 8640B manuals says something about "Patriot Missile System" on the cover. Also, I don't see the mil/ruggedized 8640B opt 323 anywhere on there. (If you need the 8640B, it's also on the bama site).

Anybody else notice a change in the LOGSA site? I suspect it may have to do with 9/11. Barry

From mikea@mikea.ath.cx Thu Jan 10 17:35:14 2002
Subject: [R-390] R-390

wrote: > Am I the only one getting double posts of everything? I'm seeing it on > several of the lists that just switched over to mailman.qth.net, not on > all the lists, but more than just one or two.

I'm only getting one copy of each. You might want to ask the listowner. -- Mike Andrews

From cbscott@ingr.com Thu Jan 10 17:36:02 2002
Subject: [R-390] R-390

I'm only getting single posts. I wonder if during the migration to MailMan, you were registered twice? Barry - N4BUQ

From mikea@mikea.ath.cx Thu Jan 10 17:59:12 2002
Subject: [R-390] R-390

wrote: > Am I the only one on the list whose spam filter is trapping John's posts? > > Mike, any idea why John's are being caught by our system?

I've only seen one post from John (jlap<something>@yahoo.com>) in January, and the last post I have before that was on 11Dec last year. I have bunches of posts from him last year.

Can you send me your spamfilter rules so that I can check them against John's headers? And I need some current headers from one of John's letters that got bounced or sidetracked into a "probably spam" folder.

You may have to "whitelist" him; if you don't own the spamfilter and/or the firewall, then you may have to talk the owner into "whitelisting" him. But I'd like to look at the rules and the headers from John's current letters first.

Now, is the spamtrap that's catching him _at_the_listserver_, or is your workplace spamtrap bouncing mail from John that comes to you from the listserver? It's important to know.

John, don't give up hope. This is just another engineering deal, and we'll tinker with it until it runs right. Mike Andrews

From w7itc@hotmail.com Thu Jan 10 18:05:05 2002
Subject: [R-390] R-390

Yes I am getting doubles to. I really don't like how this new mail client work. When you reply to a message it reply top the original writer as the default, not to the group as a whole. If you just hit reply to reply to the sender, if you click on reply all, not only does it go to the original sender is but also to the group at large. thus two replies. Ken

From LAVICWI@mail.northgrum.com Thu Jan 10 18:10:14 2002
Subject: [R-390] Logsa site

Hi Barry, I managed to download a manual from the LOGSA site late last year, but lately I've been

getting the Access Forbidden message. I would definitely like to get a reliable method of tapping into all of that good documentation. Bill

From cbscott@ingr.com Thu Jan 10 18:15:07 2002
Subject: [R-390] R-390

Hmmm, that's the way it has always worked for me (Outlook).

ReplyTo: - Just to the poster
ReplyToAll: - To the poster and the list

Apparently the hotmail email interface sees the incoming addresses than does Outlook.

Barry - N4BUQ

From cbscott@ingr.com Thu Jan 10 18:18:36 2002
Subject: [R-390] R-390

I don't own the owner of the spamfilter and I don't have access to the rulebase. Unless I want to complain to the powers that be, I'll just live with it. Barry - N4BUQ

From dlwade@pacbell.net Thu Jan 10 18:22:39 2002
Subject: [R-390] R-390

Gang, For what its worth, I have gotten double posts on occasion (just from this list)...most were just after we migrated to the new software. Its been awhile now since I've received duplicate posts. Dennis

From rlruszkowski@west.raytheon.com Thu Jan 10 18:24:00 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Roger, >snip< >Your error above (and it's subtle if you >read it quickly) is in thinking that power >is proportional to voltage. It's not, it's >proportional to voltage squared. Dave. >snip<

Dave, Power is voltage * (voltage / resistance) Power is not voltage * voltage

Please stay with this use of band width here. This stuff is not easy or it would be taught in the school house (it ain't so in all states). And there are a lot of bad Urban Legends out there. Some even apply to R390's Try the following ideas on for size.

Bench test #1
Set your RS 12 volt 1 amp transformer (with a center tape secondary) up on the lab bench. Clip your single power diode to one 12 volt secondary lead Clip your filter cap to the diode output and the other 12 volt secondary lead.

The hand book says the secondary of the transformer will deliver 12 Watts at 12 volts at 1 amp. What value 12 watt load resistor should we apply to get a 12 watts of power from the circuit to dissipate as heat? (12 ohm)

The power dissipated as heat in a 12 ohm 12 watt resistor attached to the circuit above is?

A.) None.
B.) 3 watts
C.) 6 watts
D.) 9 watts
E.) 12 watts

Bench test #2
If you reverse the diode and filter cap in the above circuit the power dissipated as heat in a 12 ohm 12 watt resistor attached to the circuit above is?
A.) None.
B.) 3 watts
C.) 6 watts
D.) 9 watts
E.) 12 watts

Bench test #3
Set your RS 12 volt 1 amp transformer (with a center tape secondary) up on the lab bench.
Use the center tape on secondary as the common.
Clip your first single power diode to one 12 volt secondary lead
Clip your second single power diode to the other 12 volt secondary lead
Clip your filter cap to the diode outputs and the common point.

The hand book says the secondary of the transformer will deliver 12 Watts at 12 volts at 1 amp.
What value 12 watt load resistor should we apply to get a 12 watts of power from the circuit to dissipate as heat? (12 ohm)

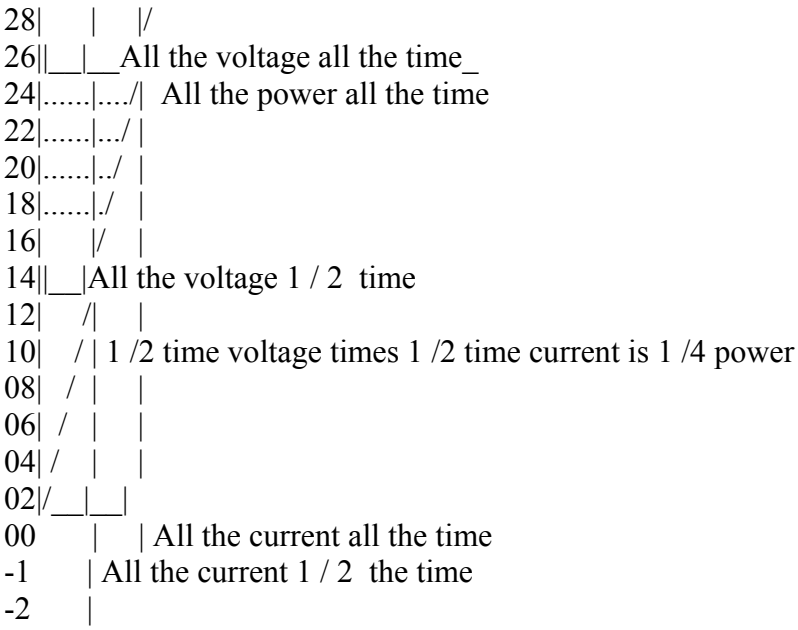
The power dissipated as heat in a 12 ohm 12 watt resistor attached to the circuit above is?
A.) None.
B.) 3 watts
C.) 6 watts
D.) 9 watts
E.) 12 watts

Bench test #4
Set your RS 12 volt 1 amp transformer (with a center tape secondary) up on the lab bench.
Clip your bridge rectifier to the 12 volt secondary leads
Clip your filter cap to the bridge outputs.

The hand book says the secondary of the transformer will deliver 12 Watts at 12 volts at 1 amp.
What value 12 watt load resistor should we apply to get a 12 watts of power from the circuit to dissipate as heat? (12 ohm)

The power dissipated as heat in a 12 ohm 12 watt resistor attached to the circuit above is?
A.) None.
B.) 3 watts
C.) 6 watts
D.) 9 watts
E.) 12 watts

30| | | / Power Dissipated across filament load



With the 12 watt 12 volt 1 amp transformer,
a half wave 1 diode rectifier will yield 3 watts (6 volts .5 amps)
a full wave 2 diode rectifier will yield 6 watts (6 volts 1 amp)
a bridge 4 diode rectifier will yield 12 watts (12 volts 1 amp)

You stick 1 diode in a transformer secondary and hang any load on it you want. That transformer secondary is limiting the available power not the load. At best you can have 1/4 of the power the transformer secondary will deliver applied to the load. If the load resistance is large enough to limit the power to less than the transformer can deliver then the power consumed in the load is less than the power that could be consumed.

As soon a we install a diode in the 25.2 volt filament transformer line for either the R390 series voltage regulators of the PTO BFO filament , at best we limit the consumable power from that transformer secondary to 1/4 of its rated full power. Apply the wrong load and we get less power. Apply the best optimum load and we get at best 1/4 of the power. The best load should be ratted to use 1/2 the volts and 1/2 the current. For this two 6 volt filaments in series to form a 12 volt load.

From billsmith@ispwest.com Thu Jan 10 18:41:47 2002
Subject: [R-390] ZM-11 Manual anyone?

Saw the talk about the LOGSA site, which was used here to get a R-390 manual. Didn't need a sponsor, just clicked the buttons. BTW, looks like they have changed the site design, and have dropped the account requirement.

At any rate, on another issue, I have a ZM-11B/U which is a small component test set. If you find one around at a swap meet, I highly recommend it, but mine is missing its manual. Wonder if anyone has a copy, or a spare? 73 de Bill, AB6MT billsmith@ispwest.com

From David_Wise@Phoenix.com Thu Jan 10 18:38:47 2002
Subject: [R-390] Logsa site

I just downloaded 060577.pdf, no problem. >From work, W98SE+IE5.5 . FWIW, Dave Wise

From rlruszkowski@west.raytheon.com Thu Jan 10 18:44:40 2002
Subject: [R-390] R-390

> if you click on reply all, not only does > it go to the original sender is but also to the group at large. thus two > replies. > > Ken , r-390-admin@mailman.qth.net And it sends a copy to the admin mail box. I thought the old list did that also. and I have to copy and paste
into the To: box and clear the CC: box.

Gee, how come I have to think about where my mail goes <:)..?

Can we get the admin box dropped from the CC when the reflector forwards a message to the group?

I would think the admin guy would like to have less to read. Roger KC6TRU

From mikea@mikea.ath.cx Thu Jan 10 18:55:03 2002
Subject: [R-390] Logsa site

wrote: > I just downloaded 060577.pdf, no problem. > From work, W98SE+IE5.5 . > > FWIW, > Dave Wise > > > From: Barry Hauser [mailto:barry@hausernet.com] > > > > I've been having trouble with the LOGSA site lately. It used

It depends on the manual. Some of them require password and ID, others don't. There's no way to tell from the outside, though, so we may be raising a lot of red flags. -- Mike Andrews

From w2ec@attglobal.net Thu Jan 10 18:55:20 2002
Subject: [R-390] R-390

This is weird, I got double posts of "Scott, Barry 1:15pm" but a single post of "Scott, Barry 1:18pm" post and a single post of "Dennis L. Wade 1:22pm". All morning long I've been getting double posts of everything on R-390. Let's see if this one double posts back to me. 73, Ray W2EC

From cbscott@ingr.com Thu Jan 10 19:16:51 2002
Subject: [R-390] R-390

I only sent the reply to the server (just like this post) -- not directly to you -- so perhaps it's something in the listserver? Barry - N4BUQ

From DAVEINBHAM@aol.com Thu Jan 10 19:20:05 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

writes: << Anyway, I guess that cold is kicking your butt pretty good. Have you tried the Wild Turkey treatment plan yet? Barry Williams >>>

Barry, My research shows that Jack Daniels black label is superior to Wild Turkey for treatment of the common cold. It also makes your R-390 sound better. Kindest regards, Dave

From twleiper@juno.com Thu Jan 10 19:25:29 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Don't you mean the center tap? If not, then you are not in agreement with your conclusions:

> With the 12 watt 12 volt 1 amp transformer, > a half wave 1 diode rectifier will yield 3 watts (6 volts .5 amps)

Across the full secondary, that voltage above would be double.

> a full wave 2 diode rectifier will yield 6 watts (6 volts 1 amp) > a bridge 4 diode rectifier will yield 12 watts (12 volts 1 amp)

In addition, what is the purpose of the filter cap? With a resistive load does it really matter? Would the integration of the half wave output really change anything, except to throw the voltage and current out of phase? Or is the idea to tune out the transformer inductanceI thought the power factor only affected the efficiency of inductive loads.

In any event, center-taps and filter caps aside, I still believe that in the 6080 discussion as proposed, insertion of a diode will only reduce the power consumed by half instead of two thirds. I just don't understand how you can restore half the AC waveform and get three times the power, which is the corollary to the diode insertion argument. I fail to (again, in a resistive load) see how the current flow in one direction has any relationship at all to the current flowing in the other direction, and what the elimination of one could possibly have to do with the other.

If you agree that no power is being delivered at the moment of zero crossover in the waveform, any other conclusion would have to be flawed. How about THAT one? Tom :-)

From rlruszkowski@west.raytheon.com Thu Jan 10 19:36:04 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Dave, Thanks for the hot tip, Mine has been on my ass since early November. I'm going out at lunch and start my treatment. Roger.

From mackeyka@mac.com Thu Jan 10 19:53:35 2002
Subject: [R-390] Spook Run Amok

Howard Rawls at howard@cconnect.net wrote:

> Shhhhhhhhhh, Norman, don't tell the other guys about us spooks. By the way, our old "organization" is still active here in NC. I accidentally discovered some evidence which seems to indicate that there are on-going missions right here in the tar heel state. I have posted this evidence on my webpage. You will have to scroll around some - it's a big picture. The URL is: http://www.cconnect.net/stuff/ > Howard ;-) ;-) ;-)

>

Howard, Great Picture, I grabbed it and set it up as my desktop background. (Any knowelege of of my participation with ASA is strictly denied) Kim

From Richard.McClung@Dielectric.spx.com Thu Jan 10 19:50:51 2002
Subject: [R-390] Spook Run Amok

Yeah ASA.... I have trouble with that also. It causes my stomach to get upset so I have to take CASA..... RICH @B> }

From w7itc@hotmail.com Thu Jan 10 20:13:52 2002
Subject: [R-390] Spam

The use of the term spam in reference to internet junk mail is suppose to have come from "Monty Python's Circus" which was an absolutely outrageous English comedy series. On this series there was a skit which featured the infamous "Spam song". There are several places you can download this song in MP3 formate, Bearshare, WinMX, Audiogalaxy, limewire, etc. There never was a explanation as to why there where Vikings with horned helmets in the English pub to sing the Spam Song Ken

From w2ec@attglobal.net Thu Jan 10 20:37:24 2002
Message-ID: <3C3DFB84.A39AE0F9@attglobal.net>

Found the problem, I was subscribed twice. Not sure how it happened, may have been during the automatic transfer phase changing from qth.net to mailman.qth.net.

I have my "real" isp address as w2ec@attglobal.net but I use a forwarding address at w2ec@arrl.net so I can change isp whenever I want and don't need to inform anyone as long as they use the w2ec@arrl.net address. Somehow I got subscribed under both the "real" isp address and the "forwarding" isp address, so got two copies of everything. If you are getting duplicates on this (or any other mailman.qth.net) list, check to see how many different addresses you might be subscribed under. 73, Ray W2EC

From R390A@R390A.com Thu Jan 10 21:43:36 2002
Subject: [R-390] Capacitor Replacement

Been watching this thread. First, do not perform a wholesale replacement of all the capacitors in the radio. The effort will not yield any improvement. Beyond that, there are some, especially in extremely low value components in the RF deck, that are clearly installed with lead dress considerations in mind.

On the www site, there is a compendium of the usual suspects when it comes to bad caps: http://www.r390a.com/ProbCaps.html Chuck Rippel, WA4HHG

From twleiper@juno.com Thu Jan 10 23:10:01 2002
Subject: [R-390] Spam

writes: > The use of the term spam in reference to internet junk mail is > suppose to have come from "Monty Python's Circus" which was an > absolutely outrageous English comedy series.

I'll have a piece of rat tart without so much rat in it..

From tbryan@nova.org Fri Jan 11 00:05:00 2002
Subject: [R-390] Logsa site

Hi Mike, >It depends on the manual. Some of them require password and ID, >others don't. There's no way to tell from the outside, though, >so we may be raising a lot of red flags.

You can tell from the outside.

https://www.logsa.army.mil/etms/data/A/022731.pdf ^ an "A" in this part of the URL indicates that it is available to the public.

For example, this manual needs a password. https://www.logsa.army.mil/etms/data/D/065169.pdf
^ this has a "D" so it needs a password.

If there is anything other than an "A" in that position, don't bother trying to download the manual.

If you are using Netscape, the URL appears on the status line at the bottom of the Netscape window.
Tom Bryan tbryan@nova.org

From ba.williams@charter.net Fri Jan 11 02:28:43 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

> Barry, > My research shows that Jack Daniels black label is superior to Wild Turkey > for treatment of the common cold. It also makes your R-390 sound better. > > Kindest regards, > Dave

Dave, Just like an Alabama fan....incomplete research. You need to do some Crown Royal drinking. Just a glass and Crown Royal....unless you decide to forego the glass. Barry

From ba.williams@charter.net Fri Jan 11 02:34:13 2002
Subject: [R-390] Spam

> The use of the term spam in reference to internet junk mail is > suppose to have come from "Monty Python's Circus" which was an > absolutely outrageous English comedy series. On this series there was > a skit which featured the infamous "Spam song
>
There was also the infamous Spam Radio pirate station a few years ago. I've seen the Spam Radio QSL and it was pretty disgusting. It is on www.frn.net in the QSL section. Barry

From R390rcvr@aol.com Fri Jan 11 02:57:38 2002
Subject: [R-390] Broadcast AM station listings

Dear List: Does anyone have a lead to where I can find a listing of all the US AM radio stations on the Web? Thanks Randy Stout

From kd9kc@elp.rr.com Fri Jan 11 03:09:55 2002
Subject: [R-390] Broadcast AM station listings

http://www.airwaves.com/index.html Mike

From ba.williams@charter.net Fri Jan 11 03:36:37 2002
Subject: [R-390] Broadcast AM station listings

Randy, Try these:

http://www.geocities.com/amlogbook/main.htm (I think this one is the best)

http://www.geocities.com/Heartland/5792/index1.html

http://www.dxzone.com/ (you have to look at the links)

Barry

From w7itc@hotmail.com Fri Jan 11 07:52:31 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

RE: Jack Daniels This reminds me of a situation years ago. My Bother and I where working on a Simca, remember those. We could not get the thing to run. Finally we retreated into the house and between the two of us drank a bottle of wine. We went back out and in a semi-plowed state to look at this French hotrod. In the cloud of wine enhanced brain power the little bomb made perfect sense and it was running like a top in no time. We realized at that point the engineers who designed this car were also had brain cells powered by wine. Maybe that explains the Lysco 600 Transmaster, it was designed by an EE drinking aged (for at least the trip down the hill) moonshine. Maybe it was Kickapoo Joy Juice. Ken

From jlap1939@yahoo.com Fri Jan 11 16:06:12 2002
Subject: [R-390] Leave It...

My Friends, I got into it again...Apol. to everyone and to the server!!...I'm old...hard to change, but I will stick around; you are not going to hear much from me, 'tho I may follow the suggestion to write up the "unoff." mil. method for SSB recpt. sometime..I just don't think very many would be interested, or believe me, as things are done differently now.. In any event, thanks to Many of you for your positive comments..I will stick around.. Regards, and thanks! John

From cbscott@ingr.com Fri Jan 11 16:17:17 2002
Subject: [R-390] Leave It...

Hey John, our spam filter did not trap this one. Great! Perhaps you were sending USB they did not have the BFO set to -2kc... Barry - N4BUQ

From jlap1939@yahoo.com Fri Jan 11 16:23:28 2002
Subject: [R-390]

Friends, I wish people on the list would quit giving their ages with such pride, it gives me a sensation of...well.. I'm just glad I get a sensation... John

From jlap1939@yahoo.com Fri Jan 11 16:29:49 2002
Subject: [R-390] Ok Folks.....

OK Folks, I didn't understand...Got some strange messages and couldn't get through when I first tried..OK now.. Is Spam anything like canned ham? I been waiting so long..(but not for spam) John

From rlruszkowski@west.raytheon.com Fri Jan 11 16:37:49 2002
Subject: [R-390] Lankford AGC Mod ?

I understand the Lankford AGC mod to be two diodes in the AGC circuit and a cap change to allow more BFO insertion into the detector.

I understand what happens when we inject more BFO into the mixer (detector) circuit.

I do not understand how the diode mod causes the difference we do hear in single side bans signals.

How does that circuit work?
What is the difference in AGC action of the circuit?
Why does SSB sound better with the change?
What caps should we experiment with to give better time constances?
What would be some target values for those caps?

Other than exceeding the PIV or forward current load of the diodes does the choice of diode make a difference?

Is diode linearity critical for this circuit?

Is diode switching time critical for this circuit?

I know this is all available some where. Does some one have it handy and can you send me some clues. Thanks Roger KC6TRU

From cbscott@ingr.com Fri Jan 11 16:46:31 2002
Subject: [R-390] Lankford AGC Mod ?

Well, everybody knows that when you insert a diode into an AC circuit, you get more power on one waveform (see previous posts concerning 6080 and RMS) so perhaps that accounts for more injection signal? <big grin> Barry - N4BUQ

From hvalver@hotmail.com Fri Jan 11 17:00:14 2002
Subject: [R-390] FS: 51J/R390 Manuals

FOR SALE: Original Manuals for R-388/51J & R-390:

R-390: TM 11-856 // T.O. 31R1-2URR-154 Jan 55. Original, good condx. $40.00

R-390: TM 11-5820-357-10 // T.O. 31R1-2URR-391 Dec 60. Original. Incl Ch 1,2,3 Good condx. $40.00

R-388: TM 11-854 // T.O. 16-35R-388-5 Original. Good condx. $40.00

All items pl.us postage. Walt (N4GL) -- hvalver@hotmail.com or penguino@atlantic.net

From r390auser@home.com Fri Jan 11 17:24:18 2002
Subject: [R-390] Lankford AGC Mod ?

Roger, **Check with Barry Hauser here on the list for back issues of the Hollow state News letter, he is now the editor.** There are four maybe five issues that cover the Langford mod in its various iterations. If Barry can't help you let me know and I will copy them and mail the info to you. Kurt Holbrook

From pha@pdq.com Fri Jan 11 17:30:46 2002
Subject: [R-390] r-391 motor bearing question

I am still refurbing my R-391's autotune. I still have a lot to learn, but am making progress. I'll share my notes with everyone when I'm farther along in the process.

The DC motor needs attention. Among other things, I need replacement bearings. I need two .25" ID, .75" OD, .25" thick bearings. They are a relatively standard size, as near as I can tell. I'd like to get some USA made bearings. Anyone know of a good place to go for standard size electric motor US made bearings? Do they exist? I know where I can get Chinese made ones.

I also would like to find replacement brushes (I bought some from a HW store that I can make work). Are there any good places to find electric motor brushes? My web searches didn't really turn up anything. Thanks, Paul

From rlruszkowski@west.raytheon.com Fri Jan 11 17:31:28 2002
Subject: [R-390] Lankford AGC Mod ?

Scott Barry, I did not understand all that 6080 and RMS thread, I am still working on some of that mail myself An I have some questions about that. But the sound of my R390/A is of more interest to me today.

If what you say below is true (It is ain't it ? <;)) where are we injecting in the AGC circuit?

I was introduced to that AGC circuit in 1968 and I still do not understand all the interaction of SSB and AGC in the R390/A.

There is even the Audio derived AGC mod for the R390.

Why does smacking the receiver gain around at an audio rate that follows the voice power change the perceived clarity of SSB?

I do agree that SSB sounds best in the OFF setting. But It is there and some times I do indulge in it. Roger. KC6TRU

From rlruszkowski@west.raytheon.com Fri Jan 11 17:36:10 2002
Subject: [R-390] Lankford AGC Mod ?

Kurt, Thank you for the tip. Roger.

Barry Hauser, Not not that Barry, the other one.

Will you please E-mail me back so I can get your address? How do I get some copies of the Hollow state News letter from you? Thanks Roger.

From mikea@mikea.ath.cx Fri Jan 11 17:46:28 2002
Subject: [R-390] r-391 motor bearing question

wrote: > > I am still refurbing my R-391's autotune. I still have a lot to learn, > but am making progress.

Most any medium-size city will have a bearing supply house of some sort. Try your Yellow Pages first; after that, try a web search on "bearings" and the name of your state or province. If even that fails, then just search for bearing sales houses and manufacturers. Good luck.

> I also would like to find replacement brushes (I bought some from a HW > store that I can make work). Are there any good places to find electric > motor brushes? My web searches didn't really turn up anything.

Yellow pages, "motor repair" or "electric motor". Some places will even make them for you, machining the graphite to fit. Good luck. -- Mike Andrews

From cbscott@ingr.com Fri Jan 11 17:49:07 2002
Subject: [R-390] r-391 motor bearing question

McMaster (www.mcmaster.com) is a good place. Also try Small Parts. Not sure of the country of manufacture for either of these. You should be able to call McMaster for details on an item. Barry - N4BUQ

From cbscott@ingr.com Fri Jan 11 17:54:13 2002
Subject: [R-390] Lankford AGC Mod ?

Well, I was introduced to the AGC circuit in 1998, so I have 30 years of catching up to do. No, I don't

understand howit works or why these mods affect SSB clarity. I plan to study that one day as well as that RMS with a diode thing as well.

Sorry I'm not more help. I just like kicking the beehive every now and then...
Barry - N4BUQ

From rbethman@home.com Fri Jan 11 18:05:16 2002
Subject: [R-390] r-391 motor bearing question

One place in the US that sells some very good bearings in the smaller sizes is BOCA Bearings. We use them in R/C helicopters, so I can tell you that they will take a LOT of punishment. try **bocabearings.com** (No www) Bob - N0DGN

From twleiper@juno.com Fri Jan 11 18:13:34 2002
Subject: [R-390] Lankford AGC Mod ?

writes: Well, everybody knows that when you insert a diode into an AC circuit, you get more power on one waveform (see previous posts concerning 6080 and RMS) so perhaps that accounts for more injection signal? <big grin> Barry - N4BUQ

"I proved, with geometric logic, that a duplicate key, er... half of the AC waveform had no relationship to the other half, so if you inserted a strawberry...ahh, diode into the pantry, it would yield the same amount of sand, regardless of which way you pounded it..."

God, I thought I finally put that one to rest. Let's get the shovels out and exhume that dead horse. It must need a little more beating... Tom

From rbethman@home.com Fri Jan 11 18:38:50 2002
Subject: [R-390] Exhumation of dead horse...

Tom, I've read the threads of this "horse". If the AC wave form halves have no relationship to each other, you have rewritten every text on AC generation and theory. IMHO that just does NOT ring true. Their is a DEFINITE relationship between the halves. The addition of a diode in an AC line changes a lot of things. The first being that you only get ONE pulse per second in lieu of TWO pulses per second. The voltage or shape of that SINGLE pulse does not change from the voltage or shape of the TWO. People can beat terms as P to P, RMS, AVG, and the like.

If 26 VAC is passed through a diode, then 26 VDC comes out - BUT only half the time that the 26 VAC did. The waveform is still sinusoidal in shape, just missing the other half of the complete cycle. Whatever voltage drop occurs is caused only by the ohmic losses of the junction of the diode. That is unless you put in a Zener diode. Then we have an entirely different animal.

Go for broke - beat the horse - he has been exhumed! Bob - N0DGN

From hbreuer@debitel.net Fri Jan 11 19:00:13 2002
Subject: [R-390] Exhumation of dead horse...

wrote: > > If 26 VAC is passed through a diode, then 26 VDC comes out - BUT only > half the time that the 26 VAC did.

The sinusoidal waveform will be distorted due to the diode forward voltage drop of 0.7 V. The dead horse is stinking worse every day. 73 Heinz DH2FA, KM5VT

From rlruszkowski@west.raytheon.com Fri Jan 11 19:03:19 2002
Subject: [R-390] Exhumation of dead horse...

Bob, I do not care which aminal it is can we beat it also? Roger.

From rlruszkowski@west.raytheon.com Fri Jan 11 19:09:04 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Barry, Yea that one.
Crown Royal is for drinking. Dave was tring to help us treat a common cold. I think Jack Daniels black label is a proven cold tonic. You know, drink plenty of fluids, get plenty of rest. Jack Daniels black label helps with both of those actions. Roger.

From cbscott@ingr.com Fri Jan 11 19:24:03 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Around here it isn't Crown Royal, it's Royal Crown (and a moonpie) Barry - N4BUQ

From DAVEINBHAM@aol.com Fri Jan 11 19:16:08 2002
Subject: [R-390] Access Counter on R-390A

writes: << Hmmm, I think Taddy's radio has a problem. Every time I go back an look at it, it's drifted up a few kc... Barry - N4BUQ >>

Barry, I noticed that drift too. It was tuned to 1444 a few minutes ago. Dave
Subject: [R-390] 6080 in place of 6802 - RMS ???

Roger, My "independent" research has reviewed the afore mentioned subjects and a few more. I might suggest a single malt Scotch - neat. From jordana@nucleus.com Fri Jan 11 19:31:07 2002

From: jordana@nucleus.com (Jordan Arndt)
Subject: [R-390] 6080 in place of 6802 - RMS ???

Do I hear Gibsons Finest 18 year old.... Whiskey that is...

From DAVEINBHAM@aol.com Fri Jan 11 19:31:43 2002
Subject: [R-390] R-390

writes: < Am I the only one getting double posts of everything? I'm seeing it on several of the lists that just switched over to mailman.qth.net, not on all the lists, but more than just one or two. 73, Ray W2EC >

No, you are not the only one getting double posts from QTH. I get 'em on about 50% of R-390 posts. Dave

From anchor@ec.rr.com Fri Jan 11 19:21:16 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Roger, Barry(s?), et al, I'll bet I'm speaking for more than a dozen of the other cupla hundred folks on this list --- I'm getting tired of using my delete button on this nonsense. I've saved Barry Ornitz' explanation, that's all I need. And it's not abt Jack Daniels. 73, Al, W8UT

From rbethman@home.com Fri Jan 11 19:36:16 2002
Subject: [R-390] Exhumation of dead horse...

Well, we are after a good start, but no winners yet. As to: The sinusoidal waveform will be distorted due to the diode forward > voltage drop of 0.7 V.

The junction voltage drop is "very" device specific. Each diode "type" (By number) has a specific voltage drop for THAT device. There is NO across the board "magic" number. No Kupie Doll Heinz!

As to: > Nope, its a bell curve, not sinusoidal > Jeff Adams

Another "miss". The pulse width may or will narrow, but NOT bell shaped. Drag out your oscilloscopes, a low voltage output transformer, and don't forget a handful of diodes. (Lord I hate sand state....)

At least no one is debating the number of pulses per second. (Smart for a change...) Nor the fact that the peak voltage is not "significantly" changed. The next concept is current. It will remain the same for a given load. Bob - N0DGN

From twleiper@juno.com Fri Jan 11 19:36:39 2002
Subject: [R-390] Exhumation of dead horse...

Tom, > > I've read the threads of this "horse". If the AC wave form halves have no relationship to each other, you have rewritten every text on AC generation and theory. IMHO that just does NOT ring true. Their is a DEFINITE relationship between the halves.

That is true, but it is a comparative relationship, not an "affective" relationship, meaning, if you remove one of the halves, it doesn't somehow change the power delivered by the other. Now you might want to argue about transformer saturation and load, for instance a heavily loaded transformer would output a higher amplitude half cycle if there was no load on the other cycle, etc. And you can also calculate in the forward voltage drop of the diode, etc. But for the purposes of this argument (this IS the correct room for an argument, isn't it Mr. Barnhard?), I am assuming no such ancillary factors. Only the power delivered by a half wave instead of the full wave.

> The addition of a diode in an AC line changes a lot of things. > The first being that you only get ONE pulse per second in lieu > of TWO pulses per second. The voltage or shape of that > SINGLE pulse does not change from the voltage or shape of the > TWO... > If 26 VAC is passed through a diode, then 26 VDC comes out - BUT > only half the time that the 26 VAC did. The waveform is still sinusoidal > in shape, just missing the other half of the complete cycle.

My point, exactly. So half the power is delivered, not a third. And the desired result is to deliver a third.

Let's agree on a couple things:

1. If you power the 6080's (in series) with 25V they will (briefly) dissipate 120 watts.
2. If you power the 6080's with 12.5 volts they will dissipate 30 watts, and this would be the ideal voltage with which to power them in series..
3. The diode cleanly removes half of the AC waveform.
4. No power is transferred or somehow "stored" at zero crossover.
5. The filament resistance at temperature is constant, or insignificantly affected by the 50% duty cycle change from 60 hz to 30 hz.

Therefore: If you insert a diode, you dissipate 120 watts half the time and 0 watts for the other half of the time (Refer to your own paragraph above). The average dissipation is thus 60 watts, and the instantaneous current during the "powered" half cycle is twice what it was designed to be.

The duplicate key exists, and it was only through the disloyalty of my officers, that the idea of inserting a diode was proposed in the first place.

> Whatever voltage drop occurs is caused only by the ohmic losses > of the junction of the diode. That is unless you put in a Zener diode. > Then we have an entirely different animal.

Ancillary stuff... .7 volt forward drop for the silicone diode, big deal.
>
> Go for broke - beat the horse - he has been exhumed!

"And...they're off..."

From twleiper@juno.com Fri Jan 11 19:44:46 2002
Subject: [R-390] R-390

Am I the only one getting double posts of everything? I'm seeing it on several of the lists that just switched over to mailman.qth.net, not on all the lists, but more than just one or two.

The problem is that people are responding to "all recipients" instead of just to you, or to the list. What those un-named folks SHOULD be doing is sending ONLY to . For instance, you did NOT get two of THIS message. Tom

From rbethman@home.com Fri Jan 11 20:32:18 2002
Subject: [R-390] Exhumation of dead horse...

writes: >> Tom, > I've read the threads of this "horse". If the AC wave form > The only point here that you and I disagree on is the relationship. It is "very" definitive. I'm ignoring core saturations. I never

got into load.

We just have to adjust the figures for the full power delivered during this pulse. "They're making the first turn...." Bob

From r390a@enteract.com Fri Jan 11 20:35:35 2002
Subject: [R-390] RTTY with R-390

Seeing the movie file of a TT-4 on Tadashi's website (http://www3.ctktv.ne.jp/~tadashi/TT4/DSCF0144.AVI) brought back memories of the RTTY setup I had years ago.

It consisted of an R-392 and a CV-278 demodulator along with a Teletype Model 15 that I got from the FBI at a GSA sale in Chicago. It actually worked pretty well, and made a lot of great noise to boot. There wasn't much stuff to copy in the SW bands, most of it was either not in English or was transmitted at a higher speed that the 15 as geared for. Occasionally I found AP or UPI newsfeeds and some of that was interesting.

So my interest in RTTY listening has been rekindled and I wonder what other list members are using with their R-390s. It would seem that doing the decoding/display with a computer makes sense, except you miss out on the sight/sound/smell of a real TTY machine.

Anyone using MMTTY (http://www.qsl.net/mmhamsoft/mmtty/index.html)? It looks pretty slick and it's freeware to boot. /dave N9ZC

From DAVEINBHAM@aol.com Fri Jan 11 20:37:42 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

writes: << Mine has been on my ass since early November. I'm going out at lunch and start my treatment. Roger. >>

Roger, I am not an MD. I am an electronic tech who has hung out at the local medical school for the last 40 years. The "cure" for the common cold was given to me by an American Indian doctor about 1963. It works !! Take a cup of whiskey (I like Jack Daniels) add juice of a lemon and a teaspoon of Cream of Tarter. Drink it before you go to bed. Turn the electric blanket up to "9".Next morning your cold is gone. Some people get a mild hangover from this treatment. I don't. But a hangover only lasts a couple hours whereas a cold will last a week or sometimes much longer. Try it. It really works. Kindest regards, Dave

From billsmith@ispwest.com Fri Jan 11 20:49:36 2002
Subject: [R-390] RTTY with R-390

Does anyone need TTY paper, particularly paper tape? Boxes are destined to go into the landfill. HELP! Bill, AB6MT billsmith@ipswest.com

From rbethman@home.com Fri Jan 11 20:52:13 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Only one change from Grandma's recipe. Delete the Cream of Tartar, replace with Honey. Same results! Bob

From ea2ig@tiscali.es Fri Jan 11 21:06:44 2002
Subject: [R-390] Help Abbreviation

Sorry for the out of topic. But I am affraid with one of the Soup Letters :-) , I found usually inthe List. I know what is NOS, NIB, ASAP etc, but I am unable to understan what is the expression IMHO. Of course my english is not very good. Thanks to all Pedro EA2IG

From cbscott@ingr.com Fri Jan 11 21:12:02 2002
Subject: [R-390] Help Abbreviation

In My Humble Opinion At least that's what I take it to be... Barry - N4BUQ

From twleiper@juno.com Fri Jan 11 21:24:45 2002
Subject: [R-390] Exhumation of dead horse...Dead horse walking

writes: EDITED...mercifully > Not so. Power is not dependent on "time". The power delivered > during that pulse is full, not half.

OK. Half the pulses, half the power. Forget the time. Same thing.

Let's say you have a steam engine with one single action cylinder. Assume a perfect flywheel, no parasitic loads (such as bearings), an unlimited supply of steam at a constant pressure (the functional equivalent of our 60 hz power), and a static load such as a coal elevator conveyor (the resistance of our filaments).

In operation, the single action cylinder pushes through one half revolution and coasts through the other. Now you either convert the cylinder to double action, or add another single action cylinder to "push" on the other half revolution while the first cylinder is "coasting". The load of coal will now have to be doubled (dissipating more energy) in order to maintain the same RPM as before, or the conveyor will run twice as fast...either way you get twice as much coal. The engine will NOT generate THREE times the power and give you three times the amount of coal.

Adding the second cylinder action in this example is the same thing as "removing" the diode in our electronic equivalent. That is why a V8 engine (for the most part) only generates eight times the power of a single cylinder engine of one eighth the displacement. Otherwise, instead of generating, say, 240 HP, it would generate 540 HP.

And so we end up here in the back stretch talking about horses... > "They're making the first turn...." > > Bob

From dlwade@pacbell.net Fri Jan 11 21:35:10 2002
Subject: [R-390] Help Abbreviation

I agree. Although the "humble" part seems to be going out of style. :) Dennis

From rlruszkowski@west.raytheon.com Fri Jan 11 21:48:53 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

Dave, My wife's Mother used this herself. She did not have an electric blanket so the you got put to bed on the living room couch in front of the wood stove under all the spare quilts. This is Friday and I do not need to get up in the morning and I'll let you know Monday how I made out. I'll seek additional heat from the R390/A. Roger.

From ea2ig@tiscali.es Fri Jan 11 22:04:30 2002
Subject: [R-390] Help abbreviation Thanks

Thanks to all that answered to my question, specially to Sally for its more extense one. Best Regards Pedro EA2IG

From billsmith@ispwest.com Fri Jan 11 22:05:29 2002
Subject: [R-390] RTTY with R-390

Have 4 large boxes. Each box has 4 smaller boxes, and in each box are 10 rolls of 5-level paper tape. Thus, have 160+ rolls of paper tape, some white, others pink. Live in the north San Francisco Bay. No, really don't want to throw it away, it isn't made anymore! But can't store it either. 73 de Bill, AB6MT

From rlruszkowski@west.raytheon.com Fri Jan 11 22:16:07 2002
Subject: [R-390] Exhumation of dead horse...Dead horse walking

Power has 2 dimensions voltage and current.

Half the power is not P/2 it is P/4. Half the voltage is V/2 Half the current is I/2. 1V times 1I is 1P 1V times 1/2I is P/2 1/2V times 1I is P/2 1/2V times 1/2 I is 1/4P It is a math thing. Power is dependent on time.

Think about transmitted power into an Antenna and 1/2 the power being 3DB down. or twice the power being 3DB up. The story is great. the logic is good. the math is in error.

The jocks, have the whips out and the horse is leaning into the rail. Roger KC6TRU.

From David_Wise@Phoenix.com Fri Jan 11 21:55:02 2002
Subject: [R-390] Help Abbreviation

I agree. Although the "humble" part seems to be going out of style. > :) How can it be a humble opinion when it's the One Truth? :-) dw

Starting to climb out of the hole

From mikea@mikea.ath.cx Fri Jan 11 22:44:14 2002
Subject: [R-390] R-1051 rack mounting brackets: who's interested?

I found the drawing for R-1051 rack mounting brackets, and have located a metalshop that can work metal that heavy. I'm going to take the drawing by Monday, and hope to have a quote Wednesday or thereabouts.

These will be bare, unpainted aluminum alloy. If you want 'em painted Navy Gray, you get to do that yourselves. If enough people would like them iridized, I'll price them that way for everyone. The drawing calls for iridized metal, and I'm trying to get 'em as much like the factory stuff as posssible.

I need a tentative list of people who'd like to buy them, and the number of sets of 2 that each of the respondents would like to buy. People on this list won't be making a firm commitment.

When I have the quote, I'll mail you back with the price, and see how many are willing to buy them at that price. If you answer yes to _that_ letter, you will be making a firm commitment, and I'll be spending my money on your accounts. I'll also need a shipping address for each of the buyers.

Please Email me if you have any questions at all. -- Mike Andrews

From fritsche@email.msn.com Fri Jan 11 22:49:54 2002
Subject: [R-390] Lankford SSB Mod

Hi Gang, did a while back... Just the diodes and immediately noticed distorsion on strong AM broadcast siganals. Removed and All is Well. What the hey.... If you want SSB turn on your Ham Rig or if your an SWL just reduce the RF gain like in the old days. My .0002 cents worth Al W5ADF

From jlkolb@cts.com Fri Jan 11 23:17:36 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

wrote: > Around here it isn't Crown Royal, it's Royal Crown (and a moonpie) > Royan Crown? is that what RC stands for? :)

John You can move a Mississippi redneck to San Diego, but his neck will never fade to pink.

From DJED1@aol.com Fri Jan 11 23:58:20 2002
Subject: [R-390] Lankford AGC Mod ?

The only thing the diodes do is to shorten the attack time of the AVC to give the "fast attack, slow decay" AVC that we want for SSB. On AM, the carrier is there all the time and the attack of the AVC does not have to be fast. Since all activity is at voice rates, the diodes do not have to be especially fast to perform satisfactorily. I expect any good silicon diodes will do, as long as they have a high resistence when back biased. Ed

From DJED1@aol.com Sat Jan 12 00:08:29 2002
Subject: [R-390] Lankford AGC Mod ?

The AVC is half of the problem with SSB on the R-390s; the other half is the product detector. I would estimate that fixing the AVC is the most important part, because to detector in the radio does OK if you just reduce the IF signal enough. The classic way to do this is to go to manual gain control, and reduce the IF signal enough to have the detector operate in a linear manner. As we know, the SSB signals sound pretty good when the radio is operated in manual mode. So... I believe much of the problem is caused by the fact that the AVC doesn't respond fast enough to the varying SSB signal, resulting in distortion at the detector. The Lankford mod just allows the AVC to increase quickly by changing the attack time constant (it basically shorts the timing resistors in one current direction). Similarly, an audio AVC will help the fast attack requirement. I went the whole way and built an external adapter which provides both product detection and fast AVC- works quite well except my BFO is not nearly as stable as the internal one. Hope this helps Ed

From rbethman@home.com Sat Jan 12 01:44:31 2002
Subject: [R-390] Exhumation of dead horse...Dead horse walking

writes: > EDITED...mercifully > > Not so. Power is not dependent on "time". The power delivered > > during that pulse is full, not half. > > OK. Half the pulses, half the power. Forget the time. Same thing. > Tom,

If the "pulse" is 26 Volts, and the current during this pulse is two amps, that pulse is 52 watts - period! Therefore, if the components cannot stand that voltage, that current, or that amount of heat dissipation - it DIES. Now is when you factor in time, be it milliseconds, minutes, or hours. "They're making the first turn...." Bob - N0DGN

From hankarn@pacbell.net Sat Jan 12 02:50:32 2002
Subject: [R-390] FS: ROHDE & SCHWARZ EK-07

FS EK-07 R&S world famous receiver. This will beat any of the R-39XX receivers Hands down. No exceptions. We have meticulously restored these receivers to work like new. Electronically the PLL (tube based) has been aligned, LMO calibrated to accuracy and linearity, selektion filter passband carefully trimmed using a network analyzer.

The cabinets have been stripped and powder coated with the original R & S color, The front panels also along with 2 color silk screening both English and German. All of the mechanical and tuning assemblies have been cleaned and lubricated, new rubber feet, strapped to 115 Volts for US, with power cord and audio connector, a copy of the manual in English. The tuning is 2 speed and the fine is like Velvet

For information on the receiver check Ostermans 3rd edition for all of the spec's Page 369. He says it is (One of the best tubes receivers ever made) We have 5 customers that say it is the best they have ever had. It also has a BITE diagnostic built in for the 27 tubes that have US equivalents.

We have 5 more at the present time for $3,000.00 plus $80.00 craring charge and freaight and insurance for 215 pounds residental delivery including lift gate. If you have a business address with a freight dock or a fork lift you save about $100.00.

The FIRM pticing is $3,000.00 USD with 50% deposit on order and balance prepaid including freight and insurance prior to shipment to your choice of delivery addresses.

The delivery is 3 to 6 weeks after receipt of deposit depending on our work load. We will advise delivery date AFROM. Hi.

Nearly all of the prior recipents have already commented as to the quality of these radios.

I am willing to demostrate mine in Northridge,CA to serious parties. Looky lous forget it along with knob twisters. Knob twisters the rate is $75.00 per 15 minutes plus damages if you break it. That is Cash up front. Lawyers $100.00 per revolution per knob, with release of liability. Thanks es 73, Hank KN6DI

From DAVEINBHAM@aol.com Sat Jan 12 04:02:53 2002
Subject: [R-390] 6080 in place of 6802 - RMS ???

writes: << Roger, My "independent" research has reviewed the afore mentioned subjects and a few more. I might suggest a single malt Scotch - neat. Bob >>

From w5or@home.com Sun Jan 13 04:16:27 2002
Subject: [R-390] list news

You are seeing some double posts. Here is the word from Al. >There are some multiple post to a few lists I caused >this during the switch over to a new mail client. >Mailman is now on the new Dual PIII 1Ghz server and >is using Postfix as the mail program. >Post fix is real high performance so we should see >faster list response than what we have had. >73, Al Don Reaves W5OR

From twleiper@juno.com Sun Jan 13 06:31:40 2002
Subject: [R-390] Exhumation of dead horse...Dead horse walking

I see the problem...we are on the same side but speaking a different language. I am talking about cumulative dissipation divided by time,or avaerage power. As I said, the power delivered during that halfwave would be at twice the rated current, which the tubes MIGHTbe able to handle for a little while at a 50% duty cycle. But thecontinous dissipation would also be too high as well, and the filamentswould still be running too hot. We agree.

Those that argue for the diode would probably think that if you couldsomehow just eliminate nine of ten cycles, you could use ten times thevoltage... Maybe we could use twelve million volts for one microsecond per second, wouldn't that deliver twelve watts continous? Tom

From john_finigan@yahoo.com Sun Jan 13 09:02:32 2002
Subject: [R-390] Inexpensive bristol wrenches

Thought that some of you would be interested to knowthat I recently got some bristol driver bits factorydirect from Chapman tools in Connecticut, for $10shipped. For that you get a mini-ratchet and 5 bits. The ratchet doesn't obstruct knobs or rf slugs,though I can't say I've tried it on every screw in theset. The quality seems good. These guys are in theJensen catalog, but Jensen doesn't sell their bristolset. Shame, since it's about $35 cheaper thanXcelite. I guess its possible that some radios mighthave screws of a different size than mine has, somileage may vary...John

From R390rcvr@aol.com Sun Jan 13 15:22:11 2002
Subject: [R-390] PD-1 SSB rececption, AM effects

Good morning crew:I just got a PD-1, the outboard product detector sold by Ron Haskins. Nice, professional looking unit, construction very tidy internally.No brainer hook up, just patch cord off IF output on back apron, plug it in, and go. The SSB is wonderful, very simple. Might be nice to have slightly finer tuning on the KC dial to fine tune voice pitch, but overall, it is really nice.

The down side is that it tends to overload just slightly on very strong AM signals. I am talking about signals that peg the carrier needle. I am running it through an Alpha Delta VRC console, basically an amplified speaker with notch, peak, variable freq. response, etc. Its possible that the two don't work well together.

I am going to hook it up to an outboard stereo amp and check that. I thought perhaps I had a problem in my AGC, so will sub out the three tubes, one by one, and see if that might help as well.Its interesting that the Lankford mod seems to have the same AM problem.I will keep you updated. Randy Stout

From w7itc@hotmail.com Sun Jan 13 18:55:07 2002
Subject: [R-390] R-1051 rack mounting brackets: who's interested?

iridized metal

Is this like "Chromacoat" I used to treat metal when I worked ata large manufacture of defense and commercial restaurant equipment. Ken

From w7itc@hotmail.com Sun Jan 13 19:09:52 2002
Subject: [R-390] Lankford AGC Mod ?

This list has had this discussion many times. I have never done thismod' because every time the subject came up it was pointed out basicallyunsatisfactory this mod is. Changine the time constant of an AGC doesnot a product detector make. Ken

From redmenaced@yahoo.com Sun Jan 13 19:54:22 2002
Subject: [R-390] From the horse's mouth

> I see the problem...we are on the same side but > speaking a different > language. I am talking about cumulative++++++++++

Yes, The language took a beating in this discussion because of the diverse backgrounds and education levels. A very detailed description starting from the basics would have put everyone on the same page and level. The patience of those who know is appreciated. So sayeth the dead horse!

From w7itc@hotmail.com Sun Jan 13 20:04:35 2002

Subject: [R-390] PD-1 SSB reception, AM effects

I was just looking at the CV-591 and it looks nothing like my Eldico SBA-1. It's a little unclear what the controls are on the front panel of the CV-591, except for the obvious ones. The SBA-1 has a notch filter, a noise limiter, and an IF gain, in addition to the usual SSB, audio, and power controls. I am really curious what the military nomenclature might be for my unit it has Signal Corp stamps on it so there must be one. The search continues. Ken

From w7itc@hotmail.com Sun Jan 13 19:00:05 2002
Subject: [R-390] Lankford SSB Mod

I find the use of a side band adapter, in my case an Eldico SBA-1, very satisfactory. It so nice not having to ride herd on the RF gain while listening to a round table, or a net. Ken

From w7itc@hotmail.com Sun Jan 13 22:28:21 2002
Subject: [R-390] 26Z5W

I was cruising and I found a website in the Netherlands that lists the 26Z5W for 5 Euro's, which is a little bit more then $5.00 each. I have sent them a note to see it this is true. On an other European site I ran across a mention of the CV5030 as a "usable sub" for the 26Z5W so far I haven't found any data on this tube. Ken

From Joe" <joe.amp@verizon.net Sun Jan 13 22:50:09 2002
Subject: [R-390] Lankford AGC Mod ?

Done *the full version* of this modification and found it to work excellent on both my non A models. I will get a popping on strong SSB signals but I just back off the RF gain. Between the PC, shop, heat, insurance rates If run any more electricity/gas Im going to have the sell the radios to keep out of the poor house. , Joe (Long Island)

From w7itc@hotmail.com Sun Jan 13 23:01:19 2002
Subject: [R-390] testing

My post aren't getting though

From w7itc@hotmail.com Sun Jan 13 23:35:20 2002
Subject: [R-390] a possiable source for 26Z5W's

I was cruising and I found a website in the Netherlands that lists the 26Z5W for 5 Euro's, which is a little bit more then $5.00 each. I have sent them a note to see it this is true. On an other European site I ran across a mention of the CV5030 as a "usable sub" for the 26Z5W so far I haven't found any data on this tube. Ken

From w7itc@hotmail.com Mon Jan 14 01:35:11 2002
Subject: [R-390] testing

Ok, I am just not seeing them in a timely way on My end. I seem to recall that MSN is doing some up-grade work and that things where going to be strange for a few days. I was just rereading Chuck's note about the replacement of the 26's with diodes. Even though My 26'ers are ok I may do the mod' anyway because of the heat issue. Ken

From mikea@mikea.ath.cx Mon Jan 14 01:31:55 2002
Subject: [R-390] R-1051 rack mounting brackets: who's interested?

wrote: iridized metal Is this like "Chromacoat" I used to treat metal when I worked at >a large manufacture of defense and commercial restaurant equipment.

I honestly don't know. I'm just reading from the drawing that gives dimensions, hole locations, sizes, and countersink angles, and the like. I suspect, but don't know, that it's a phosphatizing treatment. Google comes up dry on all the variations I tried. Mike Andrews

From rbethman@home.com Mon Jan 14 01:42:35 2002
Subject: [R-390] From the horse's mouth

The horse crosseth the line - a winner - but he finally died.

I apologize for my exhumation, but I felt a point or two had to be made. In AC the voltage peaks to the same value on either half of the cycle. What I felt was "really" missing was the concept of power and time. There is no time factor in a power equation. That was the hardest thing to get across. Once we got that established we could move on and get to the "real" meat! Bob - N0DGN
(I'm not much for titles - I feel that they are useless...but) Board Certified Nuclear Power Plant Operator and Maintenance Technician - and Instructor - Since September 1974

From w7itc@hotmail.com Mon Jan 14 02:14:28 2002
Subject: [R-390] testing

Ok I have all of them now, it took about 3 hours for them to post in my inbox. Well MSN did warn me things where going to be strange for the next few days. Jee wiz how spoiled I am, imagine not getting a post for three whole hours. I was once happy with a snail mail letter getting someplace in a week. Ken

From w9wis@charter.net Mon Jan 14 01:54:19 2002
Subject: [R-390] New (to me) R390A... Advice ?

Hi everyone, I should be taking delivery of a "new to me" Motorola (with a Collins PTO) this week or early next week. It appears from the photos to be in excellent general condition and the prior owner reports it works well and is calibrated and meets liniarity specs and has wonderful audio. It is thought to be all original with no known mods and is very clean. It has been in use probably since new and has no humm or reported vices except for normal paint wear and perhaps a few dings. It appears VERY clean on the inside and has all the covers and original meters.

I have been cruizing the net for about a week looking at all the available info and have downloaded the Y2K R390A manual.

What do I need to look at first ? What special connectors might I need ? I already use a Radio Shack 1K to 8 Ohm transformer on a different rig to get the 600 Ohm audio output into an 8 ohm speaker so I expect I'll need to do that here as well.... proior owner also gave me a 8 ohm radio to stereo cable etc to run its audio into a stereo which reportedly worked very well.

What antenna connector will I need ? And.... where might I find this stuff ?

Prepare for lots of questions as I start checking things over <grin>. Regards, Mike

From hankarn@pacbell.net Mon Jan 14 02:29:13 2002
Subject: [R-390] From the horse's mouth

Boy this horse is so rotten I would sure hate eat any that meat. It is really stinking now after 2 weeks of decay of the power cycle and the sine.!!! Hank KN6DI I think the SPCA should be called for the poor beating this horse has had.

From twleiper@juno.com Mon Jan 14 03:21:48 2002
Subject: [R-390] From the horse's mouth

writes: > Boy this horse is so rotten I would sure hate eat any that meat. It > is > really stinking now after 2 weeks of decay of the power cycle and > the > sine.!!! > Hank > KN6DI > > I think the SPCA should be called for the poor beating this horse > has > had.

And it ended just in time, too. I had finally figured out how to get the Leyden Jar charged up to 15 million volts using a home-brew Van DeGraff generator, and all I had to do was finish the motorized spark gap that would close to within arcing distance once every couple seconds. I even had a couple cases of 6080's ready to blow, ... I mean, go. Tom

From mikea@mikea.ath.cx Mon Jan 14 03:45:18 2002
Subject: [R-390] New (to me) R390A... Advice ?

wrote:> What antenna connector will I need ? And.... where might I find this stuff> ?

You're in a whole new world now. The balanced antenna connector is a "twinax" connector. They're used in wiring IBM S/36, S/38, and AS/400 LANs, and your localparts house may have them. RF Parts, Pasternak, and Allied all have them.

The unbalanced connector is more difficult. It's a "C", which is like a BNC on steroids. IIRC, RF Parts and Pasternak both have them, and I think RF Parts also has BNC Female to C Male adapters.

There may also be BNC Female to Twinax Male adapters somewhere.

Caution: Pasternak has a $100 minimum, and I think their line item minimum is $25. I've never bought from them, but I've never needed to buy that much in connectors. They also sell really good cable, if you need it in long pieces.

Other folks have their favorite parts houses, too, and I hope they'll chime in. Mike Andrews

From Joe" <joe.amp@verizon.net Mon Jan 14 04:27:36 2002
Subject: [R-390] Lankford SSB Mod

Something must had something go wrong Ken, you dont have to do that with the Lankford modification. Sounds like you needed to up the BFO injection cap and neutralize.I only need to lower the RF gain with VERY STRONG signals around +60DB.BTW: Your text posts are working, Joe

From BRingwoo@csir.co.za Mon Jan 14 07:09:18 2002
Subject: [R-390] RTTY with R-390

I was using MMTTY with quite a bit of success - alas not with theR-390A yet. Another one to try is True TTY. Mainly received weather reports and some news from an as yet unidentified station. - Bryce

From w7itc@hotmail.com Mon Jan 14 08:16:57 2002
Subject: [R-390] From the horse's mouth

Oh I can think of something worse. A foolish friend of mine while we were doing active duty in My Army National Guard days (I am a Navy Vet) found a dead sea lion on a beach a bunch of us where walking on. The idiot kicked this bloated carcass. His foot went all the way inside. That was bad, but it got worse when he pulled his foot out releasing a stream of the foulest smelling, rotten, putrid, liquid and gas. This gaseous fountain of brown goo coated his entire body. I am here to tell you even the flies where puking. Ken

From jbrannig@optonline.net Mon Jan 14 13:33:57 2002
Subject: [R-390] PD-1 SSB reception, AM effects

The CV-591 has a choice of Xtal or Var. OSC., hence the large "Bandspread" knob. No notch filter or IF gain controls. Otherwise the controls are similar. I have not seen a lot of SBA-1's around so your Signal Corps. model might be an evaluation version. Jim

From ba.williams@charter.net Mon Jan 14 14:08:01 2002
Subject: [R-390] New (to me) R390A... Advice ?

Mike, Try this site to get the updated Y2K manual for the R-390A. It is well worth the download.... http://www.hausernet.com/r390a/ Also, this is Chuck Rippel's audio mod for the R-390A. It is very simple and requires only one resistor and one capacitor.... http://www.R390A.com/html/diode_load.html Barry

From ai2q@adelphia.net Mon Jan 14 14:54:04 2002
Subject: [R-390] PD-1 SSB reception, AM effects

With all thus talk about SSB, I remind you that a circuit for a product detector I built still resides at http://pdq.com/boatanchors/ssb/ as well as at http://fly.hiwaay.net/~wb7vdn/Download.htm

Also, I recently glommed an old Hammarlund HC-10 box, and have it connected to my 51J-4, although

it will work with my R-390 or -390A as well. It's input can be quickly adjusted to accept IFs from about 430 kc to 510 kc.

I stabilized the free-running BFO in the HC-10 with some high voltage Zener diodes (in series), and replaced the 5Y3 with diodes to offload the filament demand on the power xfmr.

The HC-10 does a pretty good job on SSB. It's kind of fun to have a set with two IF strips, detectors, AGC lines, filters, limiters, and audio stages. 73, AI2Q, Alex .-.-.

From jlap1939@yahoo.com Mon Jan 14 15:19:21 2002
Subject: [R-390] IMHO

So, what is IYF..., when using leter abrvations? thganx, John (I been in the Jack Daniels...soriy)

From buzz@softcom.net Mon Jan 14 17:13:08 2002
Subject: [R-390] Abbreviations and Acronyms

http://www.ker95.com/chat101/html/abbreviations.html

From rlruszkowski@west.raytheon.com Mon Jan 14 17:59:17 2002
Subject: [R-390] Exhumation of dead horse...Dead horse walking

Dead Horse !! Dead Horse, Where? Roger.

From VARailfan@R390A.com Tue Jan 15 00:13:24 2002
Subject: [R-390] New to R390A

Welcome to the group. First, go out and buy that hernia belt you always wanted :-)

Actually, you could do a couple of things. Call Antique Radio Supply and get on of their Hammond 600/8-4 ohm audio transformers. It'll cost you about $17. 30-20,000 hz and rated at like 12W. Its most excellent; one of Fred Hammonds personal designs. While you are at it, buy a half dozen .01 and .1 Orangedrop capacitors they sell. I like the high performance versions. You'll see why in a moment.

http://www.tubesandmore.com

You might look around my web page: http://www.R390A.com

Second, when the radio arrives, test it to make sure it works then, take the IF deck out and using the capacitors you bought above, swap out the ones that just about always go bad. They are on my web site at: http://www.r390a.com/ProbCaps.html

If you do nothing else, CHANGE C-553, the plate blocking cap for the filters. There is a picture of it on the page noted, above.

Then, sit back and enjoy the radio, learning the technology as you enjoy one of the finer things in the hobby. -73- Chuck Rippel, WA4HHG

From Barry Hauser <barry@hausernet.com> Tue Jan 15 01:47:16 2002
Subject: [R-390] New to R390A

Chuck:

Never thought this would happen, but I have to disagree with your advice -- the sequence anyway.

I strongly suggest that the pilgrim make a beeline to your site right now (no, don't stop for dinner) and be sure to check out http://www.r390a.com/html/C-553.htm . Then, make some checks/replacements before powering up.

After reading your web pages a couple of years ago, I always pull the IF deck and at least check C-553 BEFORE I power up, and replace it. I haven't found a shorted one yet (in about 10 units) at least that an ohmmeter would show, but that horror story about blowing the filters one by one makes me verrrrry edgy -- paranoid even. It's easy to find using the photos on your web site. I consider this step to be a "Rippel Imperative". If one is lucky, there may be an orange drop already there, or a yellow poly jobbie.

As a rule, I do all I can to resist the impulse to test out the radio on arrival -- even if the seller had it powered up and running day before yesterday. I also pull the AF and PS modules and at least do a visual check -- and replace that blown up tantalum while I'm at it. Then, I use a variac, even though it's a bit of false security if the 26Z5W's are doing the rectifying.

Another pre-power thing -- check the tubes. Even if the rig is supposed to be working, tubes sometimes don't travel well and Murphy's Law requires that one tube develop a short in transit -- not because the carton was dropped, but due to all that vibration in the trunk of a car or on a stiffly sprung UPS trailer going cross country. Probably not, but, if it were so, Mr. Murphy further postulates that the tube short will be where it can do the most harm. I have found a few shorted tubes.

Remember, R-390's, unlike other household appliances, DON'T say: "Do not open. No user servicable parts inside." On the other hand, boldly stamped (or silk-screened) on the lower left corner of the panel is the admonition about reading the instructions. If there was enough room, the URL for Chuck's website, the Y2K manual, and Al Tirevold's FAQ site would be right there, too. Besides, these pre-flight checks will help you bond with your radio. ;-)

Other than that, pilgrim, do everything Chuck says, stay out of trouble, enjoy and ... welcome aboard,
Barry

From billsmith@ispwest.com Tue Jan 15 02:38:45 2002
Subject: [R-390] R-390 end-point adjustment

Hi, have a R-390 non-a with a Collins 70H-2 PTO, with mod.

This one is out a bit, and I have attempted to adjust the end point. I have removed the cover from S701. Inside is a hollow, threaded cylinder. The cylinder seems to be threaded inside and out. Slots are cut in the end of the cylinder presumably for screwdriver adjustment.

I have attempted to rotate this adjustment, but it appears to be locked in position. I used a small mirror to see if there was any other adjustment inside the cylinder or a locking nut. None found.

The low point of the PTO (at 000) can be set to 3.455 KHz. The upper end then measures 2.467 KHz.

Any ideas? I'd hate to force the adjustment any further without knowing I won't break anything!

73 de Bill, AB6MT billsmith@ispwest.com

From maritimus49@yahoo.com Tue Jan 15 02:49:39 2002
Subject: [R-390] R-388 knobs, etc

Hello All - OK, here is another horror story courtesy of UPS. The R-388 that I purchased was sent to me via UPS. The box was apparently dropped and the front panel was impacted. The result was that the two large knobs for tuning and band switch were cracked and one of the small knobs for selecting selectivity was also cracked. Can anyone tell me where replcements may be obtained? I get the impression that they are hard to find. I hope not. The scary thing is that the PTO shaft may have also been bent. The man who shipped the R-388 to me told me that he would double box it. However, he ended up putting it in a heavy cloth wrap and surrounding it with peanuts in one box. Of course, the receiver shifted in shipment and the panel was apparently quite close to one side when it was dropped or hit. So much for my dream of being able to open up this box and behold a beautiful, ready to go Collins. Also, has anyone had any dealings with UPS as to filing for damages? The man who shipped it said he would call and make a claim. It was insured for $400. I would appreciate any comments about those knobs and UPS. I have no plans to turn it on now. I'm going to test the tubes first and give it a close going over before that. 73, Bruce K6RQR

From Barry Hauser <barry@hausernet.com> Tue Jan 15 04:33:56 2002
Subject: [R-390] R-388 knobs, etc

Hi Bruce & List: You wrote: > OK, here is another horror story courtesy of UPS. The > R-388 that I purchased was sent to me via UPS. The box > was apparently dropped and the front panel was > impacted.

That's why the rigs should be braced at their corners or other strong points.

The result was that the two large knobs for > tuning and band switch were cracked and one of the

They should be the standard fluted knobs which are not hard to find. Does that small knob have a metal pointer at its base? (Like the filament voltage knob on a TV-7.)

The scary thing is that the PTO > shaft may have also been bent.

That is scary -- though probably fixable. Was the PTO damaged? It's bad enough when knobs break or there's other front end cosmetic damage. But the shafts and the switches and pots were not built to take the weight of the radio driving them backward. Imagine what would happen to the typical Hallicrafters bandswitch that goes right straight through from front to back PTO's don't like to be jammed either.

The man who shipped the > R-388 to me told me that he would double box it. > However, he ended up putting it in a heavy cloth wrap > and surrounding it with peanuts in one box. Of course,

Why is this so blankety-blank familiar, along with "I've shipped many of these things, with no problems, yadda yadda." I've had a few misfires come my way. Try an SP-600 with the bottom corner square inch

of panel broken off and a 2 inch crease in the rear apron for fun in the evening. Many, many near misses -- stuff arrived OK by the grace of the chief engineer in the sky -- not packed as advertised. Beanbag box syndrome -- UPS people can hardly pick the thing up because it has no corners or edges. Then, on top of being inadequately protected, it's more drop-prone.

So much for my dream of being able to open up > this box and behold a beautiful, ready to go Collins. > Also, has anyone had any dealings with UPS as to > filing for damages?

I've had no direct experience. Reason: The few times there was damage, it was the fault of the packing, or at least the packing was so clearly inadequate it wasn't presentable to the authorities. That SP-600 came in a U-Haul box made for light duty use -- not even a true shipping box and said so in six inch high letters so the UPS claims guy could see before he got out of his car. They will want to see what it was shipped in - y'know, the thing with the UPS label, bar code and tracking number stuck right on it. If it's as bad as it sounds, you may not have a chance. I'm told the fact they accepted the parcel for shipment means nada.

The man who shipped it said he > would call and make a claim. It was insured for $400.

The knobs, when you find them, won't cost much. Check the usual sources. I'll check later on a couple and let you know. PTO is another matter. One of the problems though, in making these claims, is establishing cost to repair. You can't very well trot down to the nearest Collins authorized repair center for a quote - not unless you have a way-back machine. If the PTO is bad, that could be expensive and difficult to find. The R-388 units are not as plentiful as the Cosmos's for the '390A's. Once the total climbs past a certain point -- and the packing was OK -- they may offer to pay the full amount -- but they take the merchandise. It's like collision insurance with a car. At some level, it's "totalled" even if it still runs.

Chances are, the claim will be refused outright, but that will establish officially that the fault was in the packing. (If UPS has any standard, from what I've heard, it's "original packing" (yeah, right) or in-place foam.) So you may be out of luck from the get-go. However, you then should seek compensation from the seller.

> I would appreciate any comments about those knobs and > UPS. I have no plans to turn it on now. I'm going to > test the tubes first and give it a close going over > before that.

Yup -- work around it for now, and look for other concealed damage. Hopefully there will be none, but it took a bad hit in the worst place. Incidentally, those old knobs are Bakelite and may be decently repairable. I've repaired the fluted knobs like those with epoxy. Don't use krazy glue. Mix up the epoxy well and apply quickly before it starts to set up so it will flow as you press the pieces firmly together. Don't worry about the excess right away. After it sets, take a razor or Xacto knife and trim away the excess glue flush with the surfaces. Don't try to take it all. Let them cure at least a day, maybe two. Then you can sand them smooth with very fine sandpaper or emery -- or those abrasive pads. What this approach does is to fill any voids from crumbling around the cracks or tiny missing pieces. Re-shine with Brasso, plastic polish or auto compound. You can stop at this point, or do some more detailing with hard shoe polish. There are a bunch of other ways to restore the finish. Some paint them gloss or satin black and bake to harden the finish. (Of course, then they'll eventually chip like '390 knobs.)

If it's just the knobs and no damage to the PTO or anything else, I suggest you "settle out of court". Ask the seller to repay you for the knobs. Barry

From w5or@home.com Tue Jan 15 08:19:08 2002
Subject: [R-390] New to R390A

Now this is an interesting idea, Barry. Replacement repro tags with tiny engraved reference URLs, for all future owners' reference. Maybe even a registry for this particular radio, with a database id, detailing all the changes, mods, history, owners, pedigrees, lore and UPS travails. :-)

> (or silk-screened) on the lower left corner of the panel is the admonition > about reading the instructions. If there was enough room, the URL for > Chuck's website, the Y2K manual, and Al Tirevold's FAQ site would be right > there, too. Besides, these pre-flight checks will help you bond with your > radio. ;-)

From Joe" <joe.amp@verizon.net Tue Jan 15 10:15:10 2002
Subject: [R-390] Lankford AGC Mod ?

First off you cant blame all Arabs.
YOU WANT TO KNOW THE TRUTH ?
I have 2 relatives working recovery, they are down to the 26 floor (7 stories below gnd level)
Groups of mummified down there all around the core (WTC was a curtain wall build) R-22, asbestos, burned PVC, transformer oil, and more ...thats all you get !
Us New Yorkers and my 2 brothers will take care of our own regardless.
Most recovering the remains are off duty volunteers, you idiot ****bag !
No amount of $$ can pay for for what them guys are going through !
The families have received ZIP of proper distribution..... SO SHUT YOUR MOUTH !
Perhaps we need a test?
Lets have the SC drop just ONE R-390 on your house sans parachute and see what you think !

Hmmmm.....Clin-tin unemployed spook with a Uniden ? YES ? Ba Di Ba - Ba Di Bing (smack)
Greetings from NYC -Joe

From chejmw@acsu.buffalo.edu Tue Jan 15 11:34:04 2002
Subject: [R-390] R-388 knobs, etc (LONG)

Hello Bruce, I guess I should chime in here so here goes. The full story about my dealings with UPS can be seen at Http://eshop1.chem.buffalo.edu go to the E-Bay Rip-Off point and read the story. I'll explain briefly what transpired here.

My wife bought me a fathers day present on e-bay, a Johnson thunderbolt, supposed to be in "Collector Quality Condition", She asked for, and paid for "Double Boxing" to the tune of $88.00 for shipping from California. She also asked for and paid for insurance of the unit at $1000.00 as it was supposed to be "Collector Quality" and was to be considered un-replaceable.

The seller took her money which was sent promptly, and then went to a Mail Boxes ETC; (a UPS shipping independent) dropped it off and left it to them to follow the instructions, ie; double boxing, insurance and so forth. The "MBE" folks put it in a single box with peanuts in it, (the thunderbolt weighs 117 lbs). What is wrong with that picture? They sent it out like that. It was destroyed in shipping, when we asked UPS about it they said have it appraised and file a claim. The shipper is responsible for filing the claim and says he did. Ups paid the claim (1000.00) to the shipper who KEPT the funds for the unit. We ended up with a box of broken parts, and a very corroded thunderbolt in less than good

condition, our cost almost 800.00 finally and never heard again from the seller or UPS. E-bay was no recourse either, as they couldn't even find the seller, who subsequently changed his e-bay ID and is still going business with unsuspecting souls.

I eventually got the thing "running" to the tune of an additional 500.00 but it was NOT worth it. Jim WB2FCN

From courir26@yahoo.com Tue Jan 15 13:01:38 2002
Subject: [R-390] R-390 end-point adjustment

Bill, If I have the picture right you are messing with the oven adjustment. To adjust the endpoint, one does not remove the cover. The endpoint adjustment is under a screw cap on the upper right hand side of the front of the PTO as you look at the drive shaft. Is this what you are looking at? 73 Tom N5OFF

From Barry Hauser <barry@hausernet.com> Tue Jan 15 13:36:53 2002
Subject: [R-390] R-388 knobs, etc (LONGer Still)

Hi Jim: Horror stories like yours really get to me. I may have to take a walk around the block to shake the palpatations, shakes and tendency to turn green and burst out of my shirt. (Also, everything looks red.) Hot button -- Mailboxes Etc. -- on top of the ripoff artist and general rotten b-----d in question..

Before I forget -- yes, it's the shipper who's supposed to file the claim, however, if things were truly as you said, the MBE was the shipper of record in your case. I always cringe if someone wants to use one of them to ship me something. Despite that commercial they ran up to a few months ago -- experts in packing, hah! -- all they know from is flimsy overpriced cartons, USED, pre-crumbled peanuts, and bubblewrap. They charge for all three and mark up the UPS charges anywhere from 15 to 100% over what you'd pay to UPS directly. The margin is actually higher because they are daily pickup shippers and get a volume discount. There is also now some ownership connection between UPS and MBE.

Actually, $88 sounds cheap for them for 135 lbs. Must have been a relatively short distance. Were you contacted by UPS for evidence of the loss? May be you should go after that MBE. If they really shipped it (would show on the label), THEY would have had to file the claim and would have received the money from UPS. Of course, their customer who ostensibly paid them in the first place was your seller, and that's who they'd remit to, but .... might be worth a try. May still be a reach, I dunno.

It also tars me that there are so many sellers who are quick to sell heavy relics at high prices and then just dump them in a box or trot off to an MBE. (Did the seller advertise -- "must be professionally packed"?)

I had a recent experience on a private sale. A large open reel deck with overhead console. Negotiated a price and a more-than sufficient allowance for shipping and packing materials. Next I hear from him - he shipped it -- from an MBE clone place. Needs another $100 to cover it. Cost me double what it cost you for coast to coast, but half the weight. Never again. If a seller wants to benefit from getting a good price by offering his stuff nationwide, or wider, vs. local pickup, then he should take the responsibility for packing it properly himself. The item the item delivered intact and whatever it takes to do that. There was no damage in this case, though the packing was the usual crap. I saw the receipt. Oh, and yeah, the tape deck wasn't exactly up to snuff -- like 3 out of 4 channels worth and there was a major cosmetic "blem" that went unmentioned. And this wasn't my wife ordering it -- silly me.

Next time I catch wind of "professionally packed", I'll pass, thank you. As for the gross misrepresentation involved in your case, Jim, ideally these people should be handled along with the other "illegal combatants". Military tribunal made up of disgruntled boatanchor vets after a bad day. Tarred with ukkumpucky and PCB's, feathered with used peanuts and shoved out the side door of a vintage restored Dakota at 10,000 feet, over a toxic waste dump. Or maybe more of a perfect-justice solution -- repackage/label everything in their homes. Like the orange juice gets swapped with the Liquid Plumr, hot 'n cold pipes switched, DC at the wall outlets, swap the tuna labels with the ones on the cat food, etc. Good object lesson and re-training on the consequence of things not being "as advertised". Or maybe, bubble wrap the jerk and throw him in a flimsy box with some peanuts and ....

My apologies to the list for the self-indulgence here, but this hits a hot button and it hasn't popped back out yet. Also, this list is about care & feeding of vintage gear, including repairs and restoration. Let's face it, the more serious damage and wear and tear lately is coming from irresponsible shipping and 2-7 days in transit than 40 years of hard use and bad storage -- not leaky caps or drifted resistors. Then there's mind-bending and heart-rending variance between the actual "item" and "virtual reality". Many R-390's and other gear are bedeviled by a case of severe "cognitive dissonance" whereby the graphic pixellation and ascii text descriptives don't quite correspond to the physical structure of the device. (You do know everyone, that jpegs automatically smooth out sections as part of the compression process?) Naw, the graphic and textual representations must be right - the "item" must have gotten itself re-transmogrified during shipment, as if there was a malfunction in the Star Trek transporter and the molecules didn't reassemble quite right at the delivery point, so arrives as something not quite @MINT@. Probably forgot to type the "@'s" at the transporter console. ("Hey, it was working when I shipped it.") ARGGGHHH! Barry

From JamesMiller20@worldnet.att.net Tue Jan 15 13:27:56 2002
Subject: [R-390] R-388 knobs, etc (LONG)

Perhaps as buyers we can collectively influence these sales by insisting on COD only transactions. Then when the UPS guy shows his smiling face at the door and holds out his hand for that check, we ask him to wait while we open the box and inspect the goods. Great motivation for careless sellers... perhaps they will take more care if they knew their payment depended on it!

From ba.williams@charter.net Tue Jan 15 13:41:41 2002
Subject: [R-390] R-388 knobs, etc

> Chances are, the claim will be refused outright, but that will establish > officially that the fault was in the packing.

Barry and Bruce, I sent a double boxed scanner that I sold to a guy in Texas. It arrived damaged and he sent it back to me for a claim. I refunded his money. The original packing had a puncture hole in the top where something thin and sharp pierced both boxes and caused some damage to the radio.

I got the runaround from UPS for weeks. Finally, an inspector showed up and suggested that I return the radio for warranty repair. The guy either didn't notice or didn't care that my wife heard this too, so she was my witness. I called the big UPS office for Alabama and got a higher level type on the phone. When I gave the inspector's name and said that I had a witness to the suggested fraudulent warranty scam I got a pretty fast decision to pay for repairs at an authorized dealer.

I got my RBL-5 from ebay. The guy wrapped in up into a great big ball of thick foam pieces. This was

put in a big box with lots of foam packing around the radio-foam-ball so that it was tightly positioned. It was well insulated with several more inches of foam pieces so tight they couldn't shift or settle. This is the box that spent days being misrouted to somewhere like Minnesota, back to the seller in California, then to Arizona, and finally to me via the friendly folks at UPS. It arrived in good shape. Barry

From courir26@yahoo.com Tue Jan 15 13:54:17 2002
Subject: [R-390] R-388 knobs, etc

I got a R-725 sent to me, single boxed with a few lame peanuts thrown in. Arrived unscathed. Just dumb luck. Tom

From billsmith@ispwest.com Tue Jan 15 16:59:04 2002

Hi, all, Apparently I was trying to tweak the temperature compensation. Glad I asked first! I have put the set back together, and will find another mini-moment to take a look at it. Along with miniature gear, time seems to have shrunk also.

Thanks for the notes, will carefully file them away for the next attack. Noticed also, in tuning around that a couple of spurs have appeared, one near 910 KHz and another at 610 KHz. They are not loud, but doubt they should be there. Thanks again. It is great to work on equipment this complex with an expert eye or two watching over one's shoulder. Thanks again. 73 de Bill, AB6MT billsmith@ispwest.com

From rlruszkowski@west.raytheon.com Tue Jan 15 17:53:50 2002
Subject: [R-390] 6DC6 Replacement

Fellows, Warning Solid state devices discussed in this post. POST NOT SUITABLE FOR ALL READERS.

What ideas are there for plugging a transistor into the 6DC6 RF amp socket of the R390/A.

I am looking for: equal or better sensitivity. equal or better gain. lower device noise.

to produce An over all receiver improvement in the signal to noise whatever Good 7 pin metal relay cans exist to house (conceal) [shield] the device.

Considering the nature or the RF deck underside, I am going for a plug and pray modification into the tube socket on the top side.

What's been kicked around and deemed undoable because it violates nature?

God knows there is no need to replow sinful un natural fields of thought. So any sinful ideas you can post to help me avoid them will be welcome.

What's been considered that has merit? Roger KC6TRU San Diego

From redmenaced@yahoo.com Tue Jan 15 19:05:37 2002
Subject: [R-390] Lankford AGC Mod ?

--- Joe <joe.amp@verizon.net> wrote: > First off you cant blame all Arabs.
++++++++++++
I wasn't blaming ALL arabs, just the ones that did that!

> YOU WANT TO KNOW THE TRUTH ? The clean up guys are doing the toughest part of this, no doubt about that.

My post had nothing to do with this either!

> you idiot ****bag !
+++++++
I think you took something in my post the wrong way here.

I'm a New Yorker, too. Unless you hadn't noticed its all ONE BIG STATE!

> No amount of $$ can pay for for what them guys are > going through ! ++++++++

Didn't say it would. But why do we have to pay for the rebuild?

> The families have received ZIP of proper > distribution..... SO SHUT > YOUR MOUTH !
++++++++
My post had NOTHING to do with this!!

> Perhaps we need a test? > Lets have the SC drop just ONE R-390 on your house > sans parachute and see > what you think !
++++++++
I feel like they DID drop one on my house.

> > Hmmmm.....Clin-tin unemployed spook with a Uniden ?
> YES ?
> Ba Di Ba - Ba Di Bing (smack)
> Greetings from NYC
++++++++
I thought you said you were on Long Island, that's NOT in NYC!!

Get off your high horse, they hit us all. Joe

From cbscott@ingr.com Tue Jan 15 19:46:22 2002
Subject: [R-390] 6DC6 Replacement

Oh no! I read the ENTIRE post!!! Is there a cure for this? How long do I need to breathe tube-heated air before my brain is fully cleansed? Do I need to sacrifice a virgin 26Z5W?

(Aren't there "tubesters" for the 6DC6?) Barry - N4BUQ

From john_finigan@yahoo.com Tue Jan 15 20:11:58 2002
Subject: [R-390] R-388 knobs, etc (LONGer Still)

Barry, you said it. Reading this stuff makes me so mad, I have a hard time containing myself. Personally, I received a R-390A last friday in trashed condition, due to nothing but the seller's apathy in packing. Common sense could tell anyone that a 75 lb plus radio in ONE sheet of bubble wrap, in a flimsy U-haul box will not survive the UPS gorillas. Seller was very quick in replying to emails until he got his money, since then I've tried contacting him about 6 times with no response...which leads me to an open ended question:

Why it that almost no one has the guts to put anything other than A+++++++++ on those eBay feedback forms?

Sorry about the rant. This sort of thing really bothers me.

PS, I agree MBE is the ultimate ripoff. Peanuts, for example, are often on a 500% markup, and thats just for buying a bag, not for having them put them in a box. John

From rlruszkowski@west.raytheon.com Tue Jan 15 21:20:44 2002
Subject: [R-390] 6DC6 Replacement

What's a tubester?
A Tubester is/was a solid-state replacement for hollow-state devices (read: tubes). I know many Collins 75-series rigs were done this way in decades past. I couldn't find the line-up for my old 75S-1, but I'm pretty sure all the tubes in that rig had tubester replacements available. The commonness of the 6DC6 would lead me to believe there are tubesters available for it as well, but I might be wrong.

What say ye, list? (Aren't there "tubesters" for the 6DC6?) Roger Barry - N4BUQ

From Llgpt@aol.com Tue Jan 15 23:15:50 2002
Subject: [R-390] R-388 knobs, etc

writes: << I got a R-725 sent to me, single boxed with a few lame peanuts thrown in. Arrived unscathed. Just dumb luck. Tom >>

I can top that one Tom.....A few years ago I purchased a SP-600JX-17, arrived with nothing in the box but 3 sheets of newspaper under the SP-600. It too arrived totally unscathed!! Les Locklear

From vibroplex@mindspring.com Tue Jan 15 23:46:48 2002
Subject: [R-390] Lankford AGC Mod ?

Joe, I find that speech highly offensive and certainly inappropriate for a reflector of this sort (radio). If you feel, in this radio forum, a burning desire to speak out publicly about the vicious criminals that savagely attacked the World Trade Center and the Pentagon, perhaps you could find a way to do it without introducing race into it.

What you said was akin to saying "it's great they caught Christian Michael Longo, that caucasian male in Mexico who murdered his family in Oregon." What does race have to do with it? Derek Cohn

From JamesMiller20@worldnet.att.net Wed Jan 16 00:01:24 2002

Subject: [R-390] R-388 knobs, etc (LONGer Still)

I know this is off topic but BA enthusuasts often play with more than just one manufacturer. So I am restoring an old Heathkit HR-10B receiver. Does anyone have any Heathkit touchup paint they can part with? Just need a little to touch up the front panel (it's two tone paint) and the case. Thanks... Jim N4BE

From JamesMiller20@worldnet.att.net Wed Jan 16 00:01:36 2002

Subject: [R-390] Paint

I know this is off topic but BA enthusuasts often play with more than just one manufacturer. So I am restoring an old Heathkit HR-10B receiver. Does anyone have any Heathkit touchup paint they can part with? Just need a little to touch up the front panel (it's two tone paint) and the case. Thanks... Jim N4BE

From twleiper@juno.com Wed Jan 16 00:10:47 2002
Message-ID: <20020115.191049.-504331.5.twleiper@juno.com>

writes: ... > What you said was akin to saying "it's great they caught Christian > Michael > Longo, that caucasian male in Mexico who murdered his family in > Oregon." > What does race have to do with it?

Nothing at all. Very well put, white boy... Cracker

From hankarn@pacbell.net Wed Jan 16 00:52:11 2002
Subject: [R-390] Lankford AGC Mod,... for whites only ?

Who dat Derek be? me screen see only white background with black text, it so no race, religion nor politics, it lookum for RADIO information on dis har page. u no understandum. I thinkum you go pound ya drum at da udder joint. Hank KN6DI Back to RADIO's

From ba.williams@charter.net Wed Jan 16 00:46:37 2002
Subject: [R-390] Lankford AGC Mod ?

> Joe, > > I find that speech highly offensive and certainly inappropriate for a > > > Derek Cohn

First of all, I am offended at glamorizing those terrorists as 'criminals'. They are not criminals at all and don't deserve such a lofty status. They are murders of babies and mothers and innocent civilians. They are terrorists and deserve to be hunted down like the dogs they are. The only thing left to do is hunt them down and butcher them all. End of discussion and hand wringing. Let's roll! Barry p.s. They were all Muslims too. 'nuff said. Let's roll!!!

From ba.williams@charter.net Wed Jan 16 01:22:48 2002
Subject: [R-390] R-388 knobs, etc (LONGer Still)

John, Does the creep live near me here in Alabama. I could arrange a visit maybe....and try to 'persuade' the guy to make things good with you. Barry

From goode@tribeam.com Wed Jan 16 15:41:04 2002
Subject: [R-390] 6DC6 Replacement

Alright! I must confess that I have had similar evil thoughts.

WARNING---SAND STATE THOUGHTS TO FOLLOW!!!!

I love the way my R-390A performs. Right now the only sand in it is the Navy approved power supply changes. It even has a working ballast tube. But I want this receiver to work forever! So what happens when I run out of tubes? My thoughts are that anything behind the mechanical filters is fair game since that should have minimal performance hits in dynamic range, sensitivity, etc. So I was thinking of looking at the IF, detector, agc, calibrator circuits to start experimenting on. **What I have found so far in discussions with others who have actually done solid state conversions is an article from the April 1977 QST (it is not the April fool article). This article shows how to make plug in solid state replacements for any tube using JET or MOSFETs in cascode with high voltage transistors.** This is as far as I have gotten. Anyone else willing to confess? Anyone actually succeeding in doing a solid state conversion? Steve, K9NG

From ai2q@adelphia.net Wed Jan 16 16:38:37 2002
Subject: [R-390] 6DC6 Replacement

Hi Steve: **I confess! I've poked JFETs into both 26C6 mixers on my R-392, and those 24-V stages work really well. I used a Dremel tool cutter to scribe the glass of 7-pin miniature tubes, cracking them open and removing the innards. I then soldered the JFETs with drain source and gate connected to the old plate, cathode, and grid leads, respectively. After inserting a label with my callsign on it, I then glued the glass envelopes closed. I popped 'em into the R-392, where these solid-state jobbies perform flawlessly. I can elaborate about the glass cutting procedure if you're interested**.

As per the 1977 QST article, last night I fired up an 1800-volt bipolar junction transistor in the relay circuit of an old Drake TR4. The device is a TV horizontal output transistor.

I pulled the relay driver tube and put my little solid-state jobbie (fabbed on a scrap of circuit board) in there with some clip leads, with my VTVM hanging in to see what's happening with the switching levels. I also put a reverse-biased diode across the driven relay in order to quash any possible counter-EMF that might do in the transistor. The xstr that drives the relay is in turn driven by a cheap N-channel JFET such as an MPF-102 or MPF-105, which derives its Vdd from a diode and a 300 uF cap hanging off the filament line as a simple halfwave rectifier/filter. The FET gate is extremely high-Z, and sees the control voltage at a VOX/anti-VOX summing point. Works like a champ and offloads the filament line.

Now on to RF "replacements." Finding suitable high-voltage FETs for the cascode circuits may be a problem. The Idss of the output FETs in these pairs has to complement the input FET. As for dual-gate MOSFETs, I know that Dan's Small Parts has some. Your thoughts? Vy 73, AI2Q, Alex in Kennebunk, Maine .-.-.

From cbscott@ingr.com Wed Jan 16 16:52:12 2002
Subject: [R-390] 6DC6 Replacement

Yeah, but how well did it work after you de-gassed it with the Zippo lighter? Looks like I should just sell my R390A and go get myself a radioshack rx... Barry - N4BUQ

From chg111@hotmail.com Wed Jan 16 16:58:17 2002
Subject: [R-390] PRC-77 batteries

Hello-I picked up a couple of functioning PRC-77s at a gun show Sunday. The batteries are weak; anybody know where I can get replacements ? TIA,Sandy G. nbsp; C.H. (Sandy) Geiger III

From rlruszkowski@west.raytheon.com Wed Jan 16 17:25:17 2002
Subject: [R-390] 6DC6 Replacement

Fellows, Alright! I must confess that I have had similar evil thoughts. WARNING---SAND STATE THOUGHTS TO FOLLOW!!!!

Steve, I have found Bill Noonan W6WJN in San Francisco. He really did the tubsters.

Bryce Ringwood, wrote me with some attachments we can not get through the reflector mail.

"I made a solid-state set in the '70s that worked something like this. It was(is) sensitive and low-noise, but really REALLY bad with nearby strong signals."

nearby strong signals is not a DX objective so we can skip over those things. We can hang a bridge rectifier and load across the feed line. Any signal that exceed .6 volts we can limit off across the bridge and into the load. I'll keep the finding here so we can share the knowledge. Roger.

From mikea@mikea.ath.cx Wed Jan 16 17:28:26 2002
Subject: [R-390] PRC-77 batteries

Sandy, Here's what I got from you; the HTML shows up as unformatted HTML in all its glory: left and right angle-brackets, etc., which is almost impossible to read. _And_ it shows up as a "Content-Type: text/html" attachment. The letter itself has no body at all. This is something I tend to skip as not worth the trouble.

If you can somehow coax hotmail into sending Email as plain text, your letters will have a _lot_ better chance of getting read by us old pharts with text-only mail readers.

And if you'll trim your letters to remove extraneous matter -- the stuff about sand-state replacements for our boatanchor glowbottles -- that'll drop the line usage and mailspool size a little bit, too, which will be A Good Thing. Mike Andrews

From rlruszkowski@west.raytheon.com Wed Jan 16 17:36:00 2002
Subject: [R-390] 6DC6 Replacement

Scott, Son we have really messed you mind with this sand stuff. I am sorry, I had no idea such fragile minds were being exposed to the crude stuff exchanged on this sight. Dead Horses and every thing.

Maybe you should turn the computer off for a week or 14 days and go hug your R390 until some of these bad topics pass. Think not about that radioshack path. Roger KC6TRU.

From cbscott@ingr.com Wed Jan 16 18:01:52 2002
Subject: [R-390] 6DC6 Replacement

Just wait'll the trash collectors try to pick up that pile of junque at the curb. Won't they be surprised. Lots of room now. Why didn't I think of this before. (Why are these walls so soft?) Barry - N4BUQ

From tbigelow@pop.state.vt.us Wed Jan 16 18:12:39 2002
Subject: [R-390] Lankford AGC Mod ?

Now, here's a way to get lurkers out of the woodwork... wrote:

From Richard.McClung@Dielectric.spx.com Wed Jan 16 17:57:02 2002
Subject: [R-390] 6DC6 Replacement

You know in what state you can pack that sand stuff and if there's any more talk about dead horses I'll complain to the SPCA and get your license suspended..... RICH @B> }

From Barry Hauser <barry@hausernet.com> Wed Jan 16 18:01:34 2002
Subject: [R-390] 6DC6 Replacement

wrote: .> I confess! I've poked JFETs into both 26C6 mixers on my R-392, and those
.
Am I to understand that you failed to replace the vacuum with fresh, uh, nothing? ;-)

For effect, you're allowed to add a mini orange LED for glow, but it should be driven by a EEPROM so it blinks the following message in code: "Warning to hollowstaters: Glass envelope contains solid state components which may be offensive to your sensibilities. This message in compliance with Truthi in Thermionic Emissions Act of 2002." If you use more than one of these, they must be synched.

Seriously though -- I'm interested in your tube cutting technique. Handy to make up 7 and 9 pin plugs out of bad tubes. Barry

From goode@tribeam.com Wed Jan 16 19:43:25 2002
Subject: [R-390] 6DC6 Replacement

Alex, In my quick search for high voltage FETs I have only found one reference. InterFET makes a 2N6449. I have not found a distributor for them. I have an HW-100 that I want to do the relay driver mod on as you describe. The relay seems to take out that tube every couple of years. 73, Steve, K9NG

From w7itc@hotmail.com Wed Jan 16 21:38:49 2002

Subject: [R-390] R-388 knobs, etc (LONGer Still)

This illustrates why I will never purchase anything on E-Bay. I am not a trusting soul in this instance. We all know how fragile these heavy old beasties are. To me it's a no brainer, If I ever have reason to ship am R-300 pound boat anchor I will either crate the thing Myself or have it crated and then trucked to it's destination.

There is a Ham in this area, Front range of Colorado, he my be the most hated ham I know. He is an out-and-out crook. His favorite trick is to go to the house of a recently dead ham to "help" the widow dispose of the her dead husband's equipment. He will typically tell the widow that the stuff isn't worth much but he will do her a favor and haul it off for her. He does and then shows up at the next ham feast with all of this equipment for sale. The Widow not getting a red cent out of it. I intervened at one ham feast when this crook was trying to rip-off a new Ham with an supper high price on an Yaesu FT 101B, even in it's best day the B model 101 left bunch to be desired. I rescued this young man, and took him over to a friend of mine who had a real clean TS-520S Kenwood, for sale at a fair price. I don't think The crook liked it when I called him a horse thief Ken

From w7itc@hotmail.com Wed Jan 16 22:41:16 2002
Subject: [R-390] R-388 knobs, etc (LONGer Still)

I am predigest, only four legged, red-haired members of Ireland's Canis Moochus need apply 8^)

From w5kp@swbell.net Thu Jan 17 01:35:44 2002
Subject: [R-390] 6DC6 Replacement/Glass cutting methods

Me, too. Might be useful in adapting tube bases and R-390A filters to my 75A-4. 73, Jerry W5KP

From Bob Camp <bob@cq.nu> Thu Jan 17 00:50:01 2002
Subject: [R-390] 6DC6 Replacement

Hi, More or less in the order asked:

> I am looking for: > equal or better sensitivity.

Certainly a reasonable thing to want.

> equal or better gain.

Probably not a good idea to go for more gain. You will degrade the radio's performance.

> lower device noise.

Good idea, but it's the same as sensitivity.

It would probably be a good idea to add similar or better AGC action and higher intercept point(s) to the list.

The R-390A is already chalanged in the intercept point race, and several radios of the same era (R-390

not an A) beat it in RF selectivity. If you degrade the AGC things only get worse in this department.

So how to come up with a solution:

1) A reasonable RF FET these days has at least 4X the gain of a 6DC6. Noise figure is not to hard to beat with a FET.

2) There isn't much that will run at high voltage anymore. The days have long past when you could get RF small signal parts that ran on 120 volts or so. The large signal stuff has enormous input and output capacitances.

3) The input and ouput capacitances of a single FET are a bit higher than a 6DC6 so if it a plug in mod you will have to get creative.

I suspect that leads you pretty quick to a cascode JFET arangement. That would get the output and feedback capacitances up into a reasonable range. Ouput admitance might be an issue but I doubt it.

That gets us to AGC. Probably time for some kind of op-amp and PIN diode arangement in the middle of the cascode. Sounds kind of messy.

In order to get all that running and not mess up the second and third order intercepts you would need to fiddle around quite a bit. Good Luck! Bob Camp

From ai2q@adelphia.net Thu Jan 17 01:39:40 2002
Subject: [R-390] Tube cutting 101

Hi Barry: After trying to cut open some sacrificial tubes using a few scribe-and-snap techniques, I arrived at a better way using a Dremel tool and thin cutting wheel.

I place the Dremel motor in a drillpress vise, and set the vise on my workbench so that the direction of rotation is away from me. Donning protective glasses, I then crank the motor up to top speed. Holding the 7- or 9-pin tube using gloves, I carefully rotate it against the cutting blade.

The point of contact actually glows red, which leads me to believe that the friction at that point may actually be melting the glass as well as "cutting" through it. In any case, the result is the same: I get a nice clean break. You have to fiddle a bit to get the right pressure and speed at which you rotate the tube against the wheel, but after a short learning curve, you can open these jobbies up and enjoy a low scrap rate. Naturally, you don't do this with rare tubes such as 7360s. You do it with defunct 6BA6s and 6AQ5s and the like.

Once opened, I remove the innards, and solder-in my solid-state devices. Closing the tube (after inserting a mandatory slip of paper with my callsign, date, tech info, etc.) is done with some Crazy Glue. Vy 73, AI2Q, Alex in Kennebunk, Maine .-.-.

From w7itc@hotmail.com Thu Jan 17 02:07:18 2002
Subject: [R-390] Tube cutting 101

You are cutting the glass almost the same way glass cutters do it. By the way I found a source of batteries for the man pack radio that was mentioned here, the note however was intercepted as having a

suspicious header. I am not sure what I did but if broke a list rule My apologies. Ken

From jonandvalerieoldenburg@worldnet.att.net Thu Jan 17 04:36:28 2002
Subject: [R-390] R-388 knobs, etc

Had a TT-176 Teletype shipped here single boxed with only a double layer of corrugated cardboard on the bottom as packing. I was amazed UPS delivered it in A-1 shape!! 2 years back I bought a SP-600 from a member on the Hammarlund list. UPS sent the radio on a 3 week tour of the country. It had tracking on it, so I was aware of this. I had left specific instructions with my staff at work that I must see the parcel before any signing off. The UPS man cleverly left the box in a public hall, & lucked out as it was lunch hour and the receptionist was out! The box looked like it had been rolled here, all the corners where broken and there where holes in the outer box also. Luckily the radio had been foamed in place, although a good deal of the foam was now dust.... . I could not believe that after I cleaned it up it still worked fine! Jon AB9AH:

From DAVEINBHAM@aol.com Thu Jan 17 05:35:48 2002
Subject: [R-390] Recap kit update

Hi all, I have received 3 requests in the last week wanting to know if the recap kit or the R-390A is still available. I am pleased to announce it is still available.

I needed to buy some other parts for the company recently so I bought a few more capicators while I was at it. I now have 20 recap kits in stock for same day shipment. Half with in-the-can capacitors for C603 & C606, half with under-the-chassis capacitors.

In case you have not noticed, the price of capacitors has increased lately. And tantalum capacitors have increased in price dramatically. I use a lot of tantalums in stuff for the company. Fortunately, there is only 1 tantalum in the R-390A recap kit. Even so, my profit margin on the recap kit is now thinner than a gnat's ass streached over a number 2 washtub (under $2). Bottom line, it will likely be necessary for me to raise prices after this batch of R-390A recap kits is sold. So, get 'um now before the price increase.

In regard to the long awaited recap kits for the R-390 nonA and the SP600, I am still working on them but they have had to take a back seat to my wife's medical problems. She has spent Christmas & New Years in the hospital and, in fact, had another major surgery today. I will get to 'em soon as I can. Regards, Dave

R390A capacitor kit. I have put together a ReCap kit for the R390A. It consists of:

(13) 0.1 ufd C256, C309, C504, C505, C517, C521, C528, C531, C536, C538, C543, C547, C548

(7) 0,033 ufd C275, C529, C533, C534, C541, C545, C602

(7) 0.01 ufd C549, C553, C601, C604, C605, C607, C608

(The above are Orange Drops or equivelent.)

(3) 30 ufd 300 v electrolytic C603A, C603B, C603C
(2) 47 ufd 300 v electrolytic C606A, C606B

(The above electrolytics have axial leads. You can wire them under the chassis and leave the originals in place to retain stock apperance. Or you can order capicators small enough to fit inside the cans of C603 & C606. Just remember you will have to deal with the Dreaded Black Ukkumpucky to get the guts out of the cans of C603 & C606. If you do not specify at time of your order, the under the chassis capacitors will be shipped.)
Finally, one each of :

0.047 ufd 100v C227
8 ufd 30v tantalum electrolytic C609
50 ufd 50 v electrolytic C103
0.22 ufd 100 v C101

I cannot find a source for: 2 ufd 500v C551 oil filled paper

so, I will include a very high quality poly cap. I have installed one of these in one of my R390A's and I can say I cannot hear any difference. They work great. This is the AGC capacitor.

The price for this recap kit is $80.00 US funds. Price includes UPS or US post delivery. Canada and mexico US$85. Western Europe, South America and Pacific rim US$90, rest of world US$93. All sent airmail if possible. ALABAMA RESIDENTS MUST ADD US$3 STATE SALES TAX.

Send orders to:
Dave Holder
Biological Instruments, Inc.
820 South 29 th. Street
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From BRingwoo@csir.co.za Thu Jan 17 08:41:16 2002
Message-ID: <sc46aa5a.039@CS-IMO.CSIR.CO.ZA>

Hi, (Warning ! - Sand and deceased gramniverous quadrupeds mentioned)

A few observations:

1. The problem I generally have with sand is interference from nearby (or sometimes quite far removed) strong stations causing intermodulation effects. Both my homebrew and a well known commercial sand receiver suffer badly. Thus far, I haven't had any problem with tubes. Even the much maligned (in the '70s) EF183 gave me great performance.

2. I don't understand the concept behind 'intercept points' and their measurement very well. Perhaps one of you could explain in terms a non electrical engineer can understand ? Hope this doesn't become another 6082 saga.

3. If it doesn't glow it doesn't go. The orange LED should be supplemented with a white LED in series with a capacitor to give that lovely white glow when you first switch on. White LEDs cost a bit more, but its worth it.

4. Some tubes are supplied with plastic pin straighteners - these just need the right diameter wire poked through the holes and glued to make a header on which a small PCB can be mounted.

6. Many tubes will outlast their owners. This is just an FLP ("Fun Little Project"). Making an tube radio solid-state makes no sense other than doing it for its own sake. People who take their fun seriously will buy a solid state radio.

7. What was 5? Enjoy your day - Bryce

From n8blb@hotmail.com Thu Jan 17 09:14:23 2002
Subject: [R-390] 6DC6 Replacement

All this tube to sandstate talk reminds me of a time in the sixties when I took a perfectly good SP-200 and "modernized" it by changing all the "oldfashioned" octal tubes to the "new style" miniture tubes. It seemed like a good idea at the time. Even put in a built in power supply and got rid of that outboard monster. It worked well but I dont think I gained a thing except the fun? of doing it. What does this have to do with the subject at hand? I havent the foggiest anymore. John

From w2ec@attglobal.net Thu Jan 17 13:42:30 2002
Subject: [R-390] Tube cutting 101

I seem to recall a method where you use a small wire that you hook up to a 12 volt car battery until its glowing good and hot, then quickly wrap it around the tube where you want the break to occur and dip it quickly into water. The hot wire heats the tube at the break point and the rapid cooling snaps it cleanly off. Anybody remember/try this technique? 73, Ray W2EC

From mikea@mikea.ath.cx Thu Jan 17 13:52:10 2002
Subject: [R-390] Tube cutting 101

I was wondering when someone would propose this. It works very well for bottles, jars, etc. -- as long as they aren't made of zero-TC glass or quartz. A length of Nichrome toaster element would work very well, as long as it doesn't turn out to be fragile. -- Mike Andrews

From rbethman@home.com Thu Jan 17 14:38:01 2002
Subject: [R-390] Tube cutting 101

I seem to remember being taught to wrap a piece of string around the object, soak it with lighter fluid, ignite it and let it burn out. Then the quick dip into cold water. Just another twist on the same routine. Bob - N0DGN

From cbscott@ingr.com Thu Jan 17 15:10:59 2002
Subject: [R-390] Front panel paint removal

I'm starting on another front panel restoration -- this one with stamped/engraved lettering. When I did my first one, it was silkscreened so I was able to just wet-sand the old paint right off. With this lettering, naturally I want to remove the paint from the tiny grooves as well.

I'd prefer to minimize any sanding I might do as this could decrease the goove depths. Granted, it would

be a lot of sanding to do this, but I'd rather not go there.

I tried a bit of acetone and it was rather ineffective (the original paint is quite tough). What paint strippers have worked best for those who have done this? I'm concerned about the corrosive effects of some strippers on the aluminum. I suppose it can be neutralized, but I wanted to find out what the "professionals" have used. Thanks, Barry - N4BUQ

From w2ec@attglobal.net Thu Jan 17 15:30:11 2002
Subject: [R-390] Front panel paint removal

Just get a stripper listed for "Aircraft". Aircraft are usually aluminum and will tolerate NOTHING in any compound that can possibly cause corrosion. Your local auto body store more than likely has "aircraft" grade certified stripper. 73, Ray W2EC

From cbscott@ingr.com Thu Jan 17 15:43:28 2002
Subject: [R-390] Front panel paint removal

Looks like I'm in business. First call and they knew exactly what I was talking about which is unusual when I go looking for a speciality item. The guy on the phone told me it would "this'll take it right of off of there" so this should be a cake-walk (grin)! Thanks, Ray, Barry - N4BUQ

From ai2q@adelphia.net Thu Jan 17 15:54:20 2002
Subject: [R-390] Tube cutting 101

Yup, I tried this too Ray, but didn't have a good enough assortment of Nichrome wire. 73, AI2Q, Alex

From cbscott@ingr.com Thu Jan 17 16:13:04 2002
Subject: [R-390] Front panel paint removal

Yes, I know Walter has done many of these and they do look great (at least from the pictures I've seen). I figure he will chime in with some suggestions although I haven't heard much from him on this list lately. Too much banter for him perhaps? Barry - N4BUQ

From pha@pdq.com Thu Jan 17 16:16:01 2002
Subject: [R-390] Front panel paint removal

Acetone is a solvent, but won't touch baked enamel.

You need something with methelene chloride - available in furniture and paint strippers in most hardware stores as far as I know. The stuff I like best in a spray can is Mar Hyde (automotive stores may have this), in a can, Tal-Strip III, which you let dry before removing the stuff. In all cases, be extremely careful - it desolves everything, I think eventually including skin and lungs.

If you're sanding to remove paint from the grooves, something is wrong. Use a brash brush to get the paint out after a good soaking with paint stripper.

There are two other possible alternatives to chemicals (that preserve the grooves) - plastic bead blasting (maybe glass bead - absolutely not sand blasting), and secondly, you can use heat to bubble the paint - I get impatient and use a torch, which starts affecting the metal in bad ways, but a hobby heat gun may do it, too. Paul

From jlap1939@yahoo.com Thu Jan 17 16:28:08 2002
Subject: [R-390] SSB and the 390

My Friends, Since no one has fought this it seems for some time:

At the risk of ridicule, I am going to give an effective method of BFO setting to "0" by using your ears, And also remind that the correct method always works, provided that alignment is very good on the unit in question.

I do this in response to a few inquires I have had and because many still believe people like me, who listen to obscure SSB transmissions are confused at best..If you haven't gotten into it, you should try it..With this method you can find very weak/obscure stations...

May I remind you that after you (in my case), obtain a properly aligned unit, (including many others in addition to the 390 series,) or else have aligned your own unit, including neutralization..that you may want to check VERY CLOSELY for "0" on the BFO. This is to allow Accurate frequency setting and readout, that can well surpass your ability to visually resolve the VR counter.

First the correct method..::(Isn't it?)

Find total quiet place, then also disc. ant. Set bandwidth at 0.1.
Leave BFO OFF, Turn to Cal. on function.
At any 100 kc point, tune to FIND the point that produces an increase on the carrier meter.
(it may be very tiny, so watch carefully. You may want to "rock" back and forth).
Now set bandwdth at 2 or 4 or even more on some.
Turn on BFO
Zero-beat the sig. (re-check)
Set knob at "0".(either internally or by the knob)

Hope I did this right...

However, a sig corps Sgt. named Stone, (yes he was related to Sgt. Rock), showed me this:

"Good aligned radio...Take of the BFO knob..go to dead spot, disc. ant, use cans, turn on BFO..LISTEN! Turn BFO shaft..(if you can't, you're a -----,) and tune to lowest sound generated by the BFO, by "rocking". Do several times. You will be more accurate than with any other procedure. replace knob at "0"". (this is the way I wrote it down 40 yrs ago.)

I do this, and know that it is best for me. I can tune to a freq. where I know that activity will be encountered, that is exact, w/PLO unit, and then tune my 390 (of course + or - for each sideband, after CAL. at the nearest 100), and I am more accurate, based on the voice freq. produced, than with the cal. set system. It works on my SP-600 well also, but is not as accurate. In other words, I can go to a given freq., and when the traffic starts, I will be tuned "perfect". I start about + or - one and one half on the 390 non a.

To really bore you, I give the reasoning:

Visual resolution nowhere near equals audible. (See many sights on web.) If you watch the meter, you will never get optimum, as your vision is not that sharp.

By using the natural sound of the BFO while not encountering a signal, you can find its LOWEST sig. point. (Many persons can detect a change of as little as 3 cents, and most at 4 or 5 cents. There are 100 cents in a semitone, (which is for example, C to C# on the music scale.) I suggest that this is a figure that will be off in freq. by a very small figure. Of course it would depend upon how accurate YOU could actually be, and a "tonally challenged" person might not do very well...so don't hold me too much at blame if it doesn't work..

It might be worth a reminder that good SSB, WITH OR WITHOUT a converter, is something you need to LISTEN for, and take the time to learn. You will have to find a result that gives the correct sound for the voice, so it is the same as if that person was standing right beside you. In addition, because you are encountering many diff. levels of strength with set internal generator, you must keep the RF gain reduced...

Those who don't agree, please forgive the foregoing. John

From Joe" <joe.amp@verizon.net Thu Jan 17 16:40:04 2002
Subject: [R-390] Front panel paint removal

I am also stripping one, the aircraft grade strips like a breeze. Sprayed a 50:50 ford gray enamel with a tint of blue + bake and it look great, Thinking about going with a new UV activated 500 mesh passed glow powder/acrylic mix for the engrave lettering, knobs The stuff is white in normal light. Claims are holding capacity ten times ZnS(zinc sulfide) based pigments (10-20 hour's) Anyone tried any of these stuff ? http://www.proglow.com/

Others
http://www.rctritec.com/w_sln2.html
http://www.glo-net.com/glow/effect/index.html
http://www.magicmakers.com/retail/lighting/glowpaint.html

-Joe

From n8blb@hotmail.com Thu Jan 17 17:13:53 2002
Subject: [R-390] Tube cutting 101

I have had mixed luck with a small file. I etch a line around the tube and then tap the tube with a screwdriver handle. Most of the time it will break clean. John

From n6py@QNET.COM Thu Jan 17 17:24:14 2002
Subject: [R-390] MORE GRAY MILITARY R390 CABINETS ARE AVALIABLE

Hi All, Mac, W5HPM, has found an additional twenty Military R390 cabinets. He will obtain them if we can get twenty buyers for these cabinets. These are like the first 40 he obtained which are being

packaged and shipped to those on the original buyer list we made last month. The price on the original 40 was $320 each including packaging and shipping in the lower 48 states.

These cabinets are genuine military cabinets, gray in color, never used, and probably ordered by the government during Desert Storm.

Mac has asked that I make a list of buyers interested in obtaining one or more of the 20 additional cabinets since. The estimated price is $320 each like the first lot but won't be firm until he makes the deal. These are most likely the last he can find.

If you would like one of these, please send me a email and I'll put you on the buyer list. I'll then confirm your on the list by return email. However please be patient since it will take a little time for him to obtain the cabinets and we will not ask for any money until he knows he can get the cabinet, and we have enough buyers on the list. When he makes the deal, I'll then email you with the firm cost and instructions.

If you want a cabinet be sure to give me a good email address to contact you by. One guy didn't on the original list and has lost his chance to get a cabinet since there is no way to contact him. I even tried the ARRL forwarding service and it didn't work. Bill N6PY n6py@qnet.com

From wewilson@knology.net Thu Jan 17 21:33:40 2002
Subject: [R-390] Front panel paint removal

Yes, the "Aircraft" grade paint remover is best. Then for the tough stuff that doesn't want to come out of the engraved lettering, I use a brass bristle brush (the toothbrush style brush). Don't dare try steel or anything harder than brass. Walter Wilson - KK4DF

From metzd@intelos.net Thu Jan 17 22:52:39 2002
Subject: [R-390] Need TM # for HP 8640B

Gang, I just recently obtained one of the military HP 8640B's option 323. It would appear that there are a few differences between the regular civilian 8640B and the military version and I would like to see if NTIS has the operation and service manuals available for sale. (I discovered this after downloading the manual from the BAMA site.) Unfortunately, the NTIS process requires an exact manual number to be known as their "search engine" leaves a bit to be desired. So, if anyone has a copy of the military manual could they drop me a note with that number via private mail as to not clutter the list? I suspect it is a TM 9 something for the army. Thanks 73's dave

From w7itc@hotmail.com Fri Jan 18 00:45:32 2002
Subject: [R-390] Front panel paint removal

RE: methelene chloride

Be very very careful using these Chlorated alcohols. They can trigger heart problems, arrhythmias, slow heart rates, etc. If you have a heart condition I would not touch the stuff. At any rate it goes with out say that it should be used only where there is very good air circulation. Ken

From rlruszkowski@west.raytheon.com Fri Jan 18 01:10:00 2002
Subject: [R-390] 6080 subs for 6082 in R390

Fellows, I agree that, Voltage is 25.2 Volts 6080 is 6.3V 2.5A 6082 is 26.5V .6A

I calculate The resistance of a hot 6080 filament is 6.3 / 2.5 3D 2.52 ohms. Two of the filaments in series yield a resistance of 5.04 ohms.

I can not find any data that supports the power dissipation capabilit y of the 6080 filaments. We expect them to be able to handle 6.3 V at 2.5 A or 15.75 W for their rated life. This does not make the filaments 15. 75 W resistors. Clearly they need to handle with out loss of expected life span more power during the turn on warm up period. I find no limit on how many times a filament can be switched on and off from a cold start. Cle arly starting, stopping, reversing, starting, stopping and repeating the alternations of AC current across the hot filament is not the same as a power on cold start of the filament.

I expect the resistance of the 6080 tube filament (or any filament) t o be constant regardless of the applied voltage, applied current or perce ived calculated power. As long as the resistor (load device, filament) is not actually going up in smoke under the applied force, the resistance of the load device is for the duration remaining constant.

And we want to get a diode in the mix. Not just any where in the mix . It must be in series with two 6080 tube filaments. These three devices are placed as a specific load across a specific power transformer. That transformer use to give up 25.2 volts at 1.2 amps to a pair of 6082 t ubes wired in parallel.

The new load on that transformer is now pulsing 5 Amps only one way (half cycle). Before I worry about the load resistors going up in smoke when pulsed with 25.2 V at 5 Amps every 1 / 2 cycle, I worry about the transformers ability to source 25.2 V at 5 Amps every 1 / 2 cycle. W hile the transformer winding is rated at 5 A, there are other filament load s on the transformer winding using some of that 5 amps.. Do we have the same dead horse here? I understand the transformer provides a 25.2 volt potential to the circ uit. I understand the evil diode limits the 25.2 volt potential applied to the load (filament resistance) to a 50 % duty cycle. I understand the effective potential 50 % duty cycle limited and aver aged over time can be expressed as a 12.6 volt average voltage potential. I understand the filaments offer a 5.04 ohm resistance to the flo w of current when some voltage potential is applied to the filaments. I understand that when the peak voltage is applied to the filament (some thing that now only happens 1 / 2 as often as it did before the introduction of the evil diode) the 5.04 ohms of effective resistance will limit the current to 25.2 volts / 5.04 ohms 3D 5 amps. I understand the instantaneous power calculated for this instant in time (and repeated 60 times a second) is 25.2 volts * 5 amps 3D 126 watts I understand real 6080 tubes have been placed this hellish circuit adja cent to an evil diode and have endured this powerful bombardment of elect rons without dieing a premature death. A true testament to the 6080 tube and speaks well for its inclusion into the scared hollows of R390 receiv ers. While two 6080 tubes do bring an evil diode and a wiring changes with them into the scared hollows of a R390 receiver The trio stand in for very rare 6082 tubes and keep a R390 alive and glowing. But I digress. I understand (because I read the mail) that some would grab on that nu mber 126 above, point to the evil diode and curse this whole dialog with bad logic stacked on false assumptions. Some assume the evil diode acts on the 126 to reduce it by half. And push on with logic to have me believe the filaments of the 6080 tubes get bombarded with twice as many electron s as they deserve to be bombarded with. I do not buy into this new fan gled theory nor do my ancient (1958) texts support this theory that an evil diode acts on the hypothetical instantaneous value to double the flo w of electrons in a circuit.

I understand the two 6080 tubes wired with filaments in series would glow longest if a continuous potential of 12.6 volts at 2.5 amps were applie d to the filament circuit. There are words in the text that an alterna ting current would be preferred by the 6080 tubes over a direct curren t. I accept this as an article of faith that this is what tubes desire. I have no preference for either alternating or direct current being applie d to myself and seek insulation from the experience.

The R390 with its 25.2 volt potential does not readily offer the 6080 t ubes this ideal environment. One alternative is to add a resistor in series with the filaments and limit the bombardment on the filaments. I understand this resistor would have an ideal value 5.04 ohms. I understand the vol tage applied to the series circuit would be 25.2 volts the total se ries resistance would be 10.08 ohms I understand the current that flows woul d be 2.5 amps and the power dissipated in the 5.04 ohm ideal resistor would be a continuous 31.5 watts. Also 2.5 amps flow in the filament resistance and each tube dissipates a continuous 15.75 watts.

I read from web page legend that once upon a time an engineer with true understanding of the electric mysteries correctly stated that it was not necessary to install a 31.5 watt electric power space heater into the scared hollows of a R390 receiver so as to accommodate the 6080 tubes b eing ask to stand in for the more rare and expensive 6082 tubes of old. I read that the engineer proposed the installation of an evil diode into the scared hollows of a R390 receiver. The diode receives all the evil bec ause tubes are scared and sand state stuff is evil. The engineer explained the original circuit radiated 30.24 watts of power from the 6082 filaments . He further explained the changed circuit would radiate 31.5 watts of p ower from the 6080 filaments. If the transformer were rated at 26.5 volts then the change would have been a zero sum change. Pear review of the engin eers proposed change stood the test or reason and was advanced through the web pages as an acceptable thing to let happen to an R390. I have read this pear review my self on web pages and accept the assumptions and logic put forth to explain the electric mysteries of this specific circuit. I understand the transformer provides 25.2 volts of potential all the t ime. With out potential nothing happens. I understand the evil diode limits the potential to the tube filament to 50 % or the time. I understand the tube filaments offer 5.04 ohms of resistance to the flow of current. I u nder stand that when the evil diode allows potential to be applied to the filaments that 5 amps of current will flow. I under stand the evil d iode will limit the flow of current to 50 % of time. I understand that when the evil diode permits (time dependent) potential of 25.2 volts to dr aw a pulsing (time dependent) current of 5 amps across the filament resist ance of 5.04 ohms an instantaneous (time dependent) power is dissipated as h eat. A bad math value that ignores time, power factor, duty cycle, diode vol tage drop, exact resistance, exact voltage potential and exact current i s an exact power dissipation value of 126 watts. The math is perfect. The l ogic is impeccable. The assumption is false. I under stand the 25.2 v olts applied part time over time has and average over time of 12.6 volt s. I understand the 5 amps that flows part time over time has an average over time of 2.5 amps. Consulting my 1956 text I find "P 3D EeffIeff I unde rstand the Eeff 3D 12.6 and Ieff 3D 2.5 and that P 3D 31.5. I understand that 31.5 watts radiated from 2 filaments averages 15.72 watts per filament. I find noting in the texts that leads me to believe that this amount of p ower pulsed from the filaments at a 50% duty rate in exceeds the de sign limitations of the 6080 tubes. While the filaments may prefer a the rmal cycle that radiates power in 12.6 volt 2.5 amp jolts 60 times a secon d, I can not find any text to support an aversion to 25.2 volt 5 amp jolt s 30 times a second. This brings me to a second legend I read from web page that once up on a time an engineer with false understanding of the electric mysteries c ried out loudly, 12.6 * 2.5 *60 3D 1890 while 25.2 * 5 * 30 3D 3825 think ing this was a meaning full statement. And this engineer picking up this f alse assumption and stacking much logic on it never the less reached a f alse premise. The false assumption was to think that 60 and 30 can be equ ated any old time. This engineer wrote in a text that was latter reproduced on a web page the following statements. 25.2 volts applied to a 5.04 ohm resistor 50 % of the time produces a 5 amps current to flow 50% or the time which causes the

resistor to dissipate 126 watts 50% of the time fo r an average power of 63 watts. 25.2 volts times 5 amps equals 126 watts div ided by half time equals 63 watts all the time. Again the math works but the assumption going in is false. Any good math book says order of operatio n is equal for multiplication or division. (25.2 /2) * (5/2) 3D (25.2 * 5) / 2 3D 63 any way you display it on a computer screen. However the false assumption is that the math above correctly models the problem u nder examination.

I do not understand how the square root of (63 watts * 5.04 ohms or 317 .52) 3D 17.819 volts and 17.819 volts / 5.04 ohms 3D 3.535 amps, can be balanced with the square root of (63 watts / 5.04 ohms or 12.5) 3D 2.480 amps 3D and 2.40 volts * 5.04 ohms 3D 12.5 volts. 17.819 volts are not equal t o 12.5 volts and 3.535 amps are not equal to 2.480 amps.

I do understand how the square root of (31.5 watts * 5.04 ohms or 158 .76) 3D 12.6 volts and 12.6 volts / 5.04 ohms 3D 2.5 amps. Can be balan ced with the square root of (31.5 watts / 5.04 ohms or 6.25) 3D 2.5 amps and 2. 5 amps * 5.04 ohms 3D 12.6 volts. 12.6 volts are equal to 12.6 volts and 2. 5 amps are equal to 2.5 amps.

If you incorrectly jump into this problem and fall onto a false assump tion the logic of the math will lead to a false conclusion. Clearly you can not look for math logic to carry you to the real true product. You can not wily nily disregard time, average, order, and units and declare a results that will not stand to counter checking.

Why am I dragging this dead horse around the track for a second lap? Because once an engineer got it right. Then a second engineer got it wr ong. Then it went into the archives as 6080 can not be used with diod e to replace 6082 as advertised. Bad engineering analysis follows to prove dead horse can not run. All the counter points are in the archives as dead h orse is beaten again with at least three re-entries declaring original au thor may not have high school equivalency or skills needed to activate gra mmar checker on an E-mail app.

And then we wonder why kids exposed to this trash can not wade throu gh a rational problem. Go back and read the archives since the first of this year. Where has our on line archive advanced our understanding with concise solid resolve that establishes a firm foundation to work forward on . We have a lot of hype, hypothetical and half truth in the archive that d o to its low humor value does not even rate as good entertainment.

In this post there was one sentence of relevance. Response to any of the other humor wrapped around that sentence will be of entertainment va lues only and will be replied back to as such by the author. Any response to the editorial comment of this post will be ignored by the author. I did not belong in the original and will not be knowingly propagated into the future. Roger KC6TRU

From cbscott@ingr.com Fri Jan 18 14:34:50 2002
Subject: [R-390] PSK-31

Has anyone tried receiving PSK-31 on an R390A? If so, how did you feed the sound card? I was thinking of using the Line Output, but I don't know the impedence of the typical soundcard? Are they lo-Z, hi-Z? Would it matter all that much for PSK-31? Would I be better off using the diode-load?

I assume the R390A will be stable enough for the task, but I don't know. Looking for advice. 73, Barry - N4BUQ

From tetrode@worldnet.att.net Fri Jan 18 04:42:29 2002
Subject: [R-390] MORE GRAY MILITARY R390 CABINETS ARE AVALIABLE

Hi Bill, are these the CY-979A cabinets? If so, put me down for 1. John Kay KA1XC tetrode@worldnet.att.net tnx,John

From jlap1939@yahoo.com Fri Jan 18 15:58:51 2002
Subject: [R-390] SSB and the 390

Friends, Had several supporting notes...Thank you..The listen and set technique will work... And:

Several also mentioned many additions that are possible, like modern mods, freq. readouts etc. These are in many cases very nice indeed; however, my aim with the BA's is to use it the way it was..I don't even want a converter, as it takes the initial sig. and then does with it as it wishes, (or you wish, as it were..) I don't want to have what I still do believe is the BEST rec. ever built, in the 390 non a..(I know what you are going to say..but if you prefer Harris, Digimon, or Rhody Shorts, thats ok), and not use ALL of it, ALL the time..That to me is what it's all about. I don't want to sub in some other device...(boy, I will be called down on this, I guess)

I also need to clarify a few things.. and maybe some others will add the truth sometime:

There are many methods of radio comm..And some are interested in them. I am thinking of AM, PM, DSB, FAX. etc, but the correct tuning tech. remains of importance even with the best equipment...for example you have to tune right for FSK... If you are dependent upon this comm, then it is best to have the best equip. available, but that doesn't mean that you can't use more simple equip. with some success, if you are interested enough. I listen to AM'ers and have few complaints about bandwidth, myself, but I am not trying to communicate...I just listen. Some persons who are trying to communicate do have a lot of trouble if people are splashing all over the place... Courtesy would seem to be one of the things some don't often enough consider and follow..

.....I hear a lot of deliberate interference.. "cussing" and just BADD operating technique.. Communications by radio frequency has become a wasteland on some ham bands...What think you??

You need at least the r-390 to separate the diff. combatants it seems... Where do you tune up???

Are you one of them??? (sorry for the tirade...I just happened to hear a lot of bad stuff last nite...)

This having been said, I assume you know some of this is tongue in, well, whatever...just to keep someone talking... Can't stand too much off subject matter, which is why I never feel bad about the returns from the opinion/attitude graveyard...The re-hash is a reminder of what is REALLY fun in communications... and thats opinions..Mostly about the r-390..Of course, some will think my tirade off subject...Oh well..

And :: some of the 6 who wrote me...you could also write the list.. Best regards, !! John PS...what a great list, or whatever...

From n6py@QNET.COM Fri Jan 18 21:35:01 2002

Subject: [R-390] R390 Cabinet all sold

Hi All, All the 20 additional cabinet are now spoken for and I have about 5 buyers on a back up list. Seems to be lots of interest and demand for these so maybe Mac can find more before the commercial guys get them. Keep looking Mac. Bill N6PY

From w7itc@hotmail.com Sat Jan 19 06:08:00 2002
Subject: [R-390] PSK-31

Yes I use My R390A for PSK31, it works very well. I use the line out so I have a meter and can control the input to the sound card. I use a microphone transformer to isolate the R390 form the sound card and this let things more or less see the proper impedence. I don't know where the Mic' transformer came from it was just in one of the junk boxes. Ken

From Barry Hauser <barry@hausernet.com> Sat Jan 19 04:24:27 2002
Subject: [R-390] PSK-31

wrote: > Has anyone tried receiving PSK-31 on an R390A? If so, how did you feed the sound card?

Haven't actually tried it yet, but I recently aquired a prewired "interface". This particular one is for receive only and consists of just a 1K to 1K mini audio transformer in a small plastic project box. Has a mono mini phono socket and a stereo mini phono socket with only one channel wired. Not sure if that's to accommodate a stereo line in for the card or stereo headphone jack on the more typical radios used. Looks like all the parts came from Radio Shack and was priced accordingly.

I have a whole bunch of links to web sites with that circuit plus others and a variety of software for download -- but not where I'm at now. I suspect that isolating the circuits is the main thing, impedance matching not as critical. I read that output from the radio needs to be as low as possible, so you'll need some way to control it, so maybe makes sense to use the audio out so you can use the gain control. Barry

From ba.williams@charter.net Sat Jan 19 14:47:59 2002
Subject: [R-390] PSK-31

Barry, I've not used sound in on a Windows computer, but I've been doing it on Macs for a number of years now. I've run R-390A audio thru a 800-8 ohm transformer directly into the Mac or into my stereo system and then into Macs. Either way it is fine going directly into the computer. I don't recall ever seeing a sound card for Macs, so I can't help you there.

I've tried audio from the radio to the Mac using a decoder program for Windows under emulation. I only played with it a few minutes and never actually got it to decode fax, WOLF, or code. I should go back and tinker with it.

Audio from the A is very good and stable. I've never encountered any problems compared to any other sound source. I do a lot of sound work from video tapes, cassette, radio, FM stations, etc. Audio from the A is just like all the others. Barry

From dlwade@pacbell.net Sun Jan 20 00:06:25 2002
Subject: [R-390] DeXoit and ProGold usage and Calilube

Hope everyone is having a wonderful weekend,

While sitting down to order some Caig products from RS.com I got confused with Deoxit and Pro Gold. What is the difference, do I need both, and if so, when do I use which? There was nothing in the digests have that talks about the difference if any.

Also, I noticed another Caig product, Calilube. By its description it would fit right in with the recent Switch Cleaning thread. Anyone use this stuff and can offer a review? There was no mention of it in the Digests I have. Thanks in advance... Dennis

From redmenaced@yahoo.com Sun Jan 20 00:10:31 2002
Subject: [R-390] Dead horse foaling,. Monkey wrench thrown!

In an attempt to explain what happens to the filament in the 6080 when used to replace the 6082.

Since the elevated voltage runs the filament at a higher temperature farther away from the point where it generates heat, or electrons, efficiently, the infrared range, to a point where its a more efficient illuminator more power is converted into light instead of heat.

The color range of a flourescent light tube is dependant on the temperature it operates at, the guys in the auto-body shops and print shops get real picky about that!

The 6080 and 6082 are both expected to run hot maybe the power conversion to more light is just enough to keep the 6080 running for an acceptable life time. Joe

From Barry Hauser <barry@hausernet.com> Sun Jan 20 01:35:20 2002
Subject: [R-390] DeXoit and ProGold usage and Calilube

Hi Dennis & List:

I'm told by someone who has used both -- stay with DeOxit. ProGold is intended for gold plated contacts, like edge connectors. If I'm not mistaken, it does not have the same deoxidizing capability of regular DeOxit on brass, silver, silverplate, copper, etc. Also, some advise springing for the concentrated liquid rather than the spray, which is diluted. I use the spray and apply some to a swab to avoid soaking things.

Cailube is the thing to use for pots. It works, but may take more than one application for a noisy pot. If the pot is worn -- e.g. a track is worth through the composite, or the wiper is not tight enough, it will still be noisy. It is sometimes possible to dissassemble and tweak a work pot back to decent performance. You should not use DeOxit for pots.

While you're gawking at the stuff -- a real miracle product is Caikleen Rubr, for cleaning and rejuvenating rubber parts. Excellent for test leads, cables, etc. I've even used it to restore the rubber seals on URM-25's and on pvc and vinyl line cords. Barry

From roy.morgan@nist.gov Sun Jan 20 02:03:22 2002
Subject: [R-390] DeXoit and ProGold usage and Calilube

Denis Wade wrote: >Hope everyone is having a wonderful weekend, > > While sitting down to order some Caig products from RS.com I >got confused with Deoxit and Pro Gold.

See www.caig.com for lots of details.
Order direct if you like.
Check out special sampler kits.
Try to get the 2 cc liquid squeeze tubes and practice putting the absolute minimum amount of the stuff on exactly where it is needed.. No spray is needed.

>What is the difference,

ProGold is supposed to be better, is more expensive, may not be worth it unless you only need a small quantity. Supposed to last longer on the surface. Works on a different chemical process.

>do I need both,

Probably not.. but a larger can of DeOxit spray and a small tube or spray can (tiny) of ProGold should do everything you need.

>and if so, when do I use which?

DeOxit for normal use, Pro-Gold for extra special suff, and those gold plated switches buried WAY down in the HP and Tek test equipment that you really do *not* want to open up again, ever.

> Also, I noticed another Caig product, Calilube.

"CaiLube MCL"? this stuff is a gotta have: "MCL" means Moving Contact Lubricant, for such things as pots and sliding controls, the absolute, hands down very best thing for bringing back noisy and intermittent rotating controls. "Formulated for conductive plastic and carbon-based congtrols" (I'd use DeOxit or ProGold on wirewound pots.)

See www.caig.com for lots more info.

Some products are just De-Oxit re-labled. ("R5 Power Booster" is targeted at the battery users and car audio guys.. No. ladies don't want it, they just want to ride in the cool cars with the 500 watt subwoofer systems.)

Caig Cramolin is rumored to be way better than DeOxit (which replaced it, apparently due to environmental concerns). Ignore all such rumors. You can't buy Cramolin now anyway.

No, I do not have stock in Caig.. I just have the quietest controls, smoothest running switches, and most trouble free audio system connections I have ever had in my life. Roy

From terryo@wort-fm.terracom.net Sun Jan 20 02:59:03 2002
Subject: [R-390] Worn pot heresy

>Cailube is the thing to use for pots. It works, but may take more than one >application for a noisy pot.

If the pot is worn -- e.g. a track is worth >through the composite, or the wiper is not tight enough, it will still be >noisy.

If the track is worn through, a friend who repairs guitar amps taught me a last ditch trick. Use the graphite lube spray for car door locks. His theory is the graphite fills in the little chuck holes in the resistance element. I have tried it and it works on audio gear. I've never tried it on a radio. Terry O'

From w7itc@hotmail.com Sun Jan 20 05:19:32 2002
Subject: [R-390] Re: Request to mailing list R-390 rejected

RE: rejected note.

Well I learned a little more about how e-mail works. My note about the Battery for the manpack radio was rejected because I used the "send link" option. This sends the link as an attachment, On this list an most of the others I am on attachments are banned with good reason. Ken

From Tom Harrison" <tomharrison@cwnetdg.io Sun Jan 20 08:21:56 2002
Subject: [R-390] DeXoit and De-Ox-Id

Anybody have any experience with GC Electronics sly play with Latin on DeXoit called De-Ox-Id? Are they the same? Tom VQ9/W1WB

From anchor@ec.rr.com Sun Jan 20 12:22:13 2002
Subject: [R-390] DeXoit and De-Ox-Id

no, they are not the same, not even close. De-Ox-Id is more like WD-40 (let's not start a thread on that). It is Kerosene, Mineral Oil, and at least once upon a time, Perchloroethylene. I have a bottle that I got about 5-6 yrs ago in CA, with the CA cancer warning label on it. 73, Al, W8UT

From brumac@juno.com Sun Jan 20 15:24:22 2002
Subject: Fw: Re: [R-390] Front panel paint removal

Hi All, I hardly ever post although I have been following the list for the past 3 years and have learned a lot about our great receivers. There was a recent thread on front panel refinishing and I thought that I would add my proceedure to the list.

I have had excellent luck using plain old automotive brake fluid, not the silicone variety, as a paint remover. It is not as fast as the comercial removers, but a whole lot cheaper and safer. It is slow to evaporate, and if let to sit, should clean up that R 390A front panel in a couple of days if the temp is around 70'F. I use scotch brite to remove the sludge. The engravings will take a little longer and I've found that my brass brush seems to mark the panel somewhat so I use a sharpened wooden "Q" tip stick to get down in the engraving. After a wet sanding with #400 wet or dry paper, I clean it with white vineger and then lightly prime it with zinc chromate primer, from an outboard motor dealer, and then the topcoat is your choice. Bruce MacLellan

From n6py@QNET.COM Sun Jan 20 17:17:26 2002
Subject: [R-390] Those on the first R390 Cabinet list.

All R390 Cabinet Buyers, All of you that were notified to send your checks or money orders for the military R390 Cabinets must have the checks to Mac by next Wednesday, 1/23/02. Those not received will be dropped from the cabinet list and theirs given to buyers on a second and back up list. Also the purchase of the cabinets from the source is being held up until we get more checks so we doesn't get stuck with unsold cabinets.

Most on the first list have sent me their shipping address, but Mac has received less than half the checks or money orders.

If you are on the second list or back up list, please be patient so we can find out how many checks we get next week from those that have been notified to send their checks and shipping information. Bill N6PY

From w5or@home.com Sun Jan 20 20:22:35 2002
Subject: [R-390] Donations to List Owner

If you value this list then consider making a donation to Al Waller, owner/operator of qth.net, who provides the resources for its very existence to us without charge. Al spends about $30,000 a year of his own and donated money to keep these systems running and updated. Any mailing list with qth.net in the domain is provided by Al gratis.

To summarize from one of Al's emails (after he just found out two of his usual corporate sponsors were unable to make their usual large donations):

[.. we are $10K short for the year at the start, but it gets worse. I can't put any more money into this than I already do, to do so would not be fair to my family. The only place I see this being made up is from the users ... If every user gave us a dime we could operate for 18 months or so, If every user sent us $1.00 we could operate for the next 20 years. What actually happens is about 600 people donate an average of $10 each and we never hear from the rest. I'm not ungrateful for the donations don't get me wrong but it is the same users year after year and that will cease too, I'm afraid. With no help we will be in deep dodo by Fall.]

I just sent in my donation by paypal. I'll never miss the $25 but would miss these lists including this one and Drake, Collins, and Milsurplus. To date, Al has received 262 donations totalling $3400. There are 400,000 users of qth.net! There are 561 members in this R-390 list.

Electronic donations accepted by

Credit Card https://proxy.qsl.net/donation
PayPal http://www.paypal.com (account k3tkj@qsl.net)
BidPay http://www.bidpay.com (account k3tkj@qsl.net)

Donations by mail:

QSL.NET, Inc
34087 Old Hickory Road

Laurel, Delaware 19956

QSL.NET by phone? Fax?
302-875-7979 voice
302-875-1358 fax

Thanks. Don Reaves W5OR R-390 list manager CCA AMI ARRL-LM

From n8blb@hotmail.com Sun Jan 20 20:32:29 2002
Subject: [R-390] Front panel paint removal

Used to go into Monsanto Chemical Company to do field service work on some of their equipment. We used a pretty strong solvent at that time (early 70's) and one time while I was using it one of the chemical engineers came by for something and took one whiff of the stuff and just about had a hissy fit. He said " that is a clorinated solvent and cap it up and get it out of here and NEVER bring it back". He said " that stuff will kill you". I never used it again. The company stopped using it the next year. He claimed it would cause severe nerve damage. John

From w7itc@hotmail.com Sun Jan 20 21:19:41 2002
Subject: [R-390] Front panel paint removal

One of the cleverest devices I have ever used was a mist degreaser. it used heated Perchloroethylene. When heat this stuff forms a mist with a very low vapor pressure. You could see the mist about four feet below the lip of the tank the PCE was in. To use it you would lower the part to be cleaned and degreased into the mist and instantly the PCE would condense on the part carrying all the goo away leaving you with a clean dry part. Oh but it was so dangerous We had one crew member working on it and the thermostat failed which let the temperature of the PCE to reach it's flash point. I was 100 feet away and I saw the flash, not a flame, the flame was invisible, but what looked like a shock front. The Operator was not aware of what happened but he was burned on his hands, arms, his sight was saved by the face shield he had on, but his hair was burned off, he was hurting. A couple of us grabbed him and together we went into a large tank which was full of fresh water, putting out the flames. OSHA nailed the company with a big fine because there was no safety system in place to shut the degreaser down in event of a thermostat failing. Ken

From w9wis@charter.net Sun Jan 20 23:34:49 2002
Subject: [R-390] Installation instructions for UG421/UG573

Anyone have the installation instructions/dimensions for UG-421 and UG-573 on RG-8 handy ? I found lots of new Kings connectors but without instructions. I can figure it out.... but I thought perhaps someone had the installation info and could email it to me. Thanks, Mike

From ranickel@mwci.net Mon Jan 21 02:16:30 2002
Subject: [R-390] Front panel paint removal

> One of the cleverest devices I have ever used was a mist degreaser.

Vapor degreasers used to be the standard method for cleaning oily parts and they did work great. A

sump of solvent, most often a chlorofluorocarbon (aka "ozone depleter") or nasty stuff like TCE or methelyne chloride was heated and the vapor was trapped at the desired height by a chilled band of pipes around the circumference of the tank. As the vapor rose, it would be cooled and condensate back into the tank. However there was always some loss, which was never given much thought "back in the old days".

The process is still used, but obviously with "safe" materials and good safety systems to prevent the kind of disaster Ken described. You can read more than you ever wanted to know here: http://www.degreasingdevices.com/ebook.htm

Most folks just use an aqueous cleaning proces these days, it saves on legal fees... 73, Bob W9RAN

From David_Wise@Phoenix.com Mon Jan 21 05:58:12 2002
Subject: [R-390] Dead horse foaling,. Monkey wrench thrown!

Ok ok, for those who don't believe the math, I did an experiment.

I set up a 24V (i.e. 25.2) transformer feeding a #93 12V bulb. Transformer is on a variac. Voltmeter on transformer primary. Initial voltage: 60V so the lamp gets 12. I set up the bulb in a dark room in front of a photographer's light meter. I noted the reading, put a diode in series with the bulb, and increased the variac until the light meter read the same as before. Answer: 86V. *NOT* 120V. And 86V is approximately 120/sqrt(2). Regards, Dave Wise

From hankarn@pacbell.net Mon Jan 21 05:13:45 2002
Subject: [R-390] Re: screwing HAMS Friends???

Luc, & Muier?

I would like to ask you both a question about what how you can take advantage of a Highly respected HAM Heinz Breuer. By dropping off all of your goodies at Heinz SWAP table at Lake Constance last year. Then tell Heinz you will pick them up and or pay to have them shipped. You then have his aged parents wait for over three hours to show up with your dirty laundry and tell them to have Heinz ship all of your stuff and both of you will re-inburse Heinz.

Heinz shipped all of your goodies including your dirty laundry and he has not heard from either of you to this day. Both of you still refuse to respond to his emails.

I just spent a week in Germany with Heinz and Hannelores great assistance in the purchase of an estate of radios and cannot believe that you cannot believe that these two people did not go out of their way in assistance. I just hope that I met all of the out of pocket expences that they incurred.

I just have a hard time dealing with people that can not or do not stand up to their obligations. FOR SURE IN THE HAM COMMUNITY. What goes round in this world comes around. Please do not let it bite you in YOU KNOW WHERE. FLAMING NO WAY THIS IS STRAIGHT FACTS AND FACTS OF LIFE IN REAL TIME.

Hank KN6DI

P: Long PS. This wil probably get me dumped for sure my comments with regards to HIS Royal MAJESTY "DF" The ruler of Hallicrafters and Hammarlund sites. OH YES DO NOT BE CHEAP PAY

"AL" WALLER FOR THE USE OF QTH .NETS.

If your are toooooo cheap to donate then UNSUBSCRIBE AND QUIT YOUR BITCHING.

YOU DO KNOW IF YOU DO NOT VOTE YOU ARE BLOWING HOT AIR. SO BE CHEAP OR BE NEAT AnD SEnD "AL" SOME MONEY. i SEND MONEY ALL OF THE TIME AND CANNOT GET ON THE Hallicrafters or Hammaralund .qth .net due to my talking down a frog that has nothinf to do about HAM radio. I have about 100 pieces of the above equipment and can not get by DF the list manger because I question his capability to see frogs and climb towers when he says he is legallyblind.

SEND "AL" MONEY YOU CHEAPO'S if not then go away

I HIDE OUT IN A 50 HOUR CLOSED ENVIROMENTAL CONTROLED UNIT, SO FLAME AWAY CHEAPOS.

SEND "AL" MONEY OR BUG OFF. hANK kn6di

From BRingwoo@csir.co.za Mon Jan 21 08:49:59 2002
Subject: [R-390] PSK-31

Hi, I think the sound card wants 0.5 volt p-p on Line In - but you should confirm this. Once you have everything connected, its amazing what you can do. Here are some recent links from the PCR-1000 list. I'm going to try interfacing the R-390A to my computer ... soon ... will report back.(Project No 5006<g>).

http://www.qsl.net/ok1rr/dsp.html

http://www.kb9ukd.com/digital

The last link tells you what all the funny sounds that you hear really are. Cheers - Bryce

From w7itc@hotmail.com Mon Jan 21 09:49:13 2002
Subject: [R-390] PSK-31

You sure don't have to get fancy with PSK31 for along time I just used the microphone on My head set/boom micro phone. I just hung it by the speaker.

If you look at the Monitoring Times magazine there are ad's in there for decoding software. Depending on what you want to intercept is how much this software costs. The top of the line package enables you to decode just about everything. Of course if it is encrypted it won't make any sense, but just looking at such stuff is fun. Ken

From cbscott@ingr.com Mon Jan 21 13:51:14 2002
Subject: [R-390] PSK-31 and Paint Removal

Listers, Thanks for all the replies to both inquiries.

Got some aircraft-grade stripper and when the weather cooperates and I can get a good day outside, I

plan to put it to the test.

I had my first digital communications experience last night. Had a cable and connector appropriate to connect the laptop to the TS440S and was able to copy PSK-31 sigs on 20M with ease. I got a 1k:1k transformer and will make a cable from the R390A to the laptop and see how it goes. Something different for a change and it was so easy! Thanks, Barry - N4BUQ

From jbrannig@optonline.net Mon Jan 21 14:42:51 2002
Subject: [R-390] PSK-31

A caution.....

Many R-390A's chassis float 20-50V off "ground" Connecting an ungrounded R-390 to a computer might cause you and the computer great unhappiness. I learned this the hard way. I was using a PK-232 to copy HF FAX with Dot Matrix printer (many years ago) and fried the PC board in the printer. Jim

From cbscott@ingr.com Mon Jan 21 14:49:08 2002
Subject: [R-390] PSK-31

Good point!

In my case, it shouldn't be a problem as my R390A does not have an FL101. I use an external, modern power filter with a 3-wire ground fed by a GFI-protected circuit and an external ground. That along with the audio isolation transformer should keep my laptop about as safe as I can make it with this setup.

Of course, anything can (and sometimes will) go wrong... Thanks, Barry - N4BUQ

From Barry Hauser <barry@hausernet.com> Mon Jan 21 15:44:33 2002
Subject: [R-390] PSK-31 and Paint Removal

Barry -- Some followup on both ...

> Got some aircraft-grade stripper and when the weather cooperates and I can get a good day outside, I plan to put it to the test.

The stuff I use is in a spray can and says aircraft something on it. It's of the caustic (non-flammable type). I found that the panels have a variety of paint/primer on them and it can take several applications of the stripper to get it all off. Best thing to use is one of those auto body applicators -- basically plastic putty knives without handles. Apply the stripper, allow the paint to bubble up a while, but don't wait too long or it re-sets. Scrape in full swipes across the panel right off the end to let the glop slop off. Before that, put the panel on a box that's somewhat smaller so the edges are accessable. If you want to preserve the back side paint (and silk screening, if any), mask it off, but step the masking tape in from the edges just a bit so you can strip full around and allow for the prep, primer and new paint to wrap around the edges fully.

One problem concerns all those holes. The stripper and resulting caustic goop falls through and eeks it's way around the back under the masking -- unless you prep each hole with masking tape on the back side. Then puncture/trim out the masking tape patches so the slop can drip through.

That box I mentioned before should be open top -- i.e. fold the flaps down.

As for the "engravings", I found the best thing was a nylon auto detailing brush -- like a giant toothbrush. They sell these in a set of three -- nylon (or whatever), brass and steel bristles. Don't be tempted to use the brass one, it will scratch things up. Be sure to be wearing glasses or goggles because the stuff will splash or spit especially when you're using the brush. It takes some pressure and "vigor" to work the bristles down to the bottom of the stampings.

You may well find that the stripper doesn't work on some of the old paint or primer. Before restoring to abrasives, try denatured alcohol or some other solvent. What was stubborn for the stripper may give way easily to alternate chemistry. I used denatured alcohol as the final scrub. Don't let different solvents mix -- might be hazardous. Put down plenty of newspaper or a tarp -- the fallout is messy and sticky and will take to concrete quite well.

As you get most of the old paint off, check out the panel carefully. If there are a lot of small nicks, a pass with Scotch brite or a fine sanding pad may work well. This may be a good idea simply to grain up the surface to hold the primer. Also, look closely at the "engravings". The top edges should be sharp and well defined so that it will be easy to fill them after painting. If not, do the Scotch brite thing. Whatever you do, DO NOT USE steel wool. Tiny bits break off in the tiny pits in the panel or simply fall out and stick no matter how you try to clean up. That messes up the paint job. If there are some really deep gouges, fill with Plastic Aluminum or that other stuff the guys swear by -- forgot the name of it -- from the auto parts store.

After the surface is cleaned up and neutralized of all chemicals, ideally you should immediately prime the panel, as oxidation starts right away. Originally, I was going to Alum Prep, but couldn't find it readily. Instead, I went with a self-etching primer. Raw metal surfaces should be etched before priming or else the surface may be too slick and result in peeling later on. The self etching primer I used was gray of a similar shade to the finish coat. This helps, because you've got to go very easy with the finish or else you'll load up the etchings too much to fill properly. That means the finish coats may be a bit thin in places and somewhat translucent. So, I think you're better off with gray rather than yellow zinc chromate or whatever.

If the finish coat goes wrong, don't fret. There should be plenty of stripper left in that can and the stuff you just put on will come off a lot easier than what was there before.

> > I had my first digital communications experience last night. Had a cable and connector appropriate to connect the laptop to the TS440S and was able to copy PSK-31 sigs on 20M with ease. I got a 1k:1k transformer and will make a cable from the R390A to the laptop and see how it goes. Something different for a change and it was so easy!

Put the transformer in a small project box. Run a coax out through a grommet with a couple of crimpon terminals to the audio out terminals. Mount a BNC jack in the box. Find an existing screw or two that you can safely remove from the back panel and drill holes in the bottom of the project box to match up. (assembly instructions not exactly in order -- I'm no Heathkit Inc.). Fasten project box to rear panel with transformer, grommetized captive cable and BNC jack. Now here's the really important part. Make up a professional looking label that says something like: "CV-2002XX MULTI-MODE DATA INTERFACE" and maybe "Restricted". Give everything a coat of polyurethane so it looks MFP'ed.

Now, if someday you go and sell it, we just have to wait a couple of days for the post, "Say, I just got this R-390A and it has this strange box on the back of it which says ...." That's the part where

we all get our jollies.

<sigh> I'm getting very bad now, very bad .... Barry (hoping you'll all blame this on the wrong one)

From Llgpt@aol.com Mon Jan 21 15:54:10 2002
Subject: [R-390] PSK-31 and Paint Removal

writes: << Now, if someday you go and sell it, we just have to wait a couple of days for the post, "Say, I just got this R-390A and it has this strange box on the back of it which says ...." That's the part where we all get our jollies. <sigh> I'm getting very bad now, very bad .... Barry (hoping you'll all blame this on the wrong one)

>> Hell, Just sign it Barry Williams and watch the fun!!!!! Les Locklear Gulfport, MS.

From cbscott@ingr.com Mon Jan 21 15:54:54 2002
Subject: [R-390] PSK-31 and Paint Removal

Barry, Thanks for the tips. I had planned to do both sides and have someone silkscreen the lettering on the back, but I'm not sure I'll do that. These tips will come in handy if I decide to leave the backside intact.
...and don't forget to put "NASA" and/or "APOLLO" somewhere on that little box... Barry - N4BUQ

From Barry Hauser <barry@hausernet.com> Mon Jan 21 15:56:59 2002
Subject: [R-390] PSK-31

> Many R-390A's chassis float 20-50V off "ground" Gee, Jim ....

Correct me if I'm wrong, but I think that should not be allowed. The chassis should be grounded using a full three-wire grounded power cord set. There are a number of old R-390A's around where someone just connected the neutral and hot with a two-wire cord, but the correct installation is with the green wire pulled out, fitted with a a solder or crimp-on terminal to a screw on the rear panel. The hot should go to the fused/switched side. Tingles Verboten! Barry

From rlruszkowski@west.raytheon.com Mon Jan 21 17:55:23 2002
Subject: [R-390] Dead horse foaling,. Monkey wrench thrown!

Ok ok, for those who don't believe the math, I did an experiment.

I set up a 24V (i.e. 25.2) transformer feeding a #93 12V bulb. Transformer is on a variac. Voltmeter on transformer primary. Initial voltage: 60V so the lamp gets 12. I set up the bulb in a dark room in front of a photographer's light meter. I noted the reading, put a diode in series with the bulb, and increased the variac until the light meter read the same as before. Answer: 86V. *NOT* 120V. And 86V is approximately 120/sqrt(2). Regards, Dave Wise

---

Sorry Dave, Not the same experiment.

The AC volt meter was just reading some value damped by meter movement mass and springs. Those meter reading are very misleading.

You have a dynamic resistor. It changes resistance with changes in applied power. What happened to the current when you changed the voltage that changed the resistance, changed the temperature that changed the light that changed the light meter that changed the voltage meter.

When you installed the diode and read the lamp output level with the light meter, was the lamp output 1 / 2 or 1 / 4 or some other output of light level?

Lamp conversion to visible light is not linear.
Filament conversion to heat is not linear.
Either one will dissipate all the energy.
Into which energy band (heat , light , X-ray) who knows.
How much of that energy does our test instrument capture and report?

Even here in your test you expect a uniform average of light to reach your meter. The lamp make have dark and bright sides. Changing the power across the lamp may or may not sow the same dark and bright sides. (hot spots in filament and filament hangers shade the field) What makes light output to meter reading a real average of light emitted?

I do not know how to make all light emitted be absorbed by the sensor element. So how do we ensure that light emitted to light received is linear? As you changed the light pulse rate from 60 hertz to 30 hertz how was the pulse filtered by the light meter circuit to hold an average meter reading.

We think the thermal resistance of a lamp gives a flicker free output. While the light is better than a florescent lamp, it still has a flicker and you reduce the flicker rate from 60 to 30 and thus exaggerate the factor in the test setup.

Install the diode and lamp. Adjust the power to get a lit lamp and a light meter reading. remove the diode. Remeasure the lamp light output. Is the output twice, four times or some other value more?

This still means nothing. It just lets you infer some thing about the metering equipment. You can infer any thing.

But if you start on the correct premise, you can infer correct thing about the response of the meters to real conditions.

Measure, the voltage, the current and the resistance with the diode and with out the diode. Compute all permutations of voltage, power, current and resistance. Show that all equations balance with out error.

The meter reading and math are models of the real world. If the meters, math and models do not balance, then its the meters, math and model that is in error, not nature. Roger.

From jbrannig@optonline.net Mon Jan 21 19:06:48 2002
Subject: [R-390] PSK-31

Barry, You are right. All appliances should have a 3 wire grounded cord, many do not. Also, I would not want to bet my computer on the house 3rd. wire ground! Jim

From bill@iaxs.net Mon Jan 21 20:02:43 2002
Subject: [R-390] Dead horse foaling,. Monkey wrench thrown!

Gotta love that subject line! Joe Foley does have a way with words. But it's time to pour a can of Aircraft Stripper on this to remove the gum from the works.

David Wise said: Ok ok, for those who don't believe the math, I did an experiment.

[description of setup that uses a relative light measurement (not exact) as a precision comparator. That is, the conditions are adjusted to give the *same* amount of light. The same amount of light from the same bulb filament is a pretty good indication that the same amount of energy is dissipated in the filament.]

Roger replies: [and I insert comments in brackets. These are meant to inform and not to inflame. I'm too old and have made too many mistakes to be thinking that I am smarter than someone else.]

Sorry Dave, Not the same experiment.

The AC volt meter was just reading some value damped by meter movement mass and springs. Those meter reading are very misleading.

[The meter was used on the primary of the transformer, far away from the diode-distorted voltage that lights the bulb. If these meters are "very misleading" why are they so popular?]

You have a dynamic resistor. It changes resistance with changes in applied power. What happened to the current when you changed the voltage that changed the resistance, changed the temperature that changed the light that changed the light meter that changed the voltage meter.

[Actually, the experiment did not change the resistance, temperature and light at all. Those things are all dependent on each other. If the light is the same, so are the temperature and resistance. The experiment measured the same light level for both cases. The light from a lamp is related to power. In fact, small changes in power make large changes in light, near the rated voltage of the bulb.]

When you installed the diode and read the lamp output level with the light meter, was the lamp output 1 / 2 or 1 / 4 or some other output of light level?

[No. The light level was the same. The voltage of the AC line was different.]

Lamp conversion to visible light is not linear.
Filament conversion to heat is not linear.
Either one will dissipate all the energy.
Into which energy band (heat , light , X-ray) who knows.
How much of that energy does our test instrument capture and report?

[True, it's non-linear. But there's no way that light can dissipate all of the energy in a heated filament lamp.]

Even here in your test you expect a uniform average of light to reach your meter. The lamp make have

dark and bright sides. Changing the power across the lamp may or may not sow the same dark and bright sides. (hot spots in filament and filament hangers shade the field) What makes light output to meter reading a real average of light emitted?

[Seems like these variables can be controlled by keeping the bulb and the light meter in exactly the same position while you put a diode in series with the bulb on the secondary side of the transformer. Using comparison at the same light level lets you ignore variables that don't change during testing.]

I do not know how to make all light emitted be absorbed by the sensor element. So how do we ensure that light emitted to light received is linear? As you changed the light pulse rate from 60 hertz to 30 hertz how was the pulse filtered by the light meter circuit to hold an average meter reading.

We think the thermal resistance of a lamp gives a flicker free output. While the light is better than a florescent lamp, it still has a flicker and you reduce the flicker rate from 60 to 30 and thus exaggerate the factor in the test setup.

[Dunno about David's light meter, but I've never seen one faster than half a second. 30 and 60 would not matter. Not sure the bulb filament cools fast enough to follow that, either.]

Install the diode and lamp. Adjust the power to get a lit lamp and a light meter reading. remove the diode. Remeasure the lamp light output. Is the output twice, four times or some other value more?

[That's what we can't do without expensive equipment. Adjusting for the same light level is simple, cheap and accurate.]

This still means nothing. It just lets you infer some thing about the metering equipment. You can infer any thing.

[Well, no, I can't infer that my meter is wrong if a certified calibration lab says it is right, and thousands of other labs capable of measuring the performance of the meter would agree.]

But if you start on the correct premise, you can infer correct thing about the response of the meters to real conditions.

[I think the correct premise is that power and light are related, such that the same amount of light means the same amount of power.]

Measure, the voltage, the current and the resistance with the diode and with out the diode. Compute all permutations of voltage, power, current and resistance. Show that all equations balance with out error.

[I think that there is only one permutation, unless you mean different ways of writing EI*R and PE*I. I'll pass on the "balance" stuff because so many people have already done it.]

The meter reading and math are models of the real world. If the meters, math and models do not balance, then its the meters, math and model that is in error, not nature.

[I think the meters, math and models do balance, and that many other observers would agree with me. The math and the models were accurately drawn from observing nature. Meters can be misused, but they are used for their intended purpose in David's experiment.]
Roger.

[Bottom line: a diode in series with a resistive load in an AC circuit cuts the power in half. Since the resistance stays pretty much constant in a heated filament emitting the same amount of light, E and I have a constant ratio. The correct equation for half power is P/2 E/(sqrt 2) * I/(sqrt 2) or P/2 (E * I) / 2. The equation for quarter power is P/4 E/2 * I/2. But we have half power, not quarter power, so the voltage cannot possibly be E/2. You get the same result using P (E * E) / R. The value of volts for half power must be E/(sqrt 2).]

From chg111@hotmail.com Mon Jan 21 20:50:37 2002
Subject: [R-390] R-388

>Gents- Got an opportunity to get an R-388. Guy says it's from Barker & Williamson,but has no tag,& is in excellent shape. Anything beyond the usual I need to check before I get it ? He also has an HRO 600 he's wanting to sell- thought I'd pass that along. Thx, Sandy G. C.H.(Sandy)Geiger III

From chg111@hotmail.com Mon Jan 21 21:26:51 2002
Subject: [R-390] Info on HRO-600

Gents-Yikes !!! What a hornet's nest I kicked !! The fellow w/the HRO-600 is Mike,K2BM,at AG Tannenbaum Manuals in Pennsylvania. Phone 215-540-8055. Yep,he DID say "600"-not "500". Didn't even know they made one of those. He said it was "expensive",& I lost interest. Hope this helps-Sandy G.

 </P></DIV> C.H.(Sandy)Geiger III

From kc2kj@mac.com Mon Jan 21 21:59:35 2002
Subject: [R-390] Updated web page ART-13, R-390A, Swan

Yet another update to my web page. I have added an electronic copy of the swan 1973 catalog featuring their first fully solid state rig. Lost of other interesting dope. The Swan Catalog is 3.4 mBytes in size. Have fun. Mike kc2kj

From kc2kj@mac.com Mon Jan 21 22:04:34 2002
Subject: [R-390] Updated web announcement announcement, with URL (OOOps)

Sorry about that. My website can be reached at http://kc2kj.webhop.net Mike kc2kj

From twleiper@juno.com Mon Jan 21 22:12:46 2002
Subject: [R-390] Dead horse foaling,. Monkey wrench thrown!

writes: > Gotta love that subject line! Joe Foley does have a way with[Stripper most effective, false arguments cleansed]

Half the waveform, half the power...but we want a third the power...how are you going to get there? Besides, half of those arguments about "variability" induced by 30 hz instead of 60 hz are silly, because the frequency does NOT change when you put a diode in...you are still getting half the wave at a 60hz RATE. And, as I said before, if you REMOVE the diode, I fail to see any argument one can make that would cause the power to be TRIPLED instead of doubled. Tom

From courir26@yahoo.com Mon Jan 21 22:27:26 2002
Subject: [R-390] R-388

Gentlemen? If it is from B&W with no tag, how does he know it is B&W? The old wives say that Collins made those and the Hallicrafters models also. 73 Tom

From Llgpt@aol.com Mon Jan 21 22:40:20 2002
Subject: [R-390] R-388

writes: << Gentlemen? If it is from B&W with no tag, how does he know it is B&W? The old wives say that Collins made those and the Hallicrafters models also. 73 Tom --- wrote:
>>
Uh Oh.....aren't they the same bunch that said the 67 EAC contract was the last one?? Enquiring minds want to know. Les Locklear Gulfport, MS.

From w7itc@hotmail.com Mon Jan 21 23:24:42 2002
Subject: [R-390] R-388

A nice description of the 51J4 can be found at the Following site. http://www.wa3key.com/51j4.html The thing that puzzles me about this excellent description is It describes the 51J4 as having crystal fliters. I thought the 51J4 (R388A/URR)had mechanical filters. Ken

From twleiper@juno.com Tue Jan 22 00:11:25 2002
Subject: [R-390] R-388

writes: >...The thing that puzzles me about this excellent description > is It describes the 51J4 as having crystal fliters.

It has both...

From hvalver@hotmail.com Tue Jan 22 00:27:09 2002
Subject: [R-390] FS/BO: Collins 30K-4

FS: Collins 30K-4 Vintage HF Transmitter.

Taking offers on my partially restored 30K-4 xmtr. Several years ago I acquired this rig with the idea of restoring it after retirement. The time has come and I have come to the conclusion that I bit off more than I can chew - not technically as it is very easy to work on (in 5' rack) and straight-forward circuitry - but timewise. I have been putting about 75% of my spare time on restoration taking away from projects that I am now more interested in (i.e., VLF, antennas, D/F).

It is about 75% restored. On all the individual chasis they have been cleaned and things like xfmrs, chokes, etc. were removed, cleaned, repainted, replaced, etc. Only the cabinet (5' Bud rack) remains to be refinished. Most of the components have been checked by applying either 110vac (via Variac) or B+ (variable 0-500vdc supply) and slowly bring up the applied voltages to season the electrolytics, check

insulation, etc.

It is missing the tubes (6V6, 807, 4-125A in the RF and the speech ampl/mod tubes). It has the 3-5 mhz RF coils & xtals. It is unmodified in anyway. The only addition has been a set of heavy casters so as to move it about but I plan to remove these so it is "virgin"

Digital pix are available (complete unit, before/after of each chasis, etc) to the seriously interested. It comes with a copy of the complete manual.

I am not interested in donating it and have a lot of work in it along with the original price I paid. Naturally, a pickup deal would be ideal as it probably weighs 500 lbs or better. If interested, contact: Walter Treftz (N4GL) penguino@atlantic.net (352) 637-1755

From rodney_bunt@yahoo.com Tue Jan 22 00:33:59 2002
Subject: [R-390] R-388 Crystal Filter ??

Kenneth, Quite correct. There is provision for 3 mechanical filters the bandwidth of which can be selected from the control that is "behind" and to the left of the BFO pitch. PLUS there is a 500kcs crystal filter with selectable bandwidth (5 position switch) + phasing control, these are top most controls on the left hand side, so it has both. In the 0 position of the bandwidth control, the crystal is bypassed. The 51J (1&2) the 51J3 (R/388) and the 51J4 all have the crystal filter, only the 51J4 (and the 51J3 with a conversion kit) have the mechanical filters. Rodney VK2KTZ

From Llgpt@aol.com Tue Jan 22 00:40:44 2002
Subject: [R-390] R-388

writes: << A nice description of the 51J4 can be found at the Following site. http://www.wa3key.com/51j4.html The thing that puzzles me about this excellent description is It describes the 51J4 as having crystal fliters. I thought the 51J4 (R388A/URR)had mechanical filters. Ken >>

Ken and group, It had x-tal and mechanical filters. Both could be used together or separately. Les

From ba.williams@charter.net Tue Jan 22 00:50:39 2002
Subject: [R-390] PSK-31 and Paint Removal
>
> Hell, Just sign it Barry Williams and watch the fun!!!!! > > > > Les Locklear > Gulfport, MS.

Ah, the bee hive kicker is back from a long silence! It's the other Barry, or the other other Barry. Barry

From ba.williams@charter.net Tue Jan 22 01:28:36 2002
Subject: [R-390] R-388

> Uh Oh.....aren't they the same bunch that said the 67 EAC contract was > the last one?? Enquiring minds want to know. > Les Locklear > Gulfport, MS.

Is that inquiring minds, as in The National Enquirer? Barry

From w7itc@hotmail.com Tue Jan 22 02:08:39 2002
Subject: [R-390] restoration

I have found a source for the old style cotton braded insulated wire such as was used in the old radios. http://people.ne.mediaone.net/oldradiodays/wire/wire.htm I am not sure I would use this stuff but I suppose if you wanted to restore an old radio to exactly the way it came from the factory this would fill the bill. Ken

From rodney_bunt@yahoo.com Tue Jan 22 02:10:48 2002
Subject: [R-390] Wanted: Crystal filter unit 51J

Gentlemen, I am in need of the crystal filter (500kHz) and the phasing capacitor for 51J. I have a rig that has been heavily modified. The whole Crystal filter section "insides" is missing (switch Crystal, phasing capacitor, linkages, knobs etc) the two transformers are intact, I have two holes in the front panel, not a pretty sight. Any help or leads is appreciated. Rodney VK2KTZ

From redmenaced@yahoo.com Tue Jan 22 04:59:47 2002
Subject: [R-390] Reverse Migratory Habits of RF Decks

Yes, One flew through the door Friday here in the Great White North, NY, that is. It had a tag on it saying it was from one of the Barrys in Alabama, thanks, Barry!

Anyway, it was a typical mess, someone had greased it long, long ago,..... probably not Barry. The grease had turned to glue, the ten turn stops were all stuck together, the split gears were stuck together, the clutch was in pieces in a bag, two corners were bent, the MC detent spring is missing,.....BARRY??

I stared at it for a few hours while doing other things, then I did it! I tore it apart! I ignored the little voices saying "Better make a drawing of that!", "Better check the manual first!" HAH! not me, I'm diving IN!!

I soaked half of the gears Friday night, the other half Saturday night, got it put together Sunday night, Monday morning I found out the manual isn't much help anyway!

There's a nice homey feel to having a bucket filled with Kerosene and gears soaking in the kitchen sink!

I had to put the four top, right gear groups together three times before I figured out which ones went on first, I got the Geneva drive plate upside down on the first try, and I had the bandswitch gear and the clutch drive gear swapped, but that wasn't too hard to find.

The Geneva plate also had a bent pin that I straightened, must have been rammed against the stop too hard. It works nicely now.

I did, however, manage to put the clutch together right the first time,..... after I found all the parts.

Adjusted the 10 turn stops, the band switch, the counter (KC gear is missing, too), did a two tooth preload on all gears, lubed with Hoppe's No. 9 gun oil.

What a SCHMOOZY!!

Not much wear on the gears, cams, or slides, I wonder if this deck ever got much use. Its a 1956 Motorola with two different serial numbers.

Deck corners straightened, MC gears straightened, no damaged teeth, they run true, quiet, and free so I won't change them. MC and KC shafts straight and true, too.

I found that none of the split gear sets would slide past each other so I took Nolan's suggestion and honed the burrs off each gear, especially No. 74 which because of the grease and burrs wouldn't move at all! That has to be the most expensive single gear in the whole set with its internal spring set in the hollowed out halves. I filed that one, it took a lot of work, too. The burrs were quite big, but that gear has a lot of force on it and makes many revolutions as a pinion against the big gears of the differential.

Fun puzzle! Not nearly as bad as it looks. Joe

From w7itc@hotmail.com Tue Jan 22 05:00:20 2002
Subject: [R-390] R-388

RE: Generally, I think the audio quality of the whole 51J series radios sucks.

That is indeed the real short coming of the 51J's. However I have a FR101 Yaesu that has the worse audio of any radio in good repair I have ever had. It is astounding to listen to a R390A when you take the audio off at the diode out and feed that into a high powered AV system, with the proper jumper of course, it sounds just like some of the old console radios. Ken

From rodney_bunt@yahoo.com Tue Jan 22 05:35:51 2002
Subject: [R-390] R-388 - Audio Quality

Now if you want Quality Audio, the Hallicrafters SX-28 and SX-42, BIG AUDIO !!!

A pair of 6V6 tubes in push-pull, not any old push-pull with some lousey single tube phase inverter, no no no, a full blown differential amplifier feeding the Output tubes.

In the SX-42 of 1947 vintage, it had negative feedback from the speaker side of the output transformer for extra low distortion, the receiver also had two wideband FM ranges for your post war music enthusiasts, who listened to those "new fangled" FM radio stations.

There was also a huge 12" Bass Refrex Hallicrafters speaker/cabinet (wood of course) approx 4ft tall and 2 ft wide for use with the SX-28, drop me a line I have a jpg of one (in colour) if you are interested.
Rodney VK2KTZ

From rodney_bunt@yahoo.com Tue Jan 22 05:40:33 2002
Subject: [R-390] What is the Crystal in the 51J filter ?

I am restoring a 51J the crystal filter section is missing, so I am rebuilding it, I can make up a switch, and even a differential capacitor. So, what is special (if anything) about the 500KHz crystal.

Of course an original would make life easier (any offers, leads ??) otherwise would any old 500kHz crystal do the job ?? Rodney VK2KTZ

From cbscott@ingr.com Tue Jan 22 14:06:40 2002
Subject: [R-390] Reverse Migratory Habits of RF Decks

> Yes,

You're welcome, but please see comments below.

> Anyway, it was a typical mess, someone had greased it > long, long ago,..... probably not Barry. The grease > had turned to glue, BARRY??

Nope, the grease wasn't from me. Sorry about the missing MC detent spring. I had completely forgotten about it being gone. I did, however, tell you in detail the condition of the deck (bent corner, clutch being dissassembled, etc.) and you kept saying "Send it on!" so I did. I certainly hope you weren't surprised with its condition. BTW, I only remember one bent corner. Where was the other one? I hope it wasn't done in shipping. Perhaps I just overlooked it. Don't know.

> I stared at it for a few hours while doing other > things, then I did it! I tore it apart! I ignored > the little voices saying "Better make a drawing of > that!", "Better check the manual first!" HAH! not > me, I'm diving IN!!

I placed the clutch parts in individual plastic bags and placed them inside smaller boxes inside the main box. I thought they would be pretty easy to find.

Glad you got it cleaned up and working smoothly. As I say, I hope you weren't disappointed with this. I was a bit surprised to see the report here on the list and no contact with me off the list. That being the case, I assume all was okay after all or I would have heard from you off the list? On the one hand it almost appears you didn't like what you got, but after cleaning, etc., it appears you are happy with it. Being published on the list, I want to make sure I'm not given a bad name on this list with this transaction. I was as honest with you as I could be about the condition of the deck before we closed the deal.

BTW, a day or so after I shipped it, I did find one of the small, thin (0.010"?) washers on the carpet. I don't know if it came from that deck or not as I was reassembling my at the time I had that one apart. If you need it, I'll be happy to send it to you. I don't have a detent spring or I'd send you that as well.

Regards, Barry - N4BUQ

From cbscott@ingr.com Tue Jan 22 14:19:17 2002
Subject: [R-390] PSK-31 and an R390A

Got the R390A coupled to the laptop last night and copied PSK-31 just fine. Too cool to have the two technologies working together that way. Wish I could find a RTTY package that works with the soundcard that would be as easy to use as this is. Thanks for all the advice, Barry - N4BUQ

From jlap1939@yahoo.com Tue Jan 22 15:57:18 2002

Subject: [R-390] r-390

Friends, Been off a few days..do want to remember some who are kind...Got some positive comments about the ever growing concern for bad practice on ham bands...a few wonder why I have no license..(just never wanted to talk...Like to listen..Maybe yet...?)

Wonder if anyone ever knew "the Dog" (won't say more.. just wonder if he still operates...) anyone know: "The Kosher Ham"? (won't say more)....How about Big ----? Also --- Kicker..(I KNOW I ask funny questions...)

Wonder if any have heard the drunk at approx. 3850 who just sits there and goes, over and over; N-----,N-----, N-----,N-----,N-----.....(breathe)...etc. Does the FCC concern itself, or are they just too busy???

Would like to agree with and thank Joe, Rodney and Sandy and I will write when I get caught up.

Really don't understand the info on 6080/6082...I will just hope I won't ever need one ..

Please forgive my anger at the things on radio comm. today..Many other things are changing, and, of course I come from an earlier era..I am to old to switch my beliefs about fairness and morality, much like a number of others on this list..(ex: ----), and I just want to see honor prevail..sorry we are curmu...well, crabs.. My Best Regards, John

From w7itc@hotmail.com Tue Jan 22 16:03:34 2002
Subject: [R-390] Fwd: Re: Tube question

Well here is the reply from the Netherlands on the 26Z5W's I am not suprised. Ken

All Sold, Peter

From bcotter@pop.uky.edu Tue Jan 22 16:06:41 2002
Subject: [R-390] Do B&W manufactured R-388 exist?

Tom & Sandy, I have an R-388 that was manufactured by Collins and tagged as such. However, the original 1950 pre-TM manual that came with it was published by Barker and Williamson. I haven't seen a B&W tag on an R-388, but I've only seen a dozen or so R-388's in the flesh. Perhaps someone like Howard Mills has come across one, if they exist. Or, B&W may have just been the contractor of the manual. 73 bill n4alg

From kurt.brandstetter@teleweb.at Tue Jan 22 16:23:45 2002
Subject: [R-390] Fwd: Re: Tube question

Hi Ken !

I know this seller; he is over 70 years old and has several storage places in France, Netherlands etc. I'm sure (I have talked with him 6 months ago) he may have some, but cannot find them. Several types he has sorted (when he was younger), he has hundreds of 6BA6 I have seen...

Perhaps he will look if he can find some 26Z5Ws, but as I said, he is old and cannot work a lot a

day. But I think if he finds some, he will notify you. You cannot imagine what a lot of spare tubes this man has collected over the last 50 years. Greetings from Vienna ! Kurt

From billsmith@ispwest.com Tue Jan 22 17:12:46 2002
Subject: [R-390] Reverse Migratory Habits of RF Decks

Great story, Joe! Congrats, and wish I had the time/courage to disassemble the gears in the rig here. I know it's needed. I cleaned similar grease from the outside surfaces, and have tried to flush varnish from pivots and split gears with Marvelous Mystery Oil, but really know better. Mr. Crud is still residing in there. Look forward to more reports. Is yours an "A" or "non-A"? ("non-A" here). 73 de Bill, AB6MT billsmith@ispwest.com

From Richard.McClung@Dielectric.spx.com Tue Jan 22 17:05:26 2002
Subject: [R-390] Do B&W manufactured R-388 exist?

B&W was the primary contractor for many AN/GRC-26C's which used R-388's They also buit many AN/GRC26A, B, and D's also..... RICH @B> }

Tom & Sandy, I have an R-388 that was manufactured by Collins and tagged as such. However, the original 1950 pre-TM manual that came with it was published by Barker and Williamson. I haven't seen a B&W tag on an R-388, but I've only seen a dozen or so R-388's in the flesh. Perhaps someone like Howard Mills has come across one, if they exist. Or, B&W may have just been the contractor of the manual. 73 bill n4alg

From richardlo@devax.admin.athabascau.ca Tue Jan 22 17:08:44 2002
Subject: [R-390] PSK-31 and an R390A

Scott, Barry (Clyde B) wrote: > Got the R390A coupled to the laptop last night and copied PSK-31 just fine. Too cool to have the two technologies working together that way. Wish I

Nonsense Barry (which one are you, again?), you don't want to mix technologies like that. It's unclean. I'll send you an ASR28... Freight collect of course.

I just moved 150Km to a new house and had the movers bring along the Model 28 and a tube electronic organ. I wish I could have been there to hear them complain as they hauled them up and down the basement stairs... --- Richard Loken

From courir26@yahoo.com Tue Jan 22 18:11:16 2002
Subject: [R-390] Do B&W manufactured R-388 exist?

Richard, I think you nailed it. They repackaged the 388's with the big sets most probably. 73 Tom

From KK5VR@ARN.NET Wed Jan 23 18:27:53 2002
Subject: [R-390] Thanks for your help

To all: Thanks to the many people who's intelligent comments have helped me with my R-390A and

my tuners (MFJ-989C, Heath 2060). You are a very valuable asset to people like myself who want to learn and don't mind asking. Again..... Many Thanks GT AD5DH Claude, Texas

From tbigelow@pop.state.vt.us Tue Jan 22 19:24:36 2002
Subject: [R-390] R-388 - Audio Quality

Don't forget the SX-62* series, also runs a pair of 6V6's push/pull. GREAT dial too, just picky when it comes to tuning. Apparently the SX-62 is a repackaged version of the SX-42 sans bandspread.

I've got an R-388 with a bit of a hum, but I've never heard wild praise for the audio. More that it is adequate, the rig holds calibration well, and is stable as well as sensitive. Also built with the typical Collins quality. More like a communications radio than an entertainment receiver, I guess. 73 de Todd/'Boomer' KA1KAQ

From twleiper@juno.com Tue Jan 22 19:25:42 2002
Subject: [R-390] PSK-31 and an R390A

writes: > Wish I could find a RTTY package that works with the soundcard > that would be as easy to use as this is.

There are plenty of free and evaluation TTY, CW and multi-mode programs for sound cards available on the WEB, such as TrueTTY and CWGet, etc.

There's also a site that has links to all these download sites. I don't have the link here in my LapTop, but I think I do at home...I'll send it if I ever get back...Stuck down in Greensboro. Tom

From cbscott@ingr.com Tue Jan 22 19:35:23 2002
Subject: [R-390] PSK-31 and an R390A

Yeah, sometimes I feel a bit like Dr. Frankenstein. A little bit of the old and a little bit of the new and "voila". Yes, I admit to attaching a computer as well as a sand-state product detector to the R390A. But I kind of draw the line at that. I like the innards to stay intact. It has a 3TF7 and 26Z5Ws. Barry(III) - N4BUQ

From twleiper@juno.com Tue Jan 22 19:54:42 2002
Subject: [R-390] Do B&W manufactured R-388 exist?

writes: ... > Or, B&W may have just been the contractor of the manual.

Much more likely. I have lots of manuals that were written and printed by electronic companies other than the manufacturer. I think they handed them out as consolation contracts. I even have one printed by Ford Motor Company. Tom

From chg111@hotmail.com Tue Jan 22 21:18:10 2002
Subject: [R-390] r-390

Gents-Some of those guys are sorta funny...at first. Then they get downright repulsive. What they forget is that amateur radio is a PRIVILEGE, not a right. Lots of powerful forces would just love to have that bandwidth for themselves,& if the Gummint starts having too many headaches over these nincompoops,that might just happen.Another thing-how many of us are actively trying to recruit young people into this hobby? I'd hate to think we're the Last Generation of folks that like this stuff. Soapbox mode off-Sandy G. C.H.(Sandy)Geiger III

From cbscott@ingr.com Tue Jan 22 21:24:35 2002
Subject: [R-390] r-390

Remember when certain words weren't heard on ham radio. Now, it's so commonplace I doubt if the FCC even cares. (Soapbox mode switch permanently welded in the "on" position.) Barry(III) - N4BUQ

From jetemp01@athena.louisville.edu Tue Jan 22 22:58:32 2002
Subject: [R-390] Below 8mhz problem.

Hello to the group, I recently bought a "massacre" R-390 and completely tore it down and cleaned and replaced all the "problem" caps.

I have already replaced the 100pF cap at T-207 with no luck.

The problem I have is that the calibrator is strong and loud on all bands 8mhz and above, and below 8mhz is barely audible and extremely faint.

The receiver will not hear the signal generator at all, so I have not been able to align the variable IF's.

The fixed IF hears fine, but the signal is injected directly into the IF module. With the variable IF's, the signal can not be heard while input into the balanced antenna input.

Perhaps a kind soul has experience with the problem described and will offer some hints as to a possible fix. Thanks. Jim Temple Louisville, KY. 73, KF4ICZ

From redmenaced@yahoo.com Tue Jan 22 23:23:09 2002
Subject: [R-390] Reverse Migratory Habits of RF Decks

> Glad you got it cleaned up and working smoothly. As
>
++++++++++++
I know you would! I'm not complaining a bit! Its fine. I was kidding about the detent spring. I would have contacted you sooner but you see what I've been doing,..... hehehe. We need to find a source of thrust washers, I'm not sure what I need there. I had to remove one from one gear where the manual said there should be two, only one fit.

Between that and finding some mini-BNC connectors/coax I have no problems with this deck.
Thanks, Joe

From wewilson@knology.net Tue Jan 22 23:41:06 2002
Subject: [R-390] Below 8mhz problem.

Jim, In order to verify that oscillator V207 is putting out a strong enough signal to the cathode of V202, do the following: Connect a DC voltmeter to test point E209. Put the Function switch in the STANDBY mode. You should read "approximately" -6 VDC, according to TM 11-856A, pp. 111-112. I just checked one on the bench, and it reads about -5VDC. You can check the output to the 2nd mixer (from the xtal osc deck) and the 3rd mixer (from the PTO) this same way, but the range of correct readings varies. See TM 11-865A for more details.

If the voltage is well below -6 VDC, this test won't tell you where the problem lies (V207, C327, T207, the crystal, etc). It only tests whether sufficient signal is getting to the cathode of the 1st mixer.

Walter Wilson - KK4DF http://www.knology.net/~wewilson

From organic@cyberlane.net Wed Jan 23 00:10:17 2002
Subject: [R-390] Alternat for De-Oxid?

(For what its worth)

Rummaging through MISC stash I came across a sample (not openend yet) of a contact conductive enhancement compound named Stabilant 22A. I got about 16 years ago. Its NOT a contact cleaner but a contact improver! The company homepage is: http://www.stabilant.com/

A very positive review in QST is found at: http://www.stabilant.com/revrw04h.htm A current (2000) review at the e-insite web site is here: http://technicalpapers.e-insite.net/data/detail?id974337214_997&typeRES&x1840494298

From rlruszkowski@west.raytheon.com Wed Jan 23 00:53:08 2002
Subject: [R-390] Below 8mhz problem.

Jim, More than one problem here. So what did you expect?

The receiver will not hear the signal generator at all, so I have not been able to align the variable IF's.

No signals but the Cal tones are killers. It sounds like an oxidized contact point in the antenna relay. As its from the massacre you will likely find some crud in the box.

Do some ohm meter checks on the antenna relay Pin inside on Mini BNC to pin in triax connector . Pin to pin should give continuity and pin to ground should be open.

Do you hear the antenna relay click as you go into cal mode and out of cal mode to mgc?

Strap the break-in pin on the back terminal board to ground. Operate the break-in switch off and on. Do you hear the relay in the audio deck click and kill the audio hiss? Do you hear the antenna relay click?

If a the relay is clicking and a couple operations do not clear it. It will open up and can be fixed. Some course paper ("newsprint") can be used to clean the contacts. Rain condensation has likely dirtied the

contacts.

Get a very good small Philips screw driver and really lean into it as you take the very small screws out of the cover plate on the relay and look into the contact cavity. (dead spider or what ever in there).

Poor performance under 8. is .5 - 1, 2-3 and 4-7 all equally bad?

Look into the first mixer tube socket for crud. Look into the fist mixer Z cans for crud. Again likely just weather oxidation in a contact. Look at the RF band switch for crud. Likely you will pull a can off its contacts, open it up and put it back down and every thing will work no trouble found The normal experience.

Pull it all apart and clean the contacts (De Oxit preferred)
Use what ever you have but
1.) do not ever tell this mail reflector you did it.
2.) If what you use causes other problems always infer the trouble came with the receiver and was not self inflected.

Work over the antenna relay and get some signals coming through.

Read the manual. Read Chuck Ripples web pages. Down load and read the handbook.

As this was one of those receivers you will want to one day pull the every deck. pull all the tubes and all the RF deck cans and give every contact a cleaning.

On the first IF .5 - 8 Mhz.
Again, just because its been outside, you may find a cap in the RF cans to be shorted. These will come apart and can be cleaned up. The little rubber disk between the cap sections gets stiff. Read Chucks and Dave Medley's R390/A and R390 web sight maintenance tips. The adjustment caps are in the RF and crystal decks and share a common problem. Do not take down any you do not have to. If and only if it is shown to be the problem. Aggravation exceeds return on investment.

Then go read the books again, Get all the stuff you need to treat the items correctly. Then go read the books again. Acquire a large rewarding stock of choice beverage. Do not start celebrating prior to completion of the task. Then just jump in and do it. Do not be intimidated. If it goes wrong stop and ask. It may take an hour or two to get mail back at 0 dark thirty But some one will gladly talk you through it. When its all done, just let your self go and revel in it.

While your at it you will want to give the gear train a good bath. a 32 to 40 hour ordeal is about typical.

Your only going to do it once and your only have to do it because some fool let those fine receivers set out over winter in the weather.

A good semi PM could get done on the depot bench in 4 hours. 8 hours was average for a tech his first year out of school. (to do it all and do it right) So 16 hours your first few times around is ok. Roger KC6TRU

From wewilson@knology.net Wed Jan 23 01:13:48 2002
Subject: [R-390] Alternat for De-Oxid?

ProGold is supposedly Caig's answer to Stabilant 22. Caig also make DeOxit.

Walter Wilson - KK4DF

From jetemp01@athena.louisville.edu Wed Jan 23 01:37:43 2002
Subject: [R-390] Below 8mhz problem.

Hi Roger, I have found that E209 before the 1st mixer V202 has a voltage of -.85 in standby. The other RF deck points are up to spec's. This indicates to me that something before the 1st mixer is bad.

I will check all the coils, switchs, rotary contacts, and whatever plugs in, and thouroughly clean and inspect. When finished, I will get back to you and the list. Thanks for the suggestions, everyone! Regards, Jim

From roy.morgan@nist.gov Wed Jan 23 02:06:27 2002
Subject: [R-390] Below 8mhz problem.

wrote: >Jim, > >In order to verify that oscillator V207 is putting out a strong enough >signal to the cathode of V202, do the following: Connect a DC voltmeter to >test point E209. Put the Function switch in the STANDBY mode. You should >read "approximately" -6 VDC,

Do NOT use a digital meter without a one meg resistor in series with the test lead. VTVM's contemporary with the R-390 had a 1-meg resistor in the DC probe. If it is not there, the lead loads the test point and you either kill the oscillator or get erroneous readings. Roy

From JamesMiller20@worldnet.att.net Wed Jan 23 02:06:17 2002
Subject: [R-390] Below 8mhz problem.

Go to Chuck Rippel's 390 page, he discusses the variable IF and troubleshooting. The "below 8 mhz loss" appears to be a common problem, possibly a failure in first variable IF. Check the miniature coax connectors at the top of the RF module. I believe the first mixer oscillator is injected through one of those connectors. Here's the web site for further reading: http://www.r390a.com/VARIF.htm

From jetemp01@athena.louisville.edu Wed Jan 23 02:34:47 2002
Subject: [R-390] Below 8mhz problem

Hello to the list, As an update, I have found that E209, before the 1st mixer has low voltage. It should be approx -6.5 volts, and it actually is -.85. Measured with a 1meg resistor it is -.76.

The other RF deck test points have good voltage.

The faint cal signal below 8mhz is the same on all bands below 8mhz. This prevents me from hearing the signal generator signal needed to calibrate the variable IF section. The cal signal on all bands 8mhz and above is strong and loud.

I have received suggestions to:

1. Check all the appropriate coils, switches, antenna relay, and anything that plugs in or wipes, before the 1st mixer v202, due to corrosion suspicions because of the "massacre" origion of the radio.

2. Check HR202 crystals, especially 17mhz.

3. Inspect circuitry between 1st mixer V202 and 1st crystal oscillator v207.

The crystal seems to be OK, because I purchased a spare HR202 with the radio.

I have substituted the 6c4 and 5654 tubes V202 and V207 with no change.

Thanks for the suggestions, and tomorrow I will get deeply into the above suggestions. So long for now.

Regards, Jim 73, KF4ICZ

From ence-ack@rio.com Wed Jan 23 04:27:07 2002
Subject: [R-390] Below 8mhz problem

Greetings R-390 list. My first post. I recently got a Motorola R-390a. My first. It works well and I have really enjoyed using it. In using the cal mode, though, I noticed that I still heard stuff from the antenna and there is no relay click between cal and mgc. A quick removal of the top cover to troubleshoot showed that the antenna relay module had been removed by persons unknown. End of troubleshooting. It also has only a hole where the balanced jack would be and the unbalanced jack is not original. The receiver is in otherwise quite good condition - very clean. It has probably been rebuilt by a past owner.

I am considering whether to try to find an antenna relay module to install. Right now I don't need the balanced jack or the break-in feature but I might want them in the future. Any thoughts on whether it should be replaced or where one might be found? I have heard that Rick Mish routinely removes the balanced antenna jack and replaces the unbalanced jack with another type. Any truth to this?

Thanks for the help. I have really enjoyed reading this reflector for the past month. Spence Barton

From w5or@home.com Wed Jan 23 06:17:21 2002
Subject: [R-390] Digest readers only

Are those of you receiving the list in digest mode getting it ok? I've been monitoring it since the switchover to mailman. Seems ok to me but haven't heard from any digest readers. Thanks for any report.

> Subject: R-390 digest, Vol 1 #58 - 8 msgs

Don Reaves W5OR R-390 list manager CCA AMI ARRL LM

From mikea@mikea.ath.cx Wed Jan 23 12:56:34 2002
Subject: [R-390] Below 8mhz problem

He didn't do anything of the sort with the all-Collins 390 he restored for, and sold to, me. -- Mike

Andrews

From jetemp01@athena.louisville.edu Wed Jan 23 13:03:59 2002
Subject: Fw: [R-390] Below 8mhz problem

Please note that the voltage measurements I have posted below were taken with the function switch in STANDBY, as printed in the TM. Jim

From cbscott@ingr.com Wed Jan 23 13:30:47 2002
Subject: [R-390] Below 8mhz problem

American Trans-Coil <http://www.atc-us.com/ATCSHOP/> shows antenna relays on their website. I think they have a minimum order, though. I think Fair Radio <http://www.fairradio.com/r390a1.htm> would have them, but I think they have a minimum order as well. Perhaps someone on the list has some spares... Good luck, Barry - N4BUQ

From ba.williams@charter.net Wed Jan 23 13:36:10 2002
Subject: [R-390] Below 8mhz problem

Jim, I'm hoping you keep us up to date with what you find out. I have a EAC that has the same problems you describe. I'm going to get to it one day and will have to go through this too. Barry

From cbscott@ingr.com Wed Jan 23 13:49:49 2002
Subject: [R-390] Reverse Migratory Habits of RF Decks

Sky Craft Surplus sells RG179 and Fair Radio sells the MB connectors. Both have a minimum order, though. I think someone on this list bought some of the coax and might sell a small length of it. Don't remember who it was, though. Good luck and keep us posted with your progress with the rest of the radio. Barry(III) - N4BUQ

From cbscott@ingr.com Wed Jan 23 13:57:10 2002
Subject: [R-390] Dweedle-dweedle

I was trying to copy some RTTY off the R390A last night, but didn't have much success. Many strong signals and I could see the two strong peaks on the spectrum display, but about all I could copy was garbage. While some of it may have been encrypted, I'm pretty sure the stuff on the ham bands weren't.

As you can see, this isn't an ASR28 setup... :(

It appears one must know the baudrate and shift values before a successful copy can be achieved. Is there a way to determine these values? I always thought RTTY was pretty much fixed on these values, but apparently I was wrong. Sadly, I reverted to PSK-31 for the rest of the evening. Help? Thanks, Barry(III) - N4BUQ

From cbscott@ingr.com Wed Jan 23 15:26:45 2002
Subject: [R-390] Dweedle-dweedle

Thanks to all for the replies. Hopefully I'll get the hang of it soon. Perhaps someone could point me to a frequency/schedule where the RTTY parameters are known and the messages are plain, english text. This may help me getting things fine-tuned. Thanks again, Barry(III) - N4BUQ

From mikea@mikea.ath.cx Wed Jan 23 15:29:55 2002
Subject: [R-390] Dweedle-dweedle

Scott, Barry (Clyde B) wrote: > Thanks to all for the replies. Hopefully I'll get the hang of it soon.
> Perhaps someone could point me to a frequency/schedule where the RTTY parameters are known and the messages are plain, english text. This may help me getting things fine-tuned.
<http://www.arrl.org>; see the W1AW RTTY sked. Mike Andrews

From goode@tribeam.com Wed Jan 23 15:36:09 2002
Subject: [R-390] Dweedle-dweedle

Barry, ARRL still sends RTTY bulletins. The schedule is at: http://www.arrl.org/w1aw.html 73, Steve, K9NG

From billsmith@ispwest.com Wed Jan 23 16:10:41 2002
Subject: [R-390] Dweedle-dweedle

Try: **http://www.rtty.com/** George broadcasts a news service. 73 de Bill, AB6MT
billsmith@ispwest.com

From Richard.McClung@Dielectric.spx.com Wed Jan 23 17:08:29 2002
Subject: [R-390] Dweedle-dweedle

Here's George's Schedule. When you copy him send him an e-mail <w7ksj@attbi.com>
<w7ksj@rtty.com> or give him a call and let him hear how you're copying his signal (253-833-6755).

WC2XPF Broadcast Schedule

Date Time Freq Baud
Shift
Sun 1300 PST - 1600 PST 13972 KHz 45.45 baud
170
1800 PST - 2030 PST 6994 KHz (60 WPM)

Mon No Scheduled Broadcasts

Tue 1700 PST - 2030 PST 6994 KHz 45.45
baud 170

Wed 1800 PST - 2030 PST 6994 KHz 45.45 baud
850

Thu No Scheduled Broadcasts

Fri 1700 PST - 1900 PST 6994 KHz 45.45 baud
170
1900 PST - 2030 PST 6994 KHz 74.2
baud 850
(100 WPM)
Sat 1300 PST - 1600 PST 13972 KHz 45.45 baud 170
1800 PST - 2030 PST 6994 KHz (60 WPM)
RICH @B> }

From jetemp01@athena.louisville.edu Wed Jan 23 20:15:42 2002
Subject: Fw: [R-390] Below 8mhz problem

Hello to the list, Success!! It was in the 1st oscillator circuit where I found the problem, but the fix I did not expect.

I had originally checked and reworked all the grounds in the RF deck.....I thought.

Below T207, surrounded by components, is another ground point that also anchors T207 to the deck. The deck is coated with a shellac of some sort, and I found the ground sitting on the shellac, finger tight. I removed the shellac and tightened the ground, and the radio sprang to life.

Very strong cal signal above and below 8mhz. Also, the variable IF is hearing just fine now.

It goes to show that all those trees in the forrest can get in the way of a simple fix.

Thanks to all who offered their time and expertese in assisting me with this fix. I also know that those who may have expertese in other areas would have assisted if it was needed. Thanks again. Regards, Jim Temple 73, KF4ICZ

From cbscott@ingr.com Wed Jan 23 20:27:13 2002
Subject: [R-390] Below 8mhz problem

You guys who do these modifications just kill me. If the engineers had wanted a good, clean ground at that point, they would not have gone to the trouble of having it varnished/MFP-ed underneath it! ..<grin>

Congratulations on the find. Makes you wonder if it was hard of hearing from the factory and never fixed. Barry - N4BUQ

From David_Wise@Phoenix.com Thu Jan 24 00:25:50 2002
Subject: [R-390] Below 8mhz problem

I don't quite hear you saying you checked the 1st oscillator itself. Make sure you do; without it, you won't get anything below 8, no matter what shape the 1st VIF is in. I don't remember the canonical method to check it but an easy way is to pull the 1st mixer and scope the cathode pin. This is where the

1st oscillator is injected. Should be a big, clean 17MHz sine wave, quite a few volts high (memory fade... 10?). NOTE that the 1st oscillator only runs when you're below 8. The E209 check measures this voltage in a way. When you put a voltmeter on E209, it sees the mixer grid and it looks like the plate of a diode. Every time the cathode swings negative, the grid conducts and takes the meter with it. This happens 17 million times a second; the meter averages it out. Regards, Dave Wise

From w7itc@hotmail.com Thu Jan 24 00:39:52 2002
Subject: [R-390] Below 8mhz problem

RE: http://www.atc-us.com/ATCSHOP/

Check out the meters for 18.00 they look very much like the originals for the R390.

From wewilson@knology.net Thu Jan 24 01:00:04 2002
Subject: [R-390] Below 8mhz problem

I have some of those meters in the shop. They are 100 uA full range, instead of the 1mA for the R390 carrier meter. I have not measured in internal resistance. Walter Wilson - KK4DF
http://www.knology.net/~wewilson

From ai2q@adelphia.net Thu Jan 24 01:03:54 2002
Subject: [R-390] Alternat for De-Oxid?

Hi folks: I use, and have used, Stabilant-22 since the mid-1980s when it first came out. It's very expensive, but is diluted in 99-percent isopropyl alcohol, and it goes a long long way. It's billed as a conductive polymer.

It's a great insulator between contacts, but when compressed it acts as a conductor (better than solder). I use it on edge-wipe connectors (on the V-F display on my Omni-V transceiver), on my model trains (switch contacts, rail wipers), on coax connectors at HF and below, between DIP sockets and chip lead-frames, and on vacuum tube pins.

Recently I applied Stabilant to each and every sub-mini silver banana plug and jack on the RF coils of my R-390 (non-A) during reassembly after a total teardown (after a house fire almost destroyed it). It surely didn't adversely affect anything in the RF deck. The set is very, very sensitive and hot---even on 10 meters.

Phenomenal stuff that complements De-Oxit nicely. I strongly recommend it for contacts that are under pressure as opposed to simply wipers (although it works there too). Vy 73, AI2Q, Alex .-.-.

From w7itc@hotmail.com Thu Jan 24 03:58:35 2002
Subject: [R-390] Below 8mhz problem

This website has a kind of funky search system. On the left side there is a bar that says "choose your item" below that is another box pull it down and select "military items" click "go" and another box will appear below it pull it down and select meters, and yet another box appears pull it down and you can select the meter to be viewed from there. http://www.atc-us.com/ATCSHOP/ It been so many years since I have messed with meter shunts, and such I really don't know if these meters can made to function correctly in an R390. Barring bad news from one of the list's techneers, at 18.00 bucks each it sure is

worth a try. Ken

From w7itc@hotmail.com Thu Jan 24 05:23:58 2002
Subject: [R-390] Covers

I was looking at the covers in the R390 section of http://www.atc-us.com/ATCSHOP/ It started me wondering I have the top and bottom covers for My R390A. One has round holes coined out of it, the other has louvers. Is there a top and bottom cover? Are these just mismatched covers? It seems to me the louvered one is the top one. This is the sort of thing one thinks about when one has but two functioning brain cells after a awful day at the Cheyenne, VA. Ken

From Barry Hauser <barry@hausernet.com> Thu Jan 24 06:17:17 2002
Subject: [R-390] Covers

wrote: > I was looking at the covers in the R390 section of > http://www.atc-us.com/ATCSHOP/

Those arent' covers -- the first is actually a side panel, the second is one of the two vertical, fore-aft inside panels that form the three compartments in the lower half of the frame -- for the audio deck, PTO and P/S.

> It started me wondering I have the top and bottom covers for My R390A. One has > round holes coined out of it, the other has louvers. Is there a top and bottom cover? Are these just > mismatched covers? It seems to me the louvered one is the top one. This is the sort of thing one > thinks about when one has but two functioning brain cells after a awful day at the Cheyenne, VA.

The one with the round holes is the bottom cover -- louvered one is the top. Of course, the radio will work with them reversed, but could be a violation -- like issuing a distress call without cause, or somethin'. ;-) (((((((([Barry] OOOO

From bill.riches@verizon.net Thu Jan 24 12:09:49 2002
Subject: [R-390] Alternat for De-Oxid?

Hi folks:
I use, and have used, Stabilant-22 since the mid-1980s when it first came out. Me too! I have used it on R390A, Edge connectors in computers, sound system connectors, and my 20 year old Crown Mixer switch type attenuator (part not available from crown) that nothing would clean the contacts - I gave it a shot of Stabilant 2 years ago and it is still going strong. One drop goes a long way. Most professional sound guys have it in their kit. 73, Bill Riches, WA2DVU dB Electronics Cape May, NJ

From nextgen@nextcentury.com.au Thu Jan 24 12:35:17 2002
Subject: [R-390] R390A / R390 help

Hello Everyone,
I have a question, how does the R390 and R390A compare as to sensitivity? Anyone with a spare front panel for the R390 I am looking a buying one but it has been modified they have added 2 extra switches am and ssb on both. Its a Motorola s/n 4170 I will need to restore the front panel it needs a paint job.

73's Lee.

From Barry Hauser <barry@hausernet.com> Thu Jan 24 13:00:29 2002
Subject: [R-390] R390A / R390 help

Hi Lee:
In terms of sensitivity, individual units will vary more according to condition and precision of alignment than the specs between the non-A and A, which are close if not eqivalent on paper. The bigger difference has to do with the IF section where the non-A has L/C filtering vs. the mechanical filters of the R-390A. The non-A is smoother, the A is steeper and with some ringing from time to time. There are a lot of other differences -- the non-A has a heavier gear train, full-sized internal BNC connectors, more elaborate (and hotter) power supply, was produced in smaller numbers, etc. There are sites on the 'net that compare 'em.

As for the front panel. You can probably get one from Fair Radio, but the first question is -- what's behind those added switches? The mod may be desireable or not. Sounds like someone put in a product detector or perhaps the diode mod and made it switchable or whatever. Or it could signify that the IF module was badly hacked on. If the mod isn't worthwhile, you could fill the extra holes with plastic aluminum or similar in the process of refinishing the panel. But I think you should check out the inside aspect of those added switches before buying. The holes are no big deal. Barry

From cbscott@ingr.com Thu Jan 24 14:14:31 2002
Subject: [R-390] Below 8mhz problem

Wonder how long that "Spring Sale" is gonna last... Barry - N4BUQ

From cbscott@ingr.com Thu Jan 24 14:49:53 2002
Subject: [R-390] More dweedle-dweedle

Had marginal success last night copying RTTY. I managed to catch the tail-end of a ham QSO, but was not successful with much else. 40M propagation wasn't particularly good from the west coast last night so I didn't copy WC2XPF (lots of QRN). I missed ARRL's ham broadcast, but will try again tonight.

There are lots of other RTTY signals out there, but I don't seem to be able to get much out of them. For example, there is a strong station around 10,130 kc, but I couldn't make much out of it. According to the display, it appeared to be an 850 cps shift, but I could not get intelligible copy. There are so many variables here: 5-bit, 6-bit, 7-bit, 8-bit, number of stop bits, baud rate, parity, etc. I tried lots of combinations with no luck. Of course, it could be it was sending encrypted -- don't know.

Any suggestions on some common modes other than the "standard" ham configuration of 45.45 baud, 170 cps shift? Is it possible from the relative sound of the signal to make a guess at the baudrate? Do many common baudrates share a common data format (databits, stopbits, parity)? It doesn't seem this should be so difficult.

Of course, I used the R390A for some of my attempts last night so this is "on topic". :) Thanks,
Barry(III) - N4BUQ

From ba.williams@charter.net Thu Jan 24 15:08:06 2002
Subject: [R-390] More dweedle-dweedle

This leads to the question- has anyone seen or tried Hoka Code? That is supposed to be a fantastic decoding program. I think it deciphers the correct settings for baud, stop bits, parity, etc. That reminds me of the old Bulletin Boards where you had to set all of this manually on 300 baud modems. You had to know all of those settings in advance or experiment. I know that Hoka Code is more reasonable approach when compared to the Universal decoder units costing thousands of $$$.

Has anyone heard from a Hoka Code user? Has anyone seen or heard about the Universal dedicated decoder units? Barry

From cbscott@ingr.com Thu Jan 24 15:22:48 2002
Subject: [R-390] More dweedle-dweedle

There are some 60 combinations of data bits, stop bits, and parity settings with the program I'm using. Throw in baud rates and it becomes quite a guessing game... Barry(III) - N4BUQ

From lexa@mail.island.net Thu Jan 24 15:21:56 2002
Subject: [R-390] More dweedle-dweedle

Hi, I've been using a Universal M-1200 II card for years, it works great. Universal Radio usually has decoders for sale on their used listings. The M-7000 series is good. Leo

From roy.morgan@nist.gov Thu Jan 24 16:31:13 2002
Subject: [R-390] More dweedle-dweedle

blw wrote: >This leads to the question- has anyone seen or tried Hoka Code? I nevah hoid of it Guv-nah, but: Get it at: <http://www.scancat.com/hoka.html>

"HOKA'S CODE3 Decoder

We are sure you will get many hours of pleasure and enjoyment from this decoder. My name is Jim Springer, and I am the Owner and President of Computer Aided Technologies, the USA distributor for CODE-3 and CODE-30. ..." **[The product, which costs $425 (plus $10 shipping/handling), comes with a 12-month guarantee on the audio-to-digital converter and program diskettes. Not supported on Windows ME/XP/Win2000]**

Two users groups are formed: <http://www.scancat.com/c3-users.html> "Announcing two new user group mailing list the code3list - and - code30users code3list - an open and unmoderated mailing list for the discussion of topics related to the Hoka Code 3 and Code 3 Gold demodulators. this list is targetted toward new and long term Code 3 user. code30users - a closed mailing list for the discussion of topics related to the Hoka Code 30 demodulator. ..."

From jlkolb@cts.com Thu Jan 24 16:49:09 2002
Subject: [R-390] What is the Crystal in the 51J filter ?

Rodney Bunt wrote: > I am restoring a 51J the crystal filter section is missing, so I am rebuilding it, I

can make up a > switch, and even a differential capacitor. So, what is special (if anything) about the 500KHz > crystal.

I don't know what crystal was used in the 51J xtal filter, but the usual 455 kHz xtal filter xtal was a small black plastic case with solder lug terminals coming off both sides, for lower shunt capacity across the filter than the FT-243 or other holders of that period. I would expect an HC-6 holder xtal would work well, the version with long wire leads even better. Bend the leads at right angles as soon as they leave the case for lower stray C. Wire up the xtal filter with heavy stiff wire, running straight from point A to point B, rather than looped in a circular path for stability. At the same time, the circuit should be arranged to have as little stray C as possible. John

From R390rcvr@aol.com Thu Jan 24 17:51:27 2002
Subject: [R-390] Correcting for meter sensitivities?

Dear List Mavens: Is there a simple correction factor or formula that will allow you to correct for the use of multimeters with different ohms per volt sensitivities? Some of the older data sheets have test voltages listed, using a 1k ohm/volt meter. Others with 20K ohm/volt, etc. I realize that the discrepancies vary with the level of voltage measured, but wonder is there is a straight forward way to correct readings when you don't have the specified meter. In particular, I need a 1K ohm/volt meter, but all mine are 20K ohm/volt or higher. I tried to find a new meter with that sensitivity, but not luck. Even the cheapest radio shack was 2K ohm/volt. Also, what about DMMs? Thanks Randy

From rlruszkowski@west.raytheon.com Thu Jan 24 17:50:14 2002
Subject: [R-390] R390A / R390 help

Hello Everyone, I have a question, how does the R390 and R390A compare as to sensitivity? 73's Lee.

Lee, >From 68 through 75 I took care of many thousands of R390/a and a few R390 all around the Pacific Rim. I have found either species of receiver to be about equally insensitive to GI's, Sailors, Marines and Airedales. When falling on fingers and feet I have never know a receiver to apologize for the clumsy act. The receivers are prone to popping a tube filament open at the most inopportune time with out a care as to how it impacts our plans. The receivers will split a gear clamp or strip a spline screw at the though of a maintenance procedure. These receivers can be as insensitive as any other living pet. I think the 47 Ohm resistors in the R390 power supply circuit can treat you with even more contempt than any cat I have known.

Text book wise the receivers are equal in receiver sensitivity. Having cared for and watched op's use them for years of military service the two are so close you can not tell them apart. An R390 and an R390/A set up side by side in rack and coupled to some of the best antenna the Military could build yields equal number of signals. One is not more hard or hearing than the other.

The mechanical filters in the R390/A ring. The stock R390 sounds a little better on AM than the R390/A The two stage R390 RF does not produce any better response in the head phones than the single 6DC6 in the R390/A RF amp.

Ethiopia, Turkey, Berlin got the first R390's. The R390/A went to Viet Nam, Okinawa, Japan, Korea. I had R390's in Korea with 28 Volt DC power supplies that were run off the 28 Volt truck generators. We had gas engines and heavy duty generators in the 2 1/2 ton trucks. The trucks had cargo boxes (vans) mounted on them and filled with radio's. You could run the radio's off the truck generators (battries). We

also had smaller engine generators that used a lot less gas and were much quieter than the truck engines.

These things were mostly in retirement by 1971 in Korea. But hey there was a war on over there and had been since the early 50's so we were ready to go to the field.

Worry not if its a R390 or R390/A, you do not have enough of them either way. Keep what you can get. Roger KC6TRU.

From cbscott@ingr.com Thu Jan 24 18:02:28 2002
Subject: [R-390] Changing filters and frequencies

Something I noticed (for the first time) last night: when I switch between filters, the received audio changes frequency. For example, if I switch from 4kc to 8kc, the dweedle-dweedle pitch changed ten or twenty cps. Is this normal? If so, what causes it? Is it the filters themselves or is this an IF alignment issue? Thanks, Barry(III) - N4BUQ

From richardlo@devax.admin.athabascau.ca Thu Jan 24 17:06:02 2002
Subject: [R-390] Correcting for meter sensitivities?

The question is not as easily answered as all that. Your readings are affected by how much your meter loads the circuit but how much your meter loads the circuit depends on the resistance of the meter and characteristics of the item under test. A 1000 ohm/volt meter has no impact on the reading of a fully charged 12V car battery but you will get big time lying if you try to read the control grid voltage on your favourite IF stage.

That is not what you really want to know. The load resistance of a VOM is the rated reistance multiplied by the full scale voltage on the setting you are using so:

DC Full Scale	1000 ohm/V	20,000 ohm/V
10	10,000 ohm	200,000 ohm
50	50,000 ohm	1,000,000 ohm

In your case, throw a resistor across the meter to load the circuit appropriately. If you use a DVM or a VTVM then you can ignore the meter resistance and just calculate the resistance that a 1Kohm/volt meter would have and put it in parallel with the probes. --- Richard Loken

From rlruszkowski@west.raytheon.com Thu Jan 24 18:07:41 2002
Subject: [R-390] More dweedle-dweedle

Scott, Even if it is encrypted it will still print as text. The Ham stuff is so hard to copy because by the time you get it dialed in the QSO is over.

Look in the international shortwave bands for some commercial stations. When you get these you will get all numbers
12345 67890 12345 12345 12345 12345 67890 67890 12345 12345
12345 67890 12345 12345 12345 12345 67890 67890 12345 12345

line after line in exact format. 850 shift. 45 or 60 baud 5 bit one start two stop.

The numbers get used with a book. you can translate over 200 languages with the book and the numbers. These stations hang on for hours, have lots of power, and give you time to get your controls set up. After a few hours you can hear the difference between 45 and 60. Most ever one uses 45. There is not a lot to say. and the slower rate gets through with better copy. I'll listen to a strong station around 10,130 kc, and see if I can tune it and let you know what I find, if anything. Roger.

rom rlruszkowski@west.raytheon.com Thu Jan 24 18:15:07 2002
Subject: [R-390] More dweedle-dweedle

Has anyone heard from a Hoka Code user? Has anyone seen or heard about the Universal dedicated decoder units? Barry
---

I use a Kamtronix for both CW and TTY. This outputs ASCII on a serial port. My quest was to find a computer that would run the DOS terminal program and that did not radiate so much RFI from the monitor and power supply so as to swamp my weak antenna input. I like my KAM. It is 10 years old or so. Today I am looking at sound cards and software. I finally found a computer that is quiet RFI wise and had ability to load windows. I wonder how much RFI sound cards generate. Maybe my case will contain it. Roger KC6TRU

From mikea@mikea.ath.cx Thu Jan 24 18:34:07 2002
Subject: [R-390] R390A / R390 help

Roger L Ruszkowski wrote: > These things were mostly in retirement by 1971 in Korea. But hey there was a war on over there and had been since the early 50's so we were ready to go to the field.

I can attest to that. The MARS shack at Osan AB (K-55) was dumping all their R-390 and R-390A receivers into a Dumpster. I asked about this, and was told that I could have as many as I wanted. I had turned my hold baggage in the previous day, for return from TDY at Osan, and so couldn't do a damn thing. Even then I knew how good they were. *sigh* Mike Andrews

From David_Wise@Phoenix.com Thu Jan 24 19:01:31 2002
Subject: [R-390] Changing filters and frequencies

> Something I noticed (for the first time) last night: when I > switch between filters, the received audio changes frequency.
>
It's not the filters, they can't change the frequency of the signal. That small a change, it's more likely that when you turned the BW switch you flexed the IF chassis which shifted the BFO slightly.

Hmm. Another possibility occurs to me, but it's pretty far-fetched. If your choice of filters affects signal strength, it will change the AGC voltage which will (a) cause a tiny change in the mixers' input capacitance and (b) change several tubes' plate current which will make B+ bob around (provided you're on an R-390A not an R-390), and if there's trouble in a xtal oscillator or the VFO it might manifest as increased B+ sensitivity. I told you it was far-fetched :-) Regards, Dave Wise

From cbscott@ingr.com Thu Jan 24 19:12:55 2002
Subject: [R-390] Changing filters and frequencies

I don't think it's mechanical. It was pretty much repeatable and the chassis is pretty strong with respect to the force it takes to change the bw. Yes, it's an R390A. If I were going to a very narrow filter, the B+ theory might be plausible, but I wouldn't think going from 4 to 8 or 8 to 16 would make that much difference AGC-wise. Don't know, though. I can do some checking on the AGC and other voltages when switching. Perhaps I'll see something there. Thanks, Barry(III) - N4BUQ

From cbscott@ingr.com Thu Jan 24 19:16:17 2002
Subject: [R-390] More dweedle-dweedle

I was getting printable text, but it was more like MMMOOOOTTTTVVVOVOMMMOMVV (Mad cow?) I figured encrypted text would not look this way. If I started playing around with the data-bits and baud-rates, I could get other weird patterns, but nothing that looked "right". I listened to 10130kc at lunch and I didn't hear that RTTY station. Either it is not broadcasting or the conditions aren't right for it. It's raining here and that seems to have an effect on my pitiful 20-meter inverted VEE in the attic. 73, Barry(III) - N4BUQ

From ai2q@adelphia.net Thu Jan 24 19:13:09 2002
Subject: [R-390] R390A / R390 help

Sigh on! In Vietnam the US Army left stacks of R-390As out in the mud and rain---for weeks and months on end. There's no telling whatever became of them. Vy 73, AI2Q, Alex .-.-.

From rlruszkowski@west.raytheon.com Thu Jan 24 20:06:43 2002
Subject: [R-390] R390A / R390 help

Fellows, I know these are true atrocities, I am a sensitive guys. Please, Please, Please, Place a warning label on the subject line when you post these tales of horror. Roger KC6TRU.

From wjneill@lcc.net Thu Jan 24 20:15:29 2002
Subject: [R-390] More dweedle-dweedle

I do it the hard way. I run RTTY traffic through my two R390A's and a CV-116B and can run solid copy for hours. Signal drift or fading doesn't bother me and the CV-116B does a good job of producing a good, solid DC TTY signal. I have one other AN/FRR-38 for the same purpose only I use one R390A and a 51J4 and had to do a crystal modification to the CV-116C for it to accept the 500kc IF signal output of the 51J4 but the TM made the change a piece of cake. I have one other mophodite FRR-38 in that I am using two R391's and a CV-116B and it does full business, too. Bill Neill Conroe, Texas

From ross@hypertools.com Thu Jan 24 20:26:15 2002
Subject: [R-390] The fabulous & desirable CV-116 (was: More dweedle-dweedle)

R-390 folks - OK, now one of the faithful has revealed himself - an FRR-38 even. Bill Neill's CV-

116 is a fine system indeed, and is an appropriate & desirable companion to any R-390 family radio. Better yet if you can use the CV-116 in tandem with it's younger brother, the CV-157... (The CV-116 does the dual diversity thing - too bad the CV-157 doesn't...)

William, I trust that you use the CV-116 with an appropriate printer, something like a Model 28ASR... Have fun with it all, please don't ask me to help you when you are gonna move... all the best Dave Ross N7EPI ross@hypertools.com

From wjneill@lcc.net Thu Jan 24 20:45:02 2002
Subject: [R-390] The fabulous & desirable CV-116 (was: More dweedle-dweedle)

I think I am running suitable printers with my three FRR-38's: two 60wpm Model 15's, one 75wpm Model 15, one 100wpm Model 28KSR, and one 100wpm TT-100 which is a monster to maintain but I have the necy TM's for every item of equipment I own and a reasonably adequate parts supply. On a blustery, drizzley day like today, there's nothing quite so scintillating as the odor of very warm R390A's, the subdued sound of the dweedle-dweedle coming from the speakers, the sound and odor of a Model 15 clunking and chunking away, and to watch the ma meters on the CV-116B swing in unison with every shift of the signal. Some things in life never grow old; just better.

From roy.morgan@nist.gov Thu Jan 24 20:48:40 2002
Subject: [R-390] The fabulous & desirable CV-116 (was: More dweedle-dweedle)

wrote: > > William, I trust that you use the CV-116 with an appropriate printer, >something like a Model 28ASR... I have a CV-115, basically half of a CV-116. Does anyone run one of those? Roy

From Richard.McClung@Dielectric.spx.com Thu Jan 24 20:32:52 2002
Subject: [R-390] The fabulous & desirable CV-116 (was: More dweedle-dweedle)

You've got to use klienschmitt stuff..... TT-98, UGC-4, TT-76, FCG-25, UGC-20, etc.....

One way to to run diversity with a single channel IF type converter is to use like receivers set up for diversity. Feed the IF output to a zero phase shift combiner and feed the combiners output to the input of the converter. RICH @B> }

From fritsche@email.msn.com Thu Jan 24 22:28:13 2002
Subject: [R-390] R390A / R390 help

Hi Guys, this topic brings back a few memories for me. Stationed at K-14 (Camp Humpreys) back in 67 I was responsible for the old shed by the new Listening building.. Warrant officer said clean this place up... and I did, Throwing out about a hundred top and bottom covers for the 390 and a 's Loaded them in to a duce and drove out of the camp and found a junk dealer (no problem then) . I think he gave me about 100 Won or a six-pack of OB. (UGH), Can't remember... It always amazed me what the Koreans could do with scrape metal..... Beer can roofs that really showed out in the Sun, etc. Boy, I sure wish I had that pile of covers now. 73 Al W5ADF

From w9wis@charter.net Thu Jan 24 23:30:38 2002

Subject: [R-390] Received my "new" R-390A... WoW !

I received the R-390A yesterday that many of you had answered preliminary questions about. Thanks to the many suggestions on various topics as well as the links to information sites like Chuck Ripple's ... and special thanks to Chuck for his thoughts and outstanding web page !

Here is what I received.... Motorola R-390A serial number 714... an early one. It has no modifications, has original meters, knobs, all the covers in and out, and is in really excellent condition in and out.... much better then I expected. It's amazingly clean in fact inside and the outside but for a few small dings and a very little lettering wear is excellent. It has a Collins PTO, appears to have teflon wiring and all the original tube shields etc. Was made on the 1956 contract and the internal parts are dated 1955/56 and many have a little Motorola logo on them. I'm lucky in that I actually know who owned it throughout it's life and it's been lovingly cared for...

I have built the diode load cable and have manufactured input coax for the ballanced feed ala Chuck's page. I carefully checked all the trouble spots you guys warned me about and have it running off a filtered dedicated 115 volt line. Ran it into a new Hammond 600 to 8 ohm transformer into a wooden speaker cabinet and 10 inch speaker I made... not into the stereo via the diode load yet....

I must say.... Wow !!! I'm amazed..... it's calibration and alignment seem right on, no problems everything works apparently as it should as I go through the manual... the if seems aligned fine and the bfo etc work as expected. No humm.... amazingly sensitive and the audio on AM has to be heard to be believed by one who never heard one of these classic tube rigs !!! This is going to be a keeper !!! And I'm one happy camper !!! -- Michael Melland, W9WIS

From rodney_bunt@yahoo.com Thu Jan 24 23:42:51 2002
Subject: [R-390] R390A / R390 help

I support this sentiment, nothing is built as well, I wonder if you could get a company to approve a design so "way out there" for a new product today. “Worry not if its a R390 or R390/A, you do not have enough of them either way. Keep what you can get.” I have a R-390 in AUSTRALIA, couldn't be happier, always liked to have the original and best! I also have a 1949 51J, superb!.... And a HF-2050 way out-there..... Rodney VK2KTZ

From twleiper@juno.com Thu Jan 24 23:42:16 2002
Subject: [R-390] R390A / R390 help

writes: ... > The bigger difference has to do with the IF section where the non-A has L/C filtering vs. the mechanical filters of the R-390A. The non-A is smoother, the A is steeper and with some ringing from time to time. There are a lot of other differences --

Don't forget, the R-390 also has two stages of RF amp and the toy radio only has one... Tom

From rlruszkowski@west.raytheon.com Fri Jan 25 00:13:54 2002
Subject: [R-390] R390A / R390 help

Al, I got out of Nam in Nov 70 and went to Korea then The folks from Soul had closed a site and moved down. Do you remember a place called Duffy's

The old shed was the maintenance shop. It had a dock on the end across the drive way from the other building. We could back the trucks up to the dock and walk onto the tail gates.

Late in 71 the maintenance shop moved out of the shed into the comm building.

Twice a year you humped every one of those R390/A out of the listening building across the lot to the shop and back. Not all at once mind you. But likely one a day per man.

We was kids then and just did it.

Doing generator maintenance one day I killed the DF operations for 3 days. More non standard wiring in that lot than I ever seen in my life. I was stupid enough to think I was suppose to do the PM like it said in the book. No one clued me it was a paper push job and I was not even expected to leave the desk.

The antenna guys let me climb a tower with them one day What a view. I had no idea we were so close to the Ocean there until I got up on the tower and looked to the west. You just never got over to that side of the camp and off base there. Roger.

From ba.williams@charter.net Fri Jan 25 00:37:03 2002
Subject: [R-390] More dweedle-dweedle

> Hi, I've been using a Universal M-1200 II card for years, it works great. Universal Radio usually has decoders for sale on their used listings. The M-7000 series is good. Leo > QCI Leo,

Thanks. The M-7000 is supposed to be very good if you have the money. I notice that they keep upgrading and upgrading it. Barry

From ba.williams@charter.net Fri Jan 25 00:51:26 2002
Subject: [R-390] More dweedle-dweedle

Roger, I had forgotten about Kamtronix. Thanks for reminding me. Interesting.

Have you thought of shielding your computer in any way? Most likely, it is the monitor doing the hash damage. You can first reorient your monitor to minimize RFI. Second, ground it below your radio ground connection on the way out. That helped me tremendously a long time ago. I am very lucky right now as my computer and 17" monitor is only about 2' from the rack and antenna inputs. I get no RFI at all. Shutting down or starting up creates zero noise. There is another computer about 4' away with no problems. I feel very lucky in this regard. The older TV way across the room wreaks havoc no matter what I do.

You can put a can around the card if you need to. It shouldn't hurt anything. Should be easy to make and most cards have little holes in the boards for things like that. Or, glue down some aluminum foil on the inside of the case of your computer if you really want to shield it. There are spray on chemicals you can find. Normally, it doesn't take much to shield something in a computer. Monitors are a different story. Older hard drive and CDROM motors can be bothersome. Barry

From anchor@ec.rr.com Fri Jan 25 01:24:01 2002

Subject: [R-390] meters F.S. maybe usable for carrier level, etc.

Hi all, The link to ATC's meters, got me thinking, & looking. I found I have several meters the "proper size" physically, and with specs, unlike ATC's. They don't match spec-wise to the R-390A carrier level meters, but may work with some help, e.g. changing the 27 ohm res. in the AGC ckt &/or the meter zero pot as has been suggested b4 (probably won't make it real good), or Jan Skirrow's op-amp ckt (should do the job). http://www.skirrow.org/Boatanchors/TechTalk2.pdf Here's what they are: "Meter Mutiscale: DC, 0-1 ma, 0-100mv, MR15S1D1DCAV" (this is on the face as well as the box) the actual scale is unmarked, but has 10 divisions. Made by Simpson, date packed 9/17/53. Packed in stout boxes, with foil packs & dessicant bags. (preservation method II)

They are in the original, unopened boxes, and incl mounting hardware. Digipix available tomorrow, 2 or 3, abt 60k .jpg, emailed to requestors, or may get them on the website.

I'll sell one to a customer, $18 shipping incl. to CONUS. sold as is, unopened, but for $2 addtl I'll open & check, & gnty not DOA. If too many takers, I'll do a drawing of some sort, of all responses recd by 0100Z Fri. 73, Al, W8UT New Bern, NC

K-14? That sure brings back some memories of doing flight training there in 1990 with one of the most beautiful captains ever poured into a wiggling flight suit. Just me and her in a little helicopter on a deserted runway on a sunny Sunday afternoon. She was a damned good pilot too. Sort of surprised me a bit but she always flew it right.

When I first took her out to get used to hovering she was beat from a long day on staff. She kept working hard to learn the aircraft. One day, sitting on the runway with her hot mike switch up for the world to hear on tower frequency, she said, "I never know what to do with it when I finally get it up". She meant getting the aircraft up to a hover but every pilot within a zillion miles had something to say to me about that line. I became a bit famous for a while. Even the tower guys had some sly comments. Barry

From wjneill@lcc.net Fri Jan 25 02:03:09 2002
Subject: [R-390] The fabulous & desirable CV-116 (was: More dweedle-dweedle)

<ever seen a live CV-115 but do have the TM for same, as well as SigC equipment catalogs from the mid-1950's that depict equipment assemblages utilizing the CV-115 SIZE+2>Bill NeillConroe, Texas<P>Roy Morgan wrote: At 12:26 PM 1/24/02 -0800, David Ross wrote: William, I trust that you use the CV-116 with an appropriate printer, something like a Model 28ASR... I have a CV-115, basically half of a CV-116.
Does anyone run one of those? Roy

From Llgpt@aol.com Fri Jan 25 02:27:46 2002
Subject: [R-390] R390A / R390 help

writes: <barry@hausernet.com> writes: ... > The bigger difference has to do with the IF section where the non-A has L/C filtering vs. the mechanical filters of the R-390A. The non-A is smoother, the A is steeper and with some ringing from time to time. There are a lot of other differences -- Don't forget, the R-390 also has two stages of RF amp and the toy radio only has one...
Tom

And, the R-390 is a mans receiver. The R-390A is a boys receiver. A gem from Neil Clyne G8LIU.....

Les Locklear Gulfport, MS.

From w7itc@hotmail.com Fri Jan 25 03:49:28 2002
Subject: [R-390] The fabulous & desirable CV-116 (was: More dweedle-dweedle)

To think I was offered such a setup for free. I thought about the multiple hernias from carrying it down into the radio bunker, and said no. You should have seen the look of desperation on the face of the Ham who was trying to give it to me. I think his wife, "SHE WHO MUST BE OBEYED" was about to do some surgery with a red-handled knife. Ken

From w7itc@hotmail.com Fri Jan 25 04:40:27 2002
Subject: [R-390] More dweedle-dweedle

RE: the monitor doing the hash damage.

This is why just as soon as the price-vs-performance of a flat panel monitor come into line I am going to get one. I have a nice Ensonic Flat panel on My desk at work, it was about 1500 bucks when purchased this same model is down to $599.00 now. Ken

From w7itc@hotmail.com Fri Jan 25 05:47:30 2002
Subject: [R-390] cheao twinax connectors

Cheap twinax connectors http://www.4beacon.com/VideoConTwinax.html

From vze2gmp4@verizon.net Fri Jan 25 06:33:48 2002
Subject: [R-390] R390A / R390 help

R-390a has a better "front-end" than an r-390non a.

From vze2gmp4@verizon.net Fri Jan 25 06:35:01 2002
Subject: [R-390] Changing filters and frequencies

Align your IF's

Subject: [R-390] Changing filters and frequencies > Something I noticed (for the first time) last night: when I switch between filters, the received audio changes frequency. For example, if I switch from 4kc to 8kc, the dweedle-dweedle pitch changed ten or twenty cps. Is this normal? If so, what causes it? Is it the filters themselves or is this an IF alignment issue? > > Thanks, > > Barry(III) - N4BUQ

From BRingwoo@csir.co.za Fri Jan 25 06:49:37 2002
Subject: [R-390] More dweedle-dweedle

Hi all, Confirm that a flat panel monitor is the way to go. I just had S9+ spikes every 60kHz until I got mine (an el cheapo 12" monitor made in Taiwan costing around $400 a few years ago.). I did some tests on conventional monitors using a scanner and found that there are quite a few that also have acceptably

low levels of RF. Also found my firm's Dell laptop puts out a lot of sharsh. The R390-A seems to be much less affected by computer noise than other radios (A result of the balanced input ?). - Bryce

From twleiper@juno.com Fri Jan 25 07:36:38 2002
Subject: [R-390] The fabulous & desirable CV-116 (was: More dweedle-dweedle)

wrote: > Have never seen a live CV-115 but do have the TM for same...

Could you make a copy of that and send it to Roy Morgan? I sold him his CV-115, and didn't have a manual, except for my CV-116C. I'll pay the costs... Tom

From twleiper@juno.com Fri Jan 25 07:42:17 2002
Subject: [R-390] R390A / R390 help

writes: > R-390a has a better "front-end" than an r-390non a.

Just a shiny grill. It's what gets delivered to the wheels that matters. When they painted the blue stripes on those things, it was only because they couldn't spell "Tonka". Tom

From wewilson@knology.net Fri Jan 25 11:17:57 2002
Subject: [R-390] R-390s still being destroyed

It is a real shame that the government is still destroying these radios when they would be so appreciated by this community. http://www.eham.net/forums/BoatAnchors/403 Walter Wilson - KK4DF

From mikea@mikea.ath.cx Fri Jan 25 14:14:53 2002
Subject: [R-390] R390A / R390 help

wrote: > K-14? That sure brings back some memories of doing flight training there in > 1990 with one of the most beautiful captains ever poured into a wiggling > flight suit.

Look, guys, there is a convention used across the whole damn Internet for posts like these. You put "C&C" in the subject. That warns the reader to get the cats out of his/her lap, and to swallow the Coke or Coffee before reading. BLW, you owe me a keyboard and a box of Band-Aids. ;) Mike Andrews

From organic@cyberlane.net Fri Jan 25 15:12:11 2002
Subject: [R-390] R-392 Mech.Parts Question

Hello All checking out my recently obtained R-392, I discovered the Bandwidth (three position) knob was free-wheeling. The coupling from knob shaft to rotary switch shaft is made up from three pieces. There is a matching slot on the top and middle coupling piece. A part must have been there at one time to link the two together. A view is here: http://www.cyberlane.net/~organic/R-392-Bandwidth-Coupling.jpg

I dont quite understand the need for a three-piece coupling here and would like to hear from experts.

Any help from R-392 owners is appreciated. I am still in the midst of resolving the DOA condition of a receiver that, according to the seller was last used some years ago and worked fine. Shoudda spend the time to take the Greyhound to the owners city to assess the condition of this receiver. Mechanically it seems to be in better than average shape. The tag says Serial Number 698 - Reworked by Stewart Warner Electronics. Inside markings tell me that it was built by Collins. Harry

From mikea@mikea.ath.cx Fri Jan 25 15:28:10 2002
Subject: [R-390] R-392 Mech.Parts Question

Harry Joel wrote: > Hello All > > > checking out my recently obtained R-392, I discovered > the Bandwidth (three position) knob was free-wheeling.
>
It's an Oldham coupler, which compensates for any misalignment (well, _some_ misalignment) of the front panel and chassis.

IIRC, Fair Radio has them for R-390-flavored boatanchors, and for not too much money. I don't know if the 392 and 390 couplers are interchangeable. _Very_ nice photo. Thanks; good photo work makes questions like yours _much_ more answerable. -- Mike Andrews

From ai2q@adelphia.net Fri Jan 25 15:33:59 2002
Subject: [R-390] R-390s still being destroyed

Perhaps if we organize, and call our representatives in Congress, we can get the ball rolling. -- AI2Q, Alex

From tbigelow@pop.state.vt.us Fri Jan 25 15:43:10 2002
Subject: [R-390] R390A / R390 help

wrote: <snip> > > I have a R-390 in AUSTRALIA, couldn't be happier, always liked to have the original and best! > > I also have a 1949 51J, superb!.... > > And a HF-2050 way out-there.....

If memory serves me correctly, you folks also have down there a lot or the nice old RCA AR-88s, Hallicrafter SX-28s, Early National HRO variants and (of course) the AWA HRO 'knock off'. Always wondered about powering the US radios from your mains there. I suppose the variants sent to the Commonwealth countries during WWII must have had different transformers in them or at least, multiple taps like the SP-600 does.

Hadn't heard of an R-390A's there, but I know of at least one R-391. I'm in the process right now of completing a deal for a load of WWII aircraft gear via QLD, then it'll be interesting to see what other goodies reside in the land of Oz. I bet you have a lot of Eddystone gear there. Nice stuff! 73 de Todd/'Boomer' KA1KAQ

From tbigelow@pop.state.vt.us Fri Jan 25 16:05:16 2002
Subject: [R-390] R-390s still being destroyed

I'll ask Mike Crestohl about this and see why they're still trashing them. Last I knew, they had been removed from the demil list.

From Barry Hauser <barry@hausernet.com> Fri Jan 25 16:30:26 2002
Subject: [R-390] R-392 Mech.Parts Question

Harry: As Mike pointed out, that is an Oldham coupler -- excellent photo.

Yes -- you are missing the center part which looks like a thick washer with a raised line on each side at 90 degrees to each other. Take a look somewhere in the chassis, and particularly in the case where loose parts like to roam. It's usually made of metal, but some are nylon, particularly for the smaller ones. The part may not actually be a washer shape on this type, but more of an "X" made of metal or nylon. The "bars" of the X are offset as if you nailed two teeeny tiny boards together, or two pieces of pipe.

If you find the center part, then to install, just loosen one coupling and back it off so you can slip the center piece in. The couplings set up with their slots at 90 degrees to each other, forming an "X". You can put a bit of grease or oil on the center piece. Then slide the loosened coupler up snug, and tighten -- you'll need a bristol wrench -- these aren't allen/hex screws.

If you can't find the part, try Fair radio, but tell them which coupler it is -- send them your photo by email.

If they don't have them, you may be able to fabricate the part, or just wire/tape up the two halves so that it's strong enough to turn as a unit. There isn't much stress on that coupling as long as you don't try to turn past the stop. You could even back 'em off, clean the ends with solvent, then put a dollop of silicone rubber seal or some other rubbery stuff like liquid rubber in between and then press together (right on the shafts) and allow to set.

Finally Harry, the purpose of that coupler was to compensate for mismatched lineup of the shafts due to variations in manufacture, positioning of the hole in the front panel relative to the selectivity switch which is way in the back. From the look of the photo, yours turned out nearly perfectly aligned, so you probably could use a solid coupler or make these solid by means of battlefield improvisation, which would be thematically consistent with the radio.

As for the DOA, don't fret. It's common that after storage and a trip that some of this stuff doesn't work. Of course, "selective memory" of the seller is sometimes a factor. Check the tubes, look for any loose connectors. I haven't not been able to make a '392 work yet with hardly any effort, including the first one I got which has no tubes left at all. (someone solid stated the whole thing.). Barry

From djmerz@3-cities.com Fri Jan 25 16:32:53 2002
Subject: [R-390] cabinet/chassis

Hi, I think these two messages were lost as I tried to get back on the list.

Hi, think I got back on after some good advice about how to resubscribe. We were gone for some time off and on in Nov/Dec so decided to stop the 390 mail for that period. I finished the modification of the modern Bud cabinet for my R-390a by whacking off about 4 1/2 inches (from the cabinet/not the R-390a), still leaving a good 1 1/2 inches in the back beyond the deepest part of the back. What a job, since at the last minute I decided not to chase down a local metal fab shop to shear the alum. side panels. I used a sawzall, some clamped-on wood pieces to stiffen while cutting and then a file which took some time but worked out - then modified the side braces with the attached handles to remain centered thru

the side walls. Despite the bending required at the four ends of these handle supports, they fit just right - am I lucky or what. I did take the trouble to make a piece of wood that was just the right length to use as a pattern for length. This cabinet looks very good on the set and I've got it on the Gorilla rack and playing and off my workbench so I can play with other radios now as well. My first experiment was running the RAL-8 which is right next to it to compare reception - I could find the stations easier on the R-390a but was able to receive anything I heard on the R-390a on the RAL-8 once I knew it was there. One has to me pretty familiar with the regeneration control on the RAL-8 to get the most out of it - though it's a dream compared to most regen's I've tried. I won't talk about crowded signals at this point. I was listening today to some AM on 10 meters and the 6360 amp that I put in the R-390a makes for good audio. Dan

Hi, has anyone estimated or otherwise come up with the number of sub-chassis units of various types that were manufactured for 390a's? I've seen the lists for the various makers/numbers of R390a's but don't recall seeing such numbers for extra subchassis units for repairs, spares etc. Dan

From rlruszkowski@west.raytheon.com Fri Jan 25 16:46:55 2002
Subject: [R-390] R390A / R390 help

K-14? That sure brings back some memories of doing flight training there in 1990. Barry
---
Barry, Was the ASA station and antenna field still there then? Was the big satellite tracking dishes still there? Roger KC6TRU.

From rlruszkowski@west.raytheon.com Fri Jan 25 17:07:02 2002
Subject: [R-390] More dweedle-dweedle

Hi all, Confirm that a flat panel monitor is the way to go. I just had S9+ spikes every 60kHz until I got mine (an el cheapo 12" monitor made in Taiwan costing around $400 a few years ago.).

Fellows, Back before Christmas I was crying about the computer and noise in the RF. One of the fine fellows here suggested I take the balanced shielded antenna input all the way out side to the antenna and not use an un balanced coax line in the shack.

It was suggested that some CAT 5 line (balanced twisted shielded pairs) be used.

As life would have it, when I went shopping I found a 100 ft of twin ax at 30 cents a foot which was cheaper than the cat 5 cable.

Once I put the twinax connector on the coax and got the other end of that antenna cable out the door of the shack away from the computer, all the computer crud dropped several orders of magnitude. Out side the coax shield is bonded to the ground rod. I have one conductor grounded there (a CAP did not act different than a hard DC ground) and the other goes to 60 feet of wire up 20 feet in the air. What a change in signals getting the balanced shielded line carried far enough away from the computer hash.

I now have a good computer case and power supply. I went through several to find a good one that did not make noise. My monitor is kind of OK. Again I have been through several to find a quiet one. My Kamtronix is also a noise source. I had to install a good shielded cable between the computer and the Kam with metal back shells and good ground bounds all the way through the cable. Roger KC6TRU.

From jetemp01@athena.louisville.edu Fri Jan 25 18:35:29 2002
Subject: [R-390] Stuck slugs

Hello to the group, In aligning the fixed IF in my "massacre" rig, I have found that the bottom slugs in the T501 and 502 coils are stuck. Any advice as to how to unstick them without breaking them? I have considered a hex wrench that fits the slug to overcome the whimpy plastic wands I have. Thanks. Sincerely, Jim Temple 73, KF4ICZ

From pha@pdq.com Fri Jan 25 19:17:38 2002
Subject: [R-390] R-392 Mech.Parts Question

On Fri, 25 Jan 2002, Barry Hauser wrote: > Harry: > > As Mike pointed out, that is an Oldham coupler -- excellent photo. >

I agree - that is a great shot!

It occurs to me that a trivial fix for that is to go to a hobby shop, get a small length of square bar stock of appropriate dimension, cut to fit, and put a rubber band around the thing (or tape or glue or wire wrap) to hold the bar in. The oldham coupler, as someone described, stays inserted, and a bar wouldn't. But a bar would get the job done a lot of the time. Another approach is to use two pieces of stock - a square piece to lock the two couplers together, and a tubular piece to slip over the joint - it would be held in place between the screws of the opposing couplers.

I took his excellent picture and put some notes on it. You can see it at:
<http://www.pdq.com/boatanchors/r-392/R-392-Bandwidth-Coupling.jpg>

I personally would favor that over epoxy or other glues that might gum things up otherwise. Paul

From rlruszkowski@west.raytheon.com Fri Jan 25 20:58:42 2002
Subject: [R-390] Stuck slugs

Jim, Wait for all the mail to come in on this topic.

Pull the can tops off the transformers. Dial the top slug all the way out of the transformer so you can work on the bottom one.

A hex key is an acceptable way to work a tight slug loose. Think about it and do not over force it.

The transformer slug can be adjusted from the bottom through the chassis deck.

Pull your deck up and look into the bottom to see if you get any clues.

Likely the wax has gotten hot in storage and bound the slugs. A bit more force than expected will pop them loose.

Pull the covers and the deck and look first. No reason to get surprised

The fellows will give you a list of solvents to try. My list or solvents from the 1970's is not OSHA or

group approved. We don't do that any more. Roger KC6TRU.

From jbrannig@optonline.net Fri Jan 25 21:25:00 2002
Subject: [R-390] Stuck slugs

If you can get at the slugs with a hair dryer, heat them, it might help.

The last time I took a hex wrench to a slug it took me two days to completely disassemble the unit. A week to wait for the new slug to arrive mail order (I got lucky finding one) and another two days to re-solder the leads to the coil (they broke off when the form twisted from the hex wrench torque) and reassemble the unit. Then I could finish the alignment. Just a thot Jim

From rlruszkowski@west.raytheon.com Sat Jan 26 00:57:05 2002
Subject: [R-390] Stuck slugs

Jim, This is why you wait for the mail and this is why you take the cover off first. Roger.

From jetemp01@athena.louisville.edu Sat Jan 26 01:11:54 2002
Subject: [R-390] Stuck slugs

Thanks for the tips. Will get into it over the weekend. Jim

From w7itc@hotmail.com Sat Jan 26 02:47:51 2002
Subject: [R-390] R-392 Mech.Parts Question

Harry I would really like to know the brand of Camera you used to take that photo, I am assuming it a digital unit. Great photo!! Ken

From jonandvalerieoldenburg@worldnet.att.net Sat Jan 26 04:54:33 2002
Subject: [R-390] R-392 Mech.Parts Question

small parts company stocks a selection of Oldham couplers (www.smallparts.com) Jon AB9AH

From ba.williams@charter.net Sat Jan 26 05:01:21 2002
Subject: [R-390] R390A / R390 help

> K-14? That sure brings back some memories of doing flight training there in > 1990. > > Barry > ----------------------------- > Barry, > > Was the ASA station and antenna field still there then? > > Was the big satellite tracking dishes still there? > > Roger KC6TRU. Roger,

That I couldn't tell you at the moment, but I'll dig through some flight pubs that I brought back to see if there are any towers indicated near the airfield. I also have my maps and they may be on there too. I don't know. The Korean maps were junk compared to what we had in Europe. They were definately low grade, blue light specials. I know the antenna farms would be on tactical maps of Europe, but I always suspected the cartographers omitted entire mountains and villages from the Korean Walmart specials

they issued us.

I think the airfield at K-14 was called Desiderio Base, which is a tongue twister. I was stationed in Chunchon up in the n.e. corner of S. Korea. We were in the field for 3 weeks south of K-14 and I would fly out of the field site to do touchdown autorotations, hydraulics off landings, stuck tailrotor pedal landings etc to the runway. K-14 was the closest airfield with crash-rescue on standby for the emergency maneuver training.

We would also sneak flights to K-14 for showers, hot food, and the Stars & Stripes. We would hurry from the airfield to the PX/Snackbar/Gym and back before being noticed as not flying somewhere else. I never had a chance to look around.

I'll look thru my material and see what I can deduce from it. The word in 1991 was that the HQ in Seoul was moving to K-14. There was a lot going on in Korea that was kept hush-hush but you got wind of it from time to time...like little radio sites on mountain tops that needed food flown up to them. Barry

From mikea@mikea.ath.cx Sat Jan 26 14:56:34 2002
Subject: [R-390] R390A / R390 help

wrote: > I'll look thru my material and see what I can deduce from it. The word in > 1991 was that the HQ in Seoul was moving to K-14. There was a lot going on in Korea that was kept hush-hush but you got wind of it from time to >time...like little radio sites on mountain tops that needed food flown up to them.

You mean the ones that the Red Ball Express couldn't winch and haul their 6x6 trucks up the road toin winter? Like (?)Mangil San? BTDT, GTTS. -- Mike Andrews

From ba.williams@charter.net Sat Jan 26 15:16:48 2002
Subject: [R-390] R390A / R390 help

> You mean the ones that the Red Ball Express couldn't winch and > haul their 6x6 trucks up the road toin winter? > Mike Andrews

Mike, Yes, there were some sites that were reachable only by air. Flight following radio services were provided by Evenreach Radio. I know that we had revolving chow duties for some of the remote sites way up on mountains. They were there for line of sight reasons. I saw some sort of Korean sites myself on top of mountain ridges with nothing more than a hut and what appeared to be one soldier. I never saw roads or trails up to the places either as I flew over them.

If anyone has read Blackhawk Down, or has seen the movie you may notice a Captain named Jim Yacone. His wife Becky was a Captain who flew Blackhawks at our airfield. I know that she flew to those sites. Both are great people. I gave Jim evals and saw him at Ft. Rucker right before he left for the Special Forces flight unit. I always knew he was a winner and he was one of the few Captains that I liked. He flew the little birds in Somalia and word was that he had a major role in the shootout. I saw the book in the store and looked their names up in the index. It appears Becky was only mentioned as Jim's wife in the book, so she may have left the service by then. She was hilarious to be around. I've heard more about Jim's actions in Somalia but that is only grapevine stuff at the moment. I was told he hovered over the warlord shooters to draw fire to his aircraft and away from our downed guys in the streets. I need to see the movie as it is supposed to be factual. Barry

From theprof@texoma.net Sat Jan 26 15:54:03 2002
Subject: [R-390] 26Z5 vs 26Z5W

Is a 26Z5 and a 26Z5W the same animal? I found a source for 26Z5 (no other information) for supposedly $7.00 each. My tube references don't seem to adress this beastie. 73 de Richard, KB5WLH

From billsmith@ispwest.com Sat Jan 26 22:56:46 2002
Subject: [R-390] R390A / R390 help

Barry, did you ever have any experiences with TBX-4's? I have a couple of them in nearly perfect condition. I have just fired up both receivers; they still work, though one 4 mf cap in one went bad, and the other has a missing multimeter. Of course they are broad, but they are amazing units, if nothing more that because of the component quality and quality of construction. During the day, they make great classical music receivers (we have a daytime classical music station on 1510, the IF frequency in the sets is 1515). 73 de Bill, AB6MT billsmith@ispwest.com

From Llgpt@aol.com Sun Jan 27 01:21:46 2002
Subject: [R-390] 26Z5 vs 26Z5W

theprof@texoma.net writes: s a 26Z5 and a 26Z5W the same animal? I found a source for 26Z5 (no other information) for supposedly $7.00 each. My tube references don't seem to adress this beastie.

Same tube, the W indicates ruggedized filaments. Unless you are operating it on a ship the 26Z5's will do fine. Les Locklear Gulfport, MS.

From ea2ig@tiscali.es Sun Jan 27 01:52:17 2002
Subject: [R-390] 26Z5 vs 26Z5W

Yes they are the same tube, the W means it is for the military Can you pas the information of your source ? Best Regards Pedro EA2IG

From oldradio@tin.it Sun Jan 27 09:50:02 2002
Subject: [R-390] Popping noise problem

Hello to all, I just discover a problem with my 390A. In order to ear the problem I must do the following:

RF gain ..... completely CCW
Local AF gain.....completely CW
Limiter .....OFF

In this situation there is a "creaking" and "popping" random noise in the speaker. During normal operation is very hard to ear and only in presence of weak signal.

I tried to localize the source of the noise by "sectioning" the receiver. The AF section does not produce

the noise, as well as the RF section. The source appears to be on IF section. I did section more deeply and I removed the "Diode Load" jumper and the noise is still there. This make me to believe that the source is between the "Diode Load jumper" and the first AF amplifier, witch leaves only the "Limiter". Analyzing the noise with a "scope", I see the noise as a very short but high spike on the "signal line" in the "limiter" section (actually when the Diode load jumper is in place, the noise propagate backward to the detector as well).

On the B+ line , I see low frequency variation (with the scope at is maximum sensibility of 1mV/div) witch I think is the "filtering" trying to bypass the spikes, so I am assuming that the noise is not coming from there.

When I turn the limiter on, the noise disappear on the audio as well as I do not see it with the scope and the B+ line does not have any low frequency variation. That made me to believe that the capacitor C536 was the cause. Wrong.

There are not to many other components in that section that can cause such a noise and after I replaced the tube (5814A), I did run out of options. One more piece of information, it appears that the noise goes away after the receiver is on for more the 1 hour.

Unless my analysis is wrong and the noise has different source, I need some help from the experts. Thanks for all Claudio Spiritelli

From ai2q@adelphia.net Sun Jan 27 14:49:36 2002
Subject: [R-390] Popping noise problem

Hello Claudio:

Thanks for your posting. Recently, I had a 1958-vintage Collins KWM-1 transceiver on my bench. A block-style mica capacitor in the set's product detector was operational, but noisy as all get-out.

In the KWM-1 circuit, in Standby mode, audio from the set's product detector was fed into the set's AF amplifier string, along with sidetone when on CW, and I could hear that puppy crackling away like mad in the loudspeaker when I was transmitting, and of course it was "in the background" on receive, although well masked by incoming signals.

I zeroed in on it by sectionalizing, as you're doing, using a signal tracer and scope.

It was a satisfying feeling to clip it out and see all the noise go away. Finding it was relatively easy; replacing it was tricky (very tight quarters), but now all's well in KWM-1 land. Good luck. You'll find the bad part--and then you'll be very happy! AI2Q, Alex in Kennebunk, Maine .-.-.

From JamesMiller20@worldnet.att.net Sun Jan 27 14:46:31 2002
Subject: [R-390] Popping noise problem

I had the same problem with my 390a. Someone on the list suggested that the miniature coax cables were experiencing a breakdown of the center insulation due to aging. After some experimentation, I discovered that was indeed the problem. After replacing the coax cables from the IF module to the diode load connector, and from there to the Limiter control, my problem was fixed. Apparently the little coax cables begin to break down with age. Unfortunately this can be a

tedious job! Jim N4BE

From wewilson@knology.net Sun Jan 27 18:43:08 2002
Subject: [R-390] Popping noise problem

That was indeed my problem on one R-390A. I replaced the coax between the Diode Load and the Limiter pot/switch, and the problem disappeared. To confirm this before you break into the wiring harness, you'll have to disconnect the existing coax at BOTH ends, and patch in a substitute piece of coax. Walter Wilson - KK4DF

From theprof@texoma.net Sun Jan 27 19:23:58 2002
Subject: [R-390] 26Z5 vs 26Z5W

I ordered a couple of the $7.00/ea 26Z5 from http://www.alltronics.com/ I have bought stuff from them before, but never tubes. We shall see. 73 de Richard, KB5WLH

From oldradio@tin.it Sun Jan 27 22:52:00 2002
Subject: [R-390] Popping noise problem

Joe, Yes I did change the capacitor as well as I did change all the capacitors around the limiter (C549,C532,C536,C531) the only one I did not change yet is C537. I am convinced that the noise is generated on this section , as a matter of fact even without C531 and C549 (section completely isolated) the noise persist since I can see it on the plate (pin1) of V507 with the scope, this test should also eliminate the suggestion from James (coax cables to the Diode Load). I am afraid that the problem is on the socket of V507. Is this possible?

Or should a pay attention to the resistors as well? or am I overlooking something? Thanks to all Claudio Spiritelli

. That made me to believe that the > capacitor C536 was the cause. > Wrong.
+++++++++
That's what I would suspect, too. Why do you think the capacitor is good? Did you test it at its rated voltage and check to see what the leakage current is? How old is the capacitor? Try changing it anyway and see if the noise goes away. In an old radio ALL caps are suspect! Joe

From redmenaced@yahoo.com Sun Jan 27 22:58:55 2002
Subject: [R-390] 26Z5 vs 26Z5W

YIIIII, He wants $45 for a 83 tube!!!!

From Llgpt@aol.com Sun Jan 27 23:08:14 2002
Subject: [R-390] 26Z5 vs 26Z5W

writes: << YIIIII, He wants $45 for a 83 tube!!!! >> Use a 5Z3 instead....alot cheaper. Les

From dmartin@visuallink.com Sun Jan 27 23:25:45 2002
Subject: [R-390] Below 8mhz problem

I took my 390A down for "below-8' sensitivity problems after I confirmed suspicions that it was considerably less sensitive than my 51J4 on 40 meters. I'd recently noticed that fact when doing A/B comparisons on 7290 and had always assumed it was due to different antennas on each rig. Then one day I used the same antenna and found the same thing. Also noticed the calibrator signal was 40-plus dB on 8 and above but barely 10 dB below that. On 40 meters the calibrator barely kicked the needle!

First thing I did was confirm the 1st oscillator signal. Whether looked at p-p on a scope or by checking the rectified equivalent in standby at E209, I had lots of good 1st oscillator signal. Then I found that pin 6 on V202, the first mixer grid, was lazily 0.0 to about 0.5V positive instead of -0.4V. The resistance to ground for this pin, which should have been a couple of series resistors, a small choke, and the AGC line when in AGC, or just the series discrete components when in MGC, was infinite, or open.

Hmmm... I pulled the RF deck and was very surprised to find the three series resistors, a 27 ohm parasitic suppressor right at the tube pin and a 1 meg and 22K resistor in series to a choke and the AGC line all checked fine when tested individually. However, the entire series check from the grid pin back to the J208E was again infinite! **To shorten the story, after repetitive checks I found a stone-cold solder joint on a stand-off post where R231 (1 meg) and R232 (22K) join! I reheated the joint and got a perfect -0.4V and the proper resistance.** Because this cold joint effectively opened the series line the grid was biased-off slightly positive and had no resting state -0.4V. This was my personal 390A I've had for years, a nice '67 EAC, and this particular solder junction just went south for no particular reason! Anyone else had this happen? I've often heard of a couple of guys that "reheat all the joints in the RF deck using silver solder" during their refurbishment efforts. I've always thought that to be snake oil.

While I still don't personally recommend doing that preemptively I AM more thoughtful now in checking for such conditions during my trouble shooting efforts! Finally, to get the set back to 100% I had to do a thorough alignment. I was so frustrated in my early evaluation of the problem that I fiddled around with some of the transformers to see what effect it would have. Of all of the stages I aligned, I must say the 1st variable IF took the most time. I did repetitive alignments of this stage, coils at the low end and caps at the high, over and over and over. I must say the adjustments were very interactive. Each time clear gains were realized however, and I could hear the rig coming more and more alive. Finally, after several passes I could make no further improvements.

I reset the IF gain using Rippel's method. The rig has spectacular ears now and specs out fine. I also reset the PTO endpoints while I had it out. It had gone about 6 kHz long since Chuck showed me how it was done in his shop in the summer of '98. I learned a few things doing the PTO endpoint here, but that is another posting sometime ... Dan WB4GRA

From mikea@mikea.ath.cx Mon Jan 28 00:44:10 2002
Subject: [R-390] Below 8mhz problem

wrote: > I took my 390A down for "below-8' sensitivity problems after I confirmed > suspicions that it was considerably less sensitive than my 51J4 on 40 > meters. [snip story of resurrecting a rig from partial deafness]

TYVM for the story. That's very useful stuff, and I'm glad to learn Useful Stuff.

Would you be a bit kinder to us Old Pharts, and consider the use of paragraphs, or at least a blank line

once in a while, so that we don't lose out places quite so readily? Mike Andrews

From gkaufman@the-planet.org Mon Jan 28 01:21:41 2002
Subject: [R-390] 26Z5 vs 26Z5W

Les - Unfortunately A Hickok tester won't work properly with the 5Z3, and it also draws 1A more on the 5v. OTOH a pair of 1N4007's in the base of a junked 83 work very nicely, for about $0.20 . - Gary

From Barry Hauser <barry@hausernet.com> Mon Jan 28 03:05:07 2002
Subject: [R-390] Below 8mhz problem

wrote: <snipped> >This was my personal 390A I've had for years, a nice '67 EAC, and this particular > solder junction just went south for no particular reason! Anyone else had > this happen?

Yes -- me too -- and there was a thread on this way back. Cited were long term electrolytic reaction -- between dissimilar metals, and/or the result of impurities, such as those from trace amounts of rosin that didn't boil off when the joint was originally made. They said the resulting bad joint could form a sort of resistor, or even a capacitor or semiconductor -- of sorts.

>I've often heard of a couple of guys that "reheat all the joints in the RF deck using silver solder" during their refurbishment efforts. I've always thought that to be snake oil.

Probably most of the joints have another 40-trouble free years to go, however it's the two or three like the one you found to worry about. Re-doing each joint can head that off -- if you're careful, or else you'll make more of 'em trying. Someone also provided a practical metallurgical reason for using silver solder -- something like you use it when soldering on silver plated termnals to avoid de-plating action. For different situations, you'd use some other solder. I hope he who knows what I'm writing about here jumps on and clarifies.

BTW - the really slow-fail solder joints often don't have the tell-tale characteristics of a cold joint -- dullness, ring-mark, etc. Barry

From DAVEINBHAM@aol.com Mon Jan 28 03:59:52 2002
Subject: [R-390] Recap kit update

Hi all, In the 10 days,or so, since my last post to the net, my wife is outa the hospital but in very guarded condition. Many thanks to those on this list who wrote me a personal line with nice thoughts about my situation. I think we have the finest people on earth on this list. Thank you. I think I got over a dozen emails about the last recap kit post, but only one check has arrived at my mailbox. Does that mean everyone who wants a recap kit has already bought one ?

I got a couple of interesting requests about the recap kit. One guy has the electrolytics and wants only to buy only the non-polarized capacitors, and, belive it or not, another guy wants to buy only the electrolytics. So, to make my customers happy, I will divy up the recap kits for the next month. Electrolytics only----under the chassis or in the can US$28 to USA addresses, regular recap kit less electrolytics US$56 to USA. Outside USA please email for this deal. THIS DEAL EXPIRES END OF FEBRUARY, 2002. The WHOLE recap kit is still priced as in the clip below. Kindest regards, Dave

R390A capacitor kit. I have put together a ReCap kit for the R390A. It consists of:

(13) 0.1 ufd
C256, C309, C504, C505, C517, C521, C528, C531, C536, C538, C543, C547, C548

(7) 0,033 ufd
C275, C529, C533, C534, C541, C545, C602

(7) 0.01 ufd
C549, C553, C601, C604, C605, C607, C608

(The above are Orange Drops or equivelent.)

(3) 30 ufd 300 v electrolytic C603A, C603B, C603C
(2) 47 ufd 300 v electrolytic C606A, C606B

(The above electrolytics have axial leads. You can wire them under the chassis and leave the originals in place to retain stock apperance. Or you can order capicators small enough to fit inside the cans of C603 & C606. Just remember you will have to deal with the Dreaded Black Ukkumpucky to get the guts out of the cans of C603 & C606. If you do not specify at time of your order, the under the chassis capacitors will be shipped.)

Finally, one each of :

0.047 ufd 100v C227
8 ufd 30v tantalum electrolytic C609
50 ufd 50 v electrolytic C103
0.22 ufd 100 v C101

I cannot find a source for:
2 ufd 500v C551 oil filled paper

so, I will include a very high quality poly cap. I have installed one of these in one of my R390A's and I can say I cannot hear any difference. They work great. This is the AGC capacitor.

The price for this recap kit is $80.00 US funds. Price includes UPS or US post delivery. Canada and mexico US$85. Western Europe, South America and Pacific rim US$90, rest of world US$93. All sent airmail if possible. ALABAMA RESIDENTS MUST ADD US$3 STATE SALES TAX.

Send orders to:
Dave Holder
Biological Instruments, Inc.
820 South 29 th. Street
Birmingham, Alabama 35205-1004

Before anyone starts to bitch about the price, please bear in mind, my gross profit will be about $3.12 per order. That should earn me something less than minimum wage..... before corporate and personal taxes. I reserve the right to withdraw this offer if it gets to be a pain in the butt. Dave

From w5or@home.com Mon Jan 28 04:21:51 2002

Subject: [R-390] Selective Voltmeter Achtung!

I drug home from Dayton 2001 a German Level Measuring Set. Anybody know anything about this instrument? Wandel U. Goltermann Model BSM-5 10KHZ to 36 MC. Might be useful foolin' with R-389 receivers and R-390 IFs. I need a manual, and the secret decoder ring to tell me how to get inside the case. Also need a chain hoist to move it. :-) Don Reaves W5OR

From JamesMiller20@worldnet.att.net Mon Jan 28 04:29:20 2002
Subject: [R-390] Popping noise problem

My posts don't seem to be making it through, so I will try again:

From JamesMiller20@worldnet.att.net Sun Jan 27 23:30:11 2002
Subject: [R-390] Popping noise problem

A follow up... On my 390a if I recall correctly the popping would NOT occur as much when the RF gain was cranked down. It seemed to occur more when the RF gain was at maximum and there was a strong signal, which meant the diode load voltage was at it's highest magnitude...hence the coax insulation would tend to break down (causing a pop) when the RF gain was full up and a strong signal (AM or carrier) was present. Claudio mentioned that he hears it when the RF gain is turned down (full CCW)...so maybe (hopefully) his problem is not coax related. Just a thought.

Someone emailed me asking for me to discuss the procedure I used... So here it is...If it has been determined to be the coax that is bad, you can either attempt to thread new ones through the wiring harness or leave the bad coax as is in the harness and route the replacements separately, perhaps using tie wraps to secure them to the outside of the harness. I chose to remove the old coax and thread replacements through the harness. Believe it or not, I succeeded in doing this while leaving the lacing reasonably intact. The replacement coax should be the very small stiff variety with smooth plastic cover (RG-174 I believe). The stiffness and smooth casing helps in threading it through the harness. I used the old coax as a "puller." Cut the old coax from the diode load terminals, and solder its braid to the braid of the replacement. Keep the junction as compact and smooth as possible so that it will pass through the harness easily. And you may need to use a lot of silicone spray to lubricate the harness and the replacement coax as you thread it through. You will need to loosen or temporarily remove any cable clamps, and some, but not all of the lacing and insulating sleeves may need to be removed to facilitate movement. Needle nose pliers, good eyesight and a lot of patience pushing and pulling are also needed. Alternatively you can remove all lacing, replace the offending coax, and then relace the harness with new lacing or tie wraps. After getting the new coaxes into the harness and the ends positioned where they need to be, you will need to make the connections. This is easy at the diode load terminal points and the limiter switch at the front panel. But there are connections at the IF module connector that must be done also. You will need to remove the cover from the IF module connector and replace the connections there. In my case, I chose to replace all coaxes related to the IF module connection to the diode load terminals and from there to the front panel switch. My receiver also had the diode load test point on the front panel so this had to be accommodated as well. All in all, about a 2 day job, 2 hours per day for me. Just be sure it's not a bad capacitor etc. first, to avoid this cable repair if you can. Good luck Jim N4BE

From mikea@mikea.ath.cx Mon Jan 28 08:15:18 2002
Subject: [R-390] Selective Voltmeter Achtung!

wrote: > I drug home from Dayton 2001 a German Level Measuring Set. Anybody know > anything about this instrument? > > Wandel U. Goltermann Model BSM-5 > 10KHZ to 36 MC.

They're still in business.

I don't know about the BSM-5 in particular, but I _do_ know about the more modern W&G gear, which is used for troubleshooting LANs and the like. The new stuff is superb -- in the same class as Rhode & Schwarz, the good stuff from Cubic, and so on. We have some at work, and it is an utter pleasure to use. I suspect that your BSM-5 is in the same league. Got a year of manufacture?

> Might be useful foolin' with R-389 receivers and R-390 IFs. > > I need a manual, and the secret decoder ring to tell me how to get inside > the case. Also need a chain hoist to move it. :-)

Well, now there are these "transistor" and "chip" thingies ... . Mike Andrews

From oldradio@tin.it Mon Jan 28 11:15:18 2002
Subject: [R-390] Popping noise problem

Dear All, I do agree and I am happy that it is not the cable to the "Diode Load" since the noise is only present with RF CCW, so with a minimum signal on the "Diode load". The noise is very low and it can be heard only with Local gain completely CW and RF completely CCW. Also, the noise is present even if a do separate the Limiter circuit from the Diode load. I tried to change the OA2 , but no success.

I think a need to look more carefully at the suggestion of Mr. Joe Foley, even if I already tried that procedure..... the noise source is localized on the "limiter" area.....does anyone had a problem were the socket of a tube was causing such a problem? Thanks Claudio Spiritelli

From laffitte@prtc.net Mon Jan 28 12:03:28 2002
Subject: [R-390] Boys Toys

Hi Guys, There will be a program in the History channel every night this week entitled " Boys Toys". That's big boys though. In one of the ads for the program I saw a guy with one mint SP600. Be on the lookout. I think that we will see R390s, SPs etc there. The atmosphere of the program, or at least the ad,is that this are expensive "jet setter" type toys so how about that? Can you imagine a butler saying something like " Your R390A is warm, ready and exactly on the frequency you requested sir" Enjoy! Best 73s Guido Santacana KP4FAR

From Barry Hauser <barry@hausernet.com> Mon Jan 28 12:27:44 2002
Subject: [R-390] Popping noise problem

Claudio wrote: > I think a need to look more carefully at the suggestion of Mr. Joe Foley, even if I already tried that procedure..... the noise source is localized on the "limiter" area.....does anyone had a problem were the socket of a tube was causing such a problem?

Well, that reminds me ... of someone on the list who's always reminding us to check the nuts 'n bolts on the chassis and modules -- particularly the ones on the tube sockets. Apparently the lightest corrosion between these screws and the modules can cause breaks, high resistance connections or intermittents in

grounds. This might be related to the problem disappearing after the rig warms up fully. The fix involves going over all the tube socket mounting screws with a screwdriver -- loosening and tightening.

To that I'd add checking under the hoods of the multiconductor connectors, particularly the large rectangular ones on the audio and IF decks.. The cables stiffen up with age, the strain reliefs are not fully effective, and when you go to unplug them, leads and shield braids can snap or crack. As I've mentioned probably a half dozen times already -- I had a non-A where the main tie point ground inside the large AF deck plug cover was broken -- just a buss wire wrapped around all 12/13 braids goint to a single terminal (13, I think ;-) The cable going to that plug tends to droop down below the chassis and get jostled when you move it around. Look for stuff like that. You might have to dumb down to find this bug. Barry

From Barry Hauser <barry@hausernet.com> Mon Jan 28 13:05:05 2002
Subject: [R-390] Boys Toys

Hey Guido ... Didn't 'ya know -- this is an ultra cool macho thing we're into here. Heck, "jet set" -- anybody can fly around on a plane nowadays. Yeah, it's the guys who don't know any better that stop at the Lamborghini's, Ferrari's, Duesenbergs, whatever..other Boys' Toys. They probably think that's all Mobil One is good for. heh heh Anybody got a detailed schedule? I want to show a certain someone what's classy on TV. Barry

From BRingwoo@csir.co.za Mon Jan 28 13:52:23 2002
Subject: [R-390] R-390A vs RA 17

Hi folks, I was eyeing a sexy Racal RA-17 up and down this afternoon - how do they compare to the R-390-A ? First thought was that the tuning + preselector looked a little cumbersome. (2nd thought was where the h*ll would I put it?) Does anyone out there have both? - Bryce

From jetemp01@athena.louisville.edu Mon Jan 28 14:14:27 2002
Subject: [R-390] Popping noise problem

Adding to Barry's list, be sure to carefully check the ground that is anchored by T207 under the RF deck. When I cleaned and tightned mine, the rig "sprang" to life. This is one that is not anchored by a tube socket screw and has several caps and resistors attached. Jim

From tbigelow@pop.state.vt.us Mon Jan 28 14:29:22 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

I saw this ad as well. I'm guessing it'll be a short blurb in one of the shows(probably one about techonological toys)showing electronics, perhaps ham and/or shortwave radio, what the gear once looked like and what it has evolved into. The shot to me appeared to be old film footage. Wouldn't it be nice to have access to these old film clips? I bet someone could put together one helluva boatanchor program, complete with authentic operators and backdrops. Sort of like converting the old catalog section of the handbooks to moving pictures.

History channel has some good programming, but they never seem capable of taking the time to find someone who knows about radio when they do a re-creation. CW shots are the most noticable, with the op either slapping at the key with their hand or, more recently, slapping the key down with their index

finger like they don't really care if it keys or not. Sure would be nice if they put as much effort into proper radio scenes as they do finding period uniforms and gear.

It looks like an interesting series, though. I plan to watch it this week, I believe it comes on at 9PM EST. There looked to be a lot of interesting items in the mix. 73 de Todd/'Boomer' KA1KAQ

From mikea@mikea.ath.cx Mon Jan 28 14:34:36 2002
Subject: [R-390] R-390A vs RA 17

Bryce Ringwood wrote: > Hi folks, I was eyeing a sexy Racal RA-17 up and down this afternoon - how do they compare to the R-390-A ? First thought was that the tuning + preselector looked a little cumbersome. (2nd thought was where the h*ll would I put it?) Does anyone out there have both?

If you're talking about the 2 RU or so (3.5" high) critter with the MHz and KHz knobs, mechanical digital readout, preselector, and so on, then Yep. Also got a 390, which is off the same Stridsberg MCA104 as the (in my case) Racal 6217E. The 6217 isn't running yet, having been bought "as-is", but it doesn't appear to be the usual "as-is" disaster area. At least it doesn't _yet_. They're not common at all. What price is being asked? Mike Andrews

From cbscott@ingr.com Mon Jan 28 14:39:31 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

Who needs the History Channel when we have Chuck's video? I can't afford one, but I think I could watch several reruns of that show!

Barry(III) - N4BUQ

From BRingwoo@csir.co.za Mon Jan 28 14:46:00 2002
Subject: [R-390] R-390A vs RA 17

Hi, No, this is the same size as the R-390A with KHz and MHZ tuning dials (Nothing digital). They're fairly common here and would not be too expensive (about $100) ... the shipping costs would be astronomical from S Africa, however. Plus, I think in this case you would need to buy two to get one working specimen. - Bryce

From ai2q@adelphia.net Mon Jan 28 14:43:11 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

Todd: The folks who put together the movie "Beautiful Mind" apparently knew a few things about a CIA listening post. While the takes of radio gear were short, I spotted a National NC-173 or NC-183 in there. There may have been other goodies, but the views were dark. HI HI. Vy 73, AI2Q, Alex .-.-.

From tbigelow@pop.state.vt.us Mon Jan 28 14:54:34 2002
Subject: [R-390] R-390A vs RA 17

I'd have a difficult time comparing the two for performance, Bryce. I have both, and I love 'em both

because they're both first-rate rigs. The fun is in operating the RA-17* after having used so many of the more 'conventional' types where the needle sweeps across a dial or the dial spins. That tape measure/film strip-type of display is certainly something to behold.

Likewise, changing bands with the preselector-type of band change scheme takes a little getting use to. Took me a while to figure out why the radio seemed dead, with only white noise coming from the two speakers(mine has an optional external speaker mounted in a panel just above the radio). After fiddling around with it for a while, it suddenly sprang to life quiet by accident.

I'm not set up to do an accurate comparison Bryce, but I can tell you that the one I have works as least as good as the R-390 class of radio. I used it to listen to the final broadcast of Radio St. Helena a year or so back with great results from a portable antenna. It tunes a lot easier, too!

The one BIG drawback in my view is that it's a major pain in the arse to service! The chassis is cast aluminum and reaching some components would seem to require a major tear-down of the radio. The R-390 has it licked here, easily - the modules are cake to remove and generally service. I currently have a cold solder joint or other bad connection that requires me to wiggle a certain tube to get the radio to receive, then it works fine. Unfortunately, the base wiring for this tube is buried under several other sub-assemblies and it looks like I have major surgery ahead just to reach this one, small area. Grr!

Other than that, it's a nifty rig. Stable, crisp, sensitive, and a real hoot to operate. Working on it and locating parts(for those of us in the US)is a rather large drawback, IMHO. So, rather than trying to decide between the two, just find one of each!

I know of at least one other person on the list with both, Don has offered to lend me moral support and advice when I get around to dissecting mine, because he has one and understands the ummm.....nature of the beast, shall we say? I almost think Barry Hauser(is he #1, #2, or #3?)has both, and I'd bet others do as well. It'll be interesting to see what others have to offer, hopefully something a bit more technical in comparison to my 'seat of the pants' description.

Oh, one more thing - never worry about where you'll put it before getting it. Always better to have the rig and have to shuffle things a bit than to not have it and find lotsa room! 73 de Todd/'Boomer' (haulin' and shufflin')

From tbigelow@pop.state.vt.us Mon Jan 28 15:04:34 2002
Subject: [R-390] R-390A vs RA 17

You see this receiver in a lot of the old Bond/007 films with Sean Connery. In one (can't recall which), they show what appears to be a large intercept room full of operators, each in a cubical with an RA-17 or two. In the movie Goldfinger there is a scene where Connery is about to get modified by a laser while strapped to a table. In the background is a room with a glass wall and several racks of RA-17 types and associated gear. Considering these were filmed in the 1960s, you have to wonder where they shot these scenes. I'm guessing the gear was still current technology and used for many years to come, like our venerable R-390s.

I need to find a complete set of original knobs for mine, the kind with the hex nut in the middle of the knob face. A panel would be nice, too. Mine came out of Maryland and was updated/modified for other service with the later-style knobs, and I'd at least like to restore it cosmetically. Maybe it's actually a 117 and I'm just not bright enough to figure it out!

From jlap1939@yahoo.com Mon Jan 28 15:08:58 2002
Subject: [R-390] Boy Toyes

Friends... Boatanchor film??? CONTACT ME WHEN IT'S READY.. I will want several, I think...
Regards, John

From tbigelow@pop.state.vt.us Mon Jan 28 16:05:21 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

What?!?? National receivers in a CIA listening post? Not R-390s?? I bet they had solid state rectifiers, too! Could've been worse - they could've used an S-38 or the likes.

From cbscott@ingr.com Mon Jan 28 16:16:16 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

They're saving the shots of the R390(A)s on them for "Beatiful Radio", the sequel to "Beatiful Mind". Same plot, but the star is left guessing the correct patterns when re-assembling the gear train. Barry(III) - N4BUQ

From n4xy@arrl.net Mon Jan 28 18:09:30 2002
Subject: [R-390] R-390A vs RA 17

I have both... and both are terrific examples of the then-state-of-the-art. You have it exactly correct about repairing the RA-17... I also have an HRO-500 that I need to work of since it doesn't lock above 20MHz... it is similar to the RA-17 with its early PLL design (the '17 being implemented using tubes and the '500 with all germanium transistors.) My R-390-A is the best one can be, having been given the FULL Chuck Rippel 'treatment'. I CAN do a side-by-side of both since I have a nice receiving multi-coupler, and only need the time-AND SPACE-to make some observations. My expectation is that-somehow-the R-390-A would win... but that 6 ft long 35mm film-like dial is hard to beat! And w/o Chuck's expertise in bringing my R-390-A to its full potential, that expectation of a winner would be reversed. 73 Ed Tanton N4XY <n4xy@arrl.net>

From rlruszkowski@west.raytheon.com Mon Jan 28 17:48:50 2002
Subject: [R-390] R390A / R390 help

I would have thought in the 20 years between 1971 and 1991 they would have gotten some of those ravines cleaned up and made access to the elevated watch sites accessible.

Next we will hear about R390's being used a pothole fillers.

I guess the war effort took a back seat to skimming shamming and general politics

Speak nice word about those winch truck drivers. I nearly dropped my 6x6 off the edge at 2000 feet. I had two rear duals setting in free air before I came to a stop and could not back up onto the demined path. (road my ass). It was a good 1200 foot to the valley floor. And I did it at about 2 miles an hour. It

would have been a hell or a ride if I had gone over the edge. The winch boys had to back up the hill for over a 1/2 mile because that was a close as they could get and turn around. Working the wrecker truck up to my 6x6 was more effort than picking my front end up and setting it back into the ruts. Roger.

<mikea@mikea.ath. 01/26/2002 06:56 AM >
Sent Subject: Re: [R-390] R390A / R390 help r-390-admin@mailm an.qth.net

wrote: > I'll look thru my material and see what I can deduce from it. The word in > 1991 was that the HQ in Seoul was moving to K-14. There was a lot going on > in Korea that was kept hush-hush but you got wind of it from time to > time...like little radio sites on mountain tops that needed food flown up to > them.

You mean the ones that the Red Ball Express couldn't winch and haul their 6x6 trucks up the road toin winter? Like (?)MangilSan? BTDT, GTTS.

From rlruszkowski@west.raytheon.com Mon Jan 28 18:51:53 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

What?!?? National receivers in a CIA listening post? Not R-390s?? I bet they had solid state rectifiers, too! Could've been worse - they could've used an S-38 or the likes.

The CIA was not doing Morse intercept. That was for NSA. The CIA had those things for the cover music system. You do know about cover music systems don't you? Roger.

From rlruszkowski@west.raytheon.com Mon Jan 28 18:48:49 2002
Subject: [R-390] R-390A vs RA 17

In the background is a room with a glass wall and several racks of RA-17 types and associated gear. Considering these were filmed in the 1960s, you have to wonder where they shot these scenes. I'm guessing the gear was still current technology and used for many years to come, like our venerable R-390s.

Fellows, I did the robot for "Revenge of the Nerds Part III". I saw what got filmed on a set and what you see of my robot in the movie. No comparison.

A lot of those back ground scenes are lots of 35MM slide projectors set up behind a transparent projection screen. All the slides are masked and set into position. guys spend days projecting things onto screens and taking photos. When you get the whole wall just right you take some more photos. Then you only have to get one projector set up for the scene.

I had some "wall paper" that was a city skyline. It was shot and printed on poster sheets of print film. When pasted together on a wall it became the view from the balcony in a movie. The whole scene got played in front of what amounts to a large photo wall mural.

Prior to the movie being filmed, Set guys go through phot archives and find these nifty things populate back ground scenes. More work went into getting the finger prints and glare off the glass so we can see what is behind the glass than when into doing the nifty mural or communications equipment we see.

I wish the folks in Hollywood would under stand the value of these wall paper scenes and make then available to us fans.

When I was growing up one wall of my bed room was wall papered in a single sheet of blue print paper. The drawing was a 2x real size or the 1958 Chevy dash board. Dad put a coat of paste on the wall and brushed the whole sheet up at once. He trimmed the edge to fit and glued the edge down. It faded over time and was just great.

We could have whole walls that looked like star ship walls and city skylines and nature scenes.

The Tesla coil at Griffith Observatory in Los Angles would be OK. Roger

From David_Wise@Phoenix.com Mon Jan 28 21:19:34 2002
Subject: [R-390] R-390A vs RA 17

> From: Ed Tanton [mailto:n4xy@earthlink.net] > I have both... and both are terrific examples of the > then-state-of-the-art. You have it exactly correct about repairing the > RA-17... I also have an HRO-500 that I need to work of since > it doesn't > lock above 20MHz... it is similar to the RA-17 with its early > PLL design > (the '17 being implemented using tubes and the '500 with all germanium > transistors.) My R-390-A is the best one can be, having been given the

I can't speak for the HRO-500, but there is no PLL in the RA-17 et al. The key to the PLL idea is feedback: the phase difference between the desired signal and the oscillator is fed back to the oscillator as a frequency control voltage, in such a way that it tends to reduce the phase difference.

The Wadley Drift-Cancellation Loop employed by the Racals, the Yaesu FRG-7, and several others is a feedforward design involving filtering. (IMO "Loop" is a misnomer. Also IMO, it's harder to understand than a PLL.) When you turn the MHz dial you're basically selecting one particular harmonic of a 1MHz crystal to use in the conversion. The drift cancellation happens because, mathematically speaking, one conversion adds the HFO while another conversion subtracts it. Result: no HFO drift. In spite of having an HFO, it will be as stable as your R-390A, and if you ignore the way the "first oscillator" and "second oscillator" waveforms are generated, it's simply another triple-conversion receiver.

Caveat: I know the FRG-7. If you want to know more about its rendition of this neat circuit, ask. If I've glossed or mixed up some points on the Racal, please enlighten me. And if you have an RA-17 that's looking for a home, look no further :-) Regards, Dave Wise

From w9wis@charter.net Mon Jan 28 21:13:14 2002
Subject: [R-390] More R-390A Questions...

I've been ringing my "new to me" R-390A out all weekend. I received it last Wednesday.... It's a Motorola, serial number 714 from the 1956 contract.... parts inside have 1955/56 date stamps on them. I noticed that the PTO is a Collins. I have checked over most of the things all of you told me to check and find that the radio works very well indeed. It is very clean inside and the front is also in nice shape.... has all internal covers plus top and bottom as well as tube shields (silver ones) and has what appear to be the original meters. It does not appear to have any modifications at all. Everything appears to work pretty much as it should.

I do have a couple of questions that perhaps some of you could answer for me.

How linear is a Collins PTO ? If I calibrate against the calibrator at for example 6.000 MHz and then turn up to 6.900 MHz and re-check against the calibrator It's off about 1.0 to 1.2 kHz high.

If I listen to my local AM station at 1.490 MHz and have the radio set up medium AGC, RF gain up all the way at 10 I read about 80 dB of carrier level and the audio sounds fine. However if I leave the radio on for several hours and return I notice the audio is distorted. If I then reduce RF gain a bit I hit a point where the audio clears up and is fine. I can then turn up the gain again after a bit and the audio remains fine.... but will eventually distort again. This seems to happen only on this very strong very local signal and in the 4,8 and 16 kHz filter positions. MGC appears to work normally. Is this overload when in AGC ? Is it normal ? What would be likely to fix this if it's a problem ?

BTW.... I was checking Chuck's procedure for adjusting IF gain. What is meant by "terminate antenna" ? If I put it into a 50 ohm Bird load I hear nor see any receiver noise.... perhaps it means tune to 15.2 MHz with the antenna hooked up to hear background noise ? At any rate, the carrier needle on mine using the antenna hooked to a dead spot around 15.2 pins to the right when using the procedure to check the IF gain.... could that be part of the cause of the distortion when listening to a very strong signal in AGC if the gain is in fact set too high ? Thanks, Mike, W9WIS

From courir26@yahoo.com Tue Jan 29 01:23:24 2002
Subject: [R-390] More R-390A Questions...

Mike, There are two main modes of PTO error.

1) non-linear error
B) endpoint error

If a PTO is non-linear (it can happen) a graph of the output vs dial reading would not be a straight line (within 200 hz at ea 100 kcs checkpoint).

If the PTO endpoint is off (very common to be "long") it has an output of other than the proper 1000 kcs in ten turns of the pto shaft.

The PTO should have an output of 3.455 kcs at 000 on the dial and 2.455 kcs tens turns higher than 000. Yours is requiring more than ten turns to achieve the 1000 kcs of full output. While not a major problem, it can harm sensitivity on the low bands as this can be a significant percentage out of tune when it is supposed to be joined at the hip with the RF deck and the variable IF's (less of a problem on the higher bands).

It can also be a tuning hassle, and after all if you fiddle with 390's at all this has to be right!

The endpoint adjustment is under a screw behind the transformer on the PTO. Turn it to the right to get more output is ten turns.

It may also be nonlinear, but fix the endpoint first and then regroup. You should have a manual handy when attempting this. Cheers! Tom N5OFF

From BRingwoo@csir.co.za Tue Jan 29 14:27:54 2002
Subject: [R-390] R-390A vs RA 17

Hi, Thanks to everyone for the helpful replies and movie reminiscences. They even had a wall of RA-17s in the last Bond Movie - couldn't believe my eyes. Thanks to Roger for the explanation. Now - In what movie starring Peter Sellers (In 3 roles) did an R-390(A) assist in bringing the end of the world ? - Bryce

From mikea@mikea.ath.cx Tue Jan 29 14:57:06 2002
Subject: [R-390] R-390A vs RA 17

wrote: > Hi, > > Now - In what movie starring Peter Sellers (In 3 roles) did an R-390(A) > assist in bringing the end of the world ? - Bryce

His "Fu Manchu" flick, "The Fiendish Plot of Dr. Fu Manchu", of course. But are you sure it was an "A"? And He only played two roles (Nayland Smith and Fu Manchu) in the flick. The cottage-balloon, with the imperturbable butler as pilot and navigator, was one of the best parts of the flick. But, then, so was every other part of the flick. Mike Andrews

From n1vqw@arrl.net Tue Jan 29 15:05:07 2002
Subject: [R-390] R-390A vs RA 17

> Now - In what movie starring Peter Sellers (In 3 roles) did an R-390(A) > assist in bringing the end of the world ?

Don't know about the R-390(A) because it has been a while since I saw the move. But I believe the movie was Dr. Strangelove. Sellers played Dr. Strangelove, the US president, and the military officer trying to get the code to send the message not to drop the bomb. 73 - Mark N1VQW

From jlap1939@yahoo.com Tue Jan 29 15:15:17 2002
Subject: [R-390] FILMS and FLICKS (and wishes)

Friends, Many wrote, and pointed out that many films exist.. Thank you...I knew of some, but one member directed us very well to many sites...Thanks!! I, like some, have no interest in recent instructional films; (I assure you I use the unit perfectly), we are instead interested in ORIG. material. What else know you? My Best Wishes, John

From hankarn@pacbell.net Tue Jan 29 15:25:49 2002
Subject: [R-390] R-390A vs RA 17

I have all 3 and the R&S EK-07 beats them all hands down. Hank KN6DI

From djmerz@3-cities.com Tue Jan 29 15:18:08 2002
Subject: [R-390] R-390A vs RA 17

Hi, must have been Dr. Stranglove, Dan

From shadow@gilroy.com Tue Jan 29 16:25:30 2002
Subject: [R-390] R-390A vs RA 17 / movie

The first Bond Movie. Dr. No Was on TV last week... I couldn't believe my eyes. There was a sea of Racal's. The typical military radio room. Long row of radio receivers and operators... Just... To Cool... Gary Enjoy the Second Amendment.... But a Machine Gun....

From rbethman@home.com Tue Jan 29 17:16:52 2002
Subject: [R-390] and wishes

> (I assure you I use the unit perfectly)

If indeed this is completely and totally accurate, then why be a member of a group that cannot possibly contribute to your knowledge. Please write the "perfectly" accurate operator's manual for all. This would seem to be "very" beneficial to the remainder of us.

I for one, as a 50 some year old youngster could benefit from the "master" of "all" knowledge. Bob - N0DGN

From David_Wise@Phoenix.com Tue Jan 29 17:28:53 2002

I've got to see this. The only 3-role Sellers I am aware of is "Doctor Strangelove", and I don't remember seeing an R-390A, although one would be right at home. Got to watch it again soon; it's on my short-list of all-time favorites.

In Strangelove, the instrument that helped destroy the world does not exist in reality and was absolutely _not_ an R-390A. How many of you have searched LOGSA for a manual for it? :-) What other movie contains a device with the same made-up name? I know, too easy or too hard, depending on your tastes. "Whoa!" Dave Wise

From ve3ajm@sympatico.ca Tue Jan 29 18:00:07 2002
Subject: [R-390] R-390A vs RA 17

The most vivid recollection of RA 17s in the movies or a mini series is amazingly enough the recent Canadian production of the disasterous Canadian landings at Dieppe in France in WW2. I believe it was a made for TV movie called Dieppe. Couldn't believe my eyes, with the shot of the British commander in the operations room, with racks of RA 17s! The researchers really missed the boat on that one. Al

From rbethman@home.com Tue Jan 29 18:00:27 2002
Subject: [R-390] R-390As and other Mil equip....

As a retired Army "Top Three" enlisted for 9 yrs 2 mos of a 20 yr. career, I can vouch for the presence of "strange groups" on mountain tops. We had or teams swapped by helo, got a hot ration or two by helo, and had repairmen brought up by helo.

I didn't start with a "strange group", I just received a visit from some gentlemen in civilian clothes that

borrowed my Battalion Commander's office to speak with me. My Battalion Commander was informed that I was going on a "special assignment" and that was it. I received one of those "notorious" gray ID cards, and began wearing civilian clothes, and working on mountain tops that had a compound within a compound separated by loads of chain link fence and five barrel concertina. Sometimes it was a van that we could move as "upper" echelons dictated. The black covers were in place, recorders attached, logs were meticulously maintained. The logs and tapes went out by helo in a double locked metal box.

They even had a compound within a compound separated by loads of chain link fence and five barrel concertina for us down in base camp. We were strictly discouraged in mixing with the "normal" population. Bob - N0DGN

From twleiper@juno.com Tue Jan 29 18:19:15 2002
Subject: [R-390] R-390A vs RA 17

> Now - In what movie starring Peter Sellers (In 3 roles) did an > R-390(A) assist in bringing the end of the world ? - Bryce

Dr. Strangelove

From twleiper@juno.com Tue Jan 29 18:28:53 2002
Subject: [R-390] and wishes

writes: > > (I assure you I use the unit perfectly) > If indeed this is completely and totally accurate, then why be a > member of a > group that cannot possibly contribute to your knowledge...

That is the FIRST of his mistakes. Failure to realize he made that mistake is the SECOND of his mistakes, and failure to take corrective action is the THIRD mistake. He has NO CHOICE IN THE MATTER....his mission is to STERILIZE ALL IMPERFECTION, which means he must "sterilize" himself. Beam him into deep space, maximum dispersion immediately, Captain, we are in grave danger.

From mikea@mikea.ath.cx Wed Jan 30 00:18:40 2002
Subject: [R-390] R-390As and other Mil equip....

wrote:> As a retired Army "Top Three" enlisted for 9 yrs 2 mos of a 20 yr. career, I

You are aware that now we have to kill you? Mike Andrews

From rlruszkowski@west.raytheon.com Wed Jan 30 00:17:56 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

The CIA DID use R390A's. Go look at my website for the Photo:
http://users.erols.com/eengineer/new390A.html Jeff

Of course the CIA used R390/A we have the photo's to prove it.

I just said they did not do Morse Intercept because that was farmed out to NSA and down to ASA the Navy and Air Force grunt to do. Morse was not some thing a college grad CIA operative would waste

valuable time doing. God Knows there was analysis work and real people for the CIA to work with.

Is it true that CIA operatives were keep at the Embassy with the US marines to look after the off /on switches for the CIA guys until they were "orientated".
Just a war story I heard.

Just what did the CIA use R390/A for? door stops, room heaters, casual listening, foot stools, chairs, local currency? Roger.

From Barry Hauser <barry@hausernet.com> Wed Jan 30 00:42:04 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

> Just what did the CIA use R390/A for? > door stops, room heaters, casual listening, foot stools, chairs, > local currency? > > Roger.

An R-390A, tag covered with tape, fitted out with a set of electrodes, can be a very persuasive prop in an interrogation setting. ("Still not cooperating, eh? Crank 'er up to 15,000 ...") (I didn't write this, and y'know what? - I never even heard of me.) B.

From mikea@mikea.ath.cx Wed Jan 30 00:54:40 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

On Tue, Jan 29, 2002 at 04:17:56PM -0800, Roger L > Just what did the CIA use R390/A for? > door stops, room heaters, casual listening, foot stools, chairs, > local currency?

Other way around, Rog. The CIA was there to tell the marines (I wanted to write "jarheads", but that describes my brother-in-law the Brig Bunny, not real Marines) when the lights were on, and to help them when they had to go potty and couldn't find a room with "Head" on the door.[1][2]

[1]They didn't read it, but they _did_ memorize the shape and do pattern-matching. They just got confused by signs like "Men", "Latrine", "Restroom", and so on. "Head" worked every time.

[2]I spent time with DIA, NSG, and ASA folks, as well as USAFSS, and the USAFSS were the most ... well, _interesting_ of the lot. Mike Andrews, ex-E-5, 30650E, USAF

From Richard.McClung@Dielectric.spx.com Wed Jan 30 02:24:21 2002
Subject: [R-390] Re: [R-390]Boys Toys

I beg to differ with you on the fact that the CIA did not morse intercept. They in fact did do morse intercept. The first 2 AN/TSC-26's delivered to the US Army were assigned to the CIA. The AN/TSC-26 was the Special Forces Base Station Communications Central. The RCVR van had 3 receiver positions that were set up to operate diversity in morse intercept, CW burst intercept, or SSB voice communications.

Each position originally had two R-390(*)'s, two CV-1716 IF to tone converters, two Kahn ISB converters, a RD-265 recorder-reproducer, and a control panel to remotely control the three 2.5KW ISB XMTRs in the XMTR van. The third van was the Control van which had two R-390(*)s, one CV-116, one Northern Radio Model 172 AFSK RATT demodulator. Page printers, typing reperforators, and

crypto gear for RATT COMMS.....

In the field they had RS-1's and DELCO 5300's (to name two radio sets) that transmitted CW and CW burst..... Most COMMS were done in the BTB method. The Blind Transmission Broadcast method.

The base station would xmt on several frequencies like the old marine coastal stations with a marker and transmit traffic to the deployed agents/teams. This was done in the full duplex mode. The Base station would acknowledge the intercept of traffic from the field in their regular BTB transmissions.....

Positive contact would only usually be used on an emergency frequency when eminent danger or compromise has occurred and the agent/team must be exfiltrated. RICH @B> }

From rbethman@home.com Wed Jan 30 04:15:23 2002
Subject: [R-390] R-390As and other Mil equip....

Mike, Won't be the first time I've either heard that one, or said it either! <grin> [Notice there were NO details?] Bob - N0DGN

From BRingwoo@csir.co.za Wed Jan 30 06:45:03 2002
Subject: [R-390] R-390A vs RA 17

Hi all, That was fun. Most of you knew the answer, but the first correct answer came from D Schearer, with Sandy's answer being the most technically correct. Sort of. see http://www.filmsite.org/drst2.html Cheers - Bryce (Saving up for RA-17)

From cbscott@ingr.com Wed Jan 30 13:31:18 2002
Subject: [R-390] R-390As and other Mil equip....

I thought it was the other way around: he has to kill all of us. Barry(III) - N4BUQ

From rbethman@home.com Wed Jan 30 17:12:52 2002
Subject: [R-390] R-390As and other Mil equip....

Naw! Too darn many of ya'll to track down. I'm gettin' TOO DARN OLD! <grin> Bob

From rbethman@home.com Wed Jan 30 17:37:23 2002
From: rbethman@home.com (rbethman)

Guys, I've dealt with most of the "funnies" over that career. Let's see:

CIA - Cranky Insecure Adults
NSA - Not Significantly Adroit
NRO - Not Recognizably Observant

Anyway, there are a lot of them. Most of my career was spent on the "operational" end of the world. Sort of up close and personal. Retired over 18 years ago. I give no Who, When, Where, How, or Why.

If anything seems to fit a memory of yours, it is purely coincidental. Although I am sometimes surprised when another list member writes me direct and it turns out to be a long lost "friend".

My view of the "intel" is jaundiced very heavily since being "briefed" by a group once. They were briefing us for a "mission" and were feeding us BACK what we had collected. Took a little while to realize it. They had so hacked up what we brought back that we couldn't at first tell it was "our" input. It was useless. Thank God we remembered what we had seen and discovered.

It has been too many years, too many "boo boos" (injuries), and a slight fog has settled in now that the magic "50" has since passed away. I ain't jumping from no more planes, I ain't crawlin' around in the dark. Too many things to go bump with, and my bifocals will probably fog over at the wrong time..... If ya have to come kill me, be merciful and make it QUICK. It may be a blessin'. Bob - N0DGN

From Richard.McClung@Dielectric.spx.com Wed Jan 30 18:46:20 2002
Subject: [R-390] R-390As and other Mil equip....

That's the beauty of MIRV's..... Can get a whole bunch of bunches with one..... RICH @B> }

From kb6lwn@qsl.net Wed Jan 30 20:55:05 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

WHY!?!? Does this thread still have the "[Hammarlund]" tag in the subject line ??? I haven't seen one reference to that mfgr in at least a dozen or two posts... Bruce

From tbigelow@pop.state.vt.us Wed Jan 30 21:37:36 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

Bruce - If it bothers you THAT much, why didn't you just *remove* it? I don't think it's like those pillow tags that say 'DO NOT REMOVE' or the pillow police will getcha.

'sides, most of us '390 guys know that you need a Hammar 600 in the rack to even out that load factor of the '390 receivers. They're nice to listen to, as well.
73, Boomer KA1KAQ (glancing at the subject line and departing) Bruce - KB6LWN wrote:

From lexa@mail.island.net Wed Jan 30 23:13:14 2002
Subject: [R-390] Harris RF-230

Hi, Are there any Harris buffs, guru's, out there, I have a few questions to ask about my RF-230. Leo VE7LMJ QCI

From wy6k@yahoo.com Thu Jan 31 04:30:55 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

Ok, Ok. Here's your reference: Hammarlund. :-)

From chg111@hotmail.com Thu Jan 31 13:35:11 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

Gents-Well, last nite The History Channel,in their "Boy's Toys" series, DID have a nice vintage color shot of a rack of HammarHead SP-600s. Also ,a very nice looking Zenith porthole console TV. Of course the SP-600s had nothing to do w/what they were talking about-remote controls-but they were nice looking. Anybody else pick up on that? -Sandy G. C.H.(Sandy)Geiger III

From tbigelow@pop.state.vt.us Thu Jan 31 15:27:35 2002
Subject: [R-390] Re: Hammarlund in the Subject

wrote: > Ummm.. Uhhh.. Because I'm not the lazy twit > that couldn't be bothered to edit the subject > line to reflect the ACTUAL content/thread of > the post ??? Just guessing here ;)

True - you were just the twit who decided to rant about it like someone pissed in your Cheerios. Now I'm the twit responding to you. See? It all makes sense if you think about it a bit. ;)

> That's kind of like that Lame 'delete key' argument. > Sure makes it nice for those that live their lives > as irresponsible members of society, doesn't it ?!

Or really miserable for the politically-correct types who think everything should be done strictly by their terms, since they are obviously the best, most correct terms. You seem to think others are acting irresponsibly, yet you have no intent of taking any responsibility for yourself by not reading(sorta like using the delete key) items that don't interest you. Instead you imply that *all* the responsibility lies with other posters and *none* with you. Hmmmm...

Many of us enjoy discussing the SP-600 made by [Hammarlund], even using one when possible. And, while I won't try to speak for everyone else, I also enjoy the stories passed on by others who lived and worked in a time that we can now only read about. To me, it gives a more life and meaning to an otherwise-obscure piece of old radio gear sitting in front of me.

> And what about those that use those tags (as they > were originally meant to be used) to filter their > incoming mail to the proper folder (to use a Win- > doze term). I guess they need to go in and edit > their filters or add an additional one that checks > to see if the "[R-390]" tag ALSO exists in the subj > line, just so the lamers that are too lazy to make > the change in the subj don't take a chance of cramp- > ing their fingers ???!!! Makes sense to me! NOT! > Bruce

Well, I'm really confused here, Bruce - why not a rant about the words "Boys Toys" still being in the subject line as well, when the conversation had obviously turned to life experiences, etc.? Pretty much unrelated, so it fits with the rest of your argument. Why are you so put out of the topic of [Hammarlund] still appearing in the same topic with [R-390] but none of the other issues that would also fall into the category of being off topic or otherwise 'filter-able'?

I have a theory, Bruce - you could be suffering from "R-390/Internet Overload". It's possible that Don might have some Prozac samples available that he possibly keeps on hand for just such an emergency here on the list. In the meantime, just put the keyboard down and back away.... slooooooowly, now.... Todd

--
Be sure to tune in next week for another episode of "Do it MY way or I'll SCREAM!!!"

From tbigelow@pop.state.vt.us Thu Jan 31 15:39:23 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

Yep, I did Sandy - was pretty much what I expected, too - lasted all of 3 seconds or so. Two SP-600s in a rack, looked like the 'Northern' converted models. Nice and crisp, decent color, too. They showed them with respect to the TV remote that was set up to work from sound instead of light, the reference being made by the fellow who invented the remote that he was concentrating on sound waves and their possibilities. I recall a friend in high school had one of these TVs - first time his mom clicked the remote I heard the distinctive *ping* the hammer makes. Wonder if she still has it?

Pretty interesting show overall. I really enjoyed the shots of those R/C MiGs with real turbojets - 200 mph! THAT was cool! Bet you could keep the neighbor's dog out of the yard with one of those. <evil cackle>

I was really hoping they'd have a show about electronics, though - something that at least touched on the evolution of radio and perhaps showed a few racks of R-390s as well as the SP-600s, maybe a Collins 'Big Talk' station. Hey....maybe we could bombard them with requests for a show about boatanchors, specifically the R-390? Sure would be interesting, especially if they showed a bunch of that old film footage of the intercept rooms (or whatever they were) with rack after rack of R-390 and related equipment.

"Radio and How it Preserves Freedom"

Hey, they could take a rating hit for one night for us! Who knows, maybe ratings would go up? 73 de Todd/'Boomer' KA1KAQ

BTW, I have a couple of the old Motorola 'porthole' TVs, maybe a 6-8" screen? I've got one displayed in my familyroom with a nifty set of rabbit ears on top - complete with loading coils!

From ba.williams@charter.net Thu Jan 31 15:45:35 2002
Subject: [R-390] Re: Hammarlund in the Subject

>> And what about those that use those tags (as they were originally meant to be used) to filter their incoming mail to the proper folder (to use a Win- doze term). > >> Bruce

Folders is a Macintosh OS term dating back to 1984. Atari and Commodore adopted it next. It is 'subdirectory' in DOS terminology. Barry

From twleiper@juno.com Thu Jan 31 16:03:56 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

writes: > > > Gents-Well,last nite The History Channel,in their "Boy's > Toys" series, DID have a nice vintage color shot of a rack of > HammarHead SP-600s

Yeah, I saw that. Must have been VLF SP-600's because they were talking about 40 khz ultrasonic controls at the time. They had nothing to do with the subject matter...they might as well have used a file shot of the head of SPECTRE stroking a cat, or the reactor control room in Dr. No's Bauxite mine. Tom

From w5or@home.com Thu Jan 31 18:33:28 2002
Subject: [R-390] Flaming on this list

Gentlemen? Think before engaging your transmit switches. This is a public forum and none of you want to be in the penalty box, do you? Don Reaves W5OR

From redmenaced@yahoo.com Thu Jan 31 18:40:21 2002
Subject: [R-390] Re: Hammarlund in the Subject

> Folders is a Macintosh OS term dating back to 1984. Atari and Commodore adopted it next. It is 'subdirectory' in DOS terminology. ++++++++++

Nah, It started at Xerox! They invented the mouse, too. Joe

From Richard.McClung@Dielectric.spx.com Thu Jan 31 19:04:50 2002
Subject: [R-390] Re: Hammarlund in the Subject

That's right XEROX came up with the GUI and all that stuff in their reserach center that was in Palo Alto, CA. They gave it to the industry for anyone to use..... RICH @B> }

From ba.williams@charter.net Thu Jan 31 19:06:58 2002
Subject: [R-390] Re: Hammarlund in the Subject

> That's right XEROX came up with the GUI and all that stuff in their reserach center that was in Palo Alto, CA.

Yes, that is how it happened. There was a lawsuit a few years ago but Xerox never put a claim on their GUI. An Apple team had visited Xerox labs before the first Macintosh was released with the GUI and mouse. Thus, there is a strong link between the visit and the first Macintosh OS.

There were other semi-GUI operating systems. I think Commodore was the first computer system with a commercial interface and I forget the name now. You could use the joystick to point and click, but no mouse. This was around 1983 or so.

The Atari GEM interface for the 16 bit ST computer was developed right after the release of the first Macintosh. Atari sent a team of programmers to IBM, who had a team writing the OS...before Microsoft and Windows. Atari adopted this and cowrote it with that team. I think that company subcontracted out by IBM was DEC but I could be wrong. Barry

From bill@iaxs.net Thu Jan 31 19:41:17 2002
Subject: [R-390] Re: Hammarlund in the Subject

You impotent geek! You infected dishcloth! You ... Words fail me! Bruce said Windoze! He did not say DOS! Outlook sorts messages into folders! Next time, engage brain before using keyboard! Yours in a towering rage over the misuse of a word, Sam "Its not MY Fault" Hall

...
The above is a vision of what this list could degenerate into whenever someone replies to an inflammatory posting. Let the list manager remove the flamers. Do not give them the attention they crave by taking up their challenge. There are oveR 390 flamers out there. Regards, Bill Hawkins

P.S. "News of the Weird" today reports that a family from Utah went into the mountains on a hunting trip. The adults left their 2-year-old in the truck, but he got out and got lost in very cold weather. He died before a search party could find him. The father committed suicide. The remains of the family are suing the search party for one million because they failed to find the child in time.

"Not MY fault", indeed. The killer is that the lawyer who took this case will probably be able to put together a jury that will give him half a million.

From tbigelow@pop.state.vt.us Thu Jan 31 20:00:23 2002
Subject: [R-390] Flaming on this list

Indeed - I got a bit incensed by seeing fellow list members referred to as 'lazy twits' for merely leaving the word [Hammarlund] in the subject line. Seems pretty stupid to me, but my response here on the list wasn't any better. Apologies to the good members of this list. de Todd/'Boomer' KA1KAQ

From r390a@enteract.com Thu Jan 31 20:08:00 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys [Remote Control]

I remember those early Zenith "Space Command" ultrasonic remotes. If you misplaced it, you could jangle your house keys and usually get something to happen, though not always what you wanted!

From tbigelow@pop.state.vt.us Thu Jan 31 20:18:00 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys [Remote Control]

My favorite is watching the TV switch channels when the sunlight hits the receptor just right. They mentioned that this was cured long ago, but my folks had a TV that was probably 70s/80s vintage which still went nuts as the sun set...

From twleiper@juno.com Thu Jan 31 20:28:40 2002
Subject: [R-390] Re: Hammarlund in the Subject

writes: >> You impotent geek! [insanity deleted] >> Sam "Its not MY Fault" Hall > > > The above is a vision of what this list could degenerate > into whenever someone replies to an inflammatory posting.

Hammarlund

Yes Grasshopper, sometimes a person's penchant for accuracy, and craving for attention or recognition, results in these pathetic cries from the depths of their depression and isolation. Instead of yelling at the television every time somebody says "I" when they should have said "me", or says "million" instead of "billion", they can now type a response that gets some attention. It is, indeed, quite an unfortunate situation. Whether this is brought on by ones' heredity or environment has been the subject of endless

research and debate, from Darwin to Randolph and Mortimer Duke, and cannot be elaborated upon here.

Hammarlund

The key is to not take it personally by NOT responding to them in a like fashion, but instead remaining introspective, and minister to these low-life, miserable rotten bastards with the dignity and respect they deserve. Love and Peace Tom Hammarlund

From wy6k@yahoo.com Thu Jan 31 20:57:56 2002
Subject: [R-390] Re: Hammarlund in the Subject

I second what Todd has said here (see below). I enjoyed the whole thread until some people started complaining. Michael

From wy6k@yahoo.com Thu Jan 31 21:01:46 2002
Subject: [R-390] Re: Hammarlund in the Subject

I was with Steve Jobs at the NCC (National Computer Conference) when the Xerox machine was first displayed with a mouse and iconic GUI. Steve said right then it was a great idea. That led to the Lisa which lead to the Mac. I understand that the visit to Xerox was after the NCC. I have almost forgotten, but I think the name of the Xerox system was "Star". Correct me if I'm wrong. Michael

From twleiper@juno.com Thu Jan 31 22:27:45 2002
Subject: [R-390] Re: Hammarlund in the Subject

writes: ... > I have almost forgotten, but I think the name of the Xerox > system was "Star". Correct me if I'm wrong.

No, it was called the "SP-600", and it was actually invented by Hammarlund. Tom

From mikea@mikea.ath.cx Thu Jan 31 23:16:00 2002
Subject: [R-390] Re: Hammarlund in the Subject

wrote: > I was with Steve Jobs at the NCC (National Computer Conference) when the Xerox machine was first > displayed with a mouse and iconic GUI. Steve said right then it was a great idea. That led to > the Lisa which lead to the Mac. I understand that the visit to Xerox was after the NCC. I have > almost forgotten, but I think the name of the Xerox system was "Star". Correct me if I'm wrong.

I don't remember "Star" as an in-house name, but it could have been the "Dorado" or Goldfish", maybe, under a different name. Just A Guess. -- Mike Andrews

From rbethman@home.com Thu Jan 31 23:32:40 2002
Subject: [R-390] Re: Hammarlund in the Subject

I seem to remember "Gem". It is going back aways. The stuff came on a 8inch floppy. Now I know I'm

getting old... Bob N0DGN