

## R-390 Reflector January '05 Edited

From ka4prf at us-it.net Sat Jan 1 07:29:12 2005  
Subject: [R-390] Off Topic - Transistor R390A sounding good.

Hi all,

My R-390A is sounding good lately.

I don't know where to go for this info, so I am checking here? I need to replace a transistor. I have gone to the electronics store in West Palm Beach and they can't find it? I checked with a source here on the web and it's not listed in their catalog. Anyway, if anyone could take a look at the following number and let me know if they can cross reference it, I'd appreciate it? You can get me off group at my email address of: ka4prf@us-it.net

The transistor's number is MPS 6530 I think the case has a large "E" on it? The resistor is an NPN type. O18 case Thanks Chuck

From odyslim at comcast.net Sat Jan 1 07:54:03 2005  
Subject: [R-390] tubes

Since we are on the subject of tubes... Has anyone ever heard of the Ediswan Valve Co? I am always scrounging and found 10 6AK6 made by them. Was just wondering if they are worth using.  
Thanks, Scott W3CV

From pmills7 at houston.rr.com Sat Jan 1 10:15:46 2005  
Subject: [R-390] Off Topic - Transistor R390A sounding good.

For those who dabble in stuff with obsolete semiconductors, the NTE website has a downloadable cross reference that is very handy. Go to [www.nteinc.com](http://www.nteinc.com) thanks, Phil W5BVB

From ka4prf at us-it.net Sat Jan 1 10:54:19 2005  
Subject: [R-390] Off Topic - Transistor R390A sounding good.

Okay guys,

I think you all found my transistor. I will be purchasing a gross later of the NTE 123AP. tHANKS  
Chuck

From richardmay at hotmail.com Sat Jan 1 12:35:19 2005  
Subject: [R-390] wiring harness for R-390A

Does anybody have the main wiring harness for an R-390A that you are willing to sell or trade?

From ham at cq.nu Sat Jan 1 13:14:52 2005  
Subject: [R-390] Off Topic - Transistor R390A sounding good.

Hi

One of the more interesting mysteries of the world is the enormous number of transistor part numbers out there compared to the number of tubes. If you look at a tube manual from the R390 era you will find roughly 1/100 the number of tubes compared to the number of transistors and diodes in an equivalent solid state book these days.

We don't worry too much about a particular brand of tubes in the 390 but the audio guys go a bit nuts on specific manufacturers of "classic" tubes. As far as I can see the R390 approach (don't sweat it) works just fine except when you have a tube that's just plain bad. I have never seen a problem that always happens with a specific brand of tube in a 390.

If you look in your 390 there are a bunch of fundamentally different tubes in it. You are not going to swap a dual triode for a pentode and have much success. Even if you stick to triodes they come in a wide variety of bias and gain setups.

Bipolar transistors are different. You have two basic flavors NPN and PNP. Provided you don't run too much power, current or voltage do their thing ok. At a given current level the gain of most of them is very similar in a normal circuit.

If you already have a bag full of diodes or transistors, try plugging one in and see what happens. It just may work and save you a major hassle.

The Lankford SSB mod on the 390A is a very good example of this. There are probably thousands of diode part numbers that will work just fine in the circuit. They are easier to find by body style than by part number. If the diode looks like it will work it probably will.

So if transistors are more like each other than tubes - why so many transistor types?

Marketing rules .... Take Care! Bob Camp KB8TQ

From dhallam at rapidsys.com Sat Jan 1 13:36:41 2005  
Subject: [R-390] Off Topic - Transistor R390A sounding good.

Along these lines, can anyone explain for me why the audio people are willing to pay prices that approach or exceed \$100 for specific tubes that are versions of garden variety tubes, i.e., 12AX7, 12AU7, 6SN7, etc. What was done to these tubes that make them special or is it just the oxygen free copper speaker wire all over again? David C. Hallam KC2JD

From crips01 at msn.com Sat Jan 1 13:50:38 2005  
Subject: [R-390] Off Topic - Transistor R390A sounding good.

Re: Autofools and their overpriced tubes:

I don't understand this either I have some gold pin audio amp tubes here. I have seen them going on e-bay for a \$100 bucks each. There is no way I will sell them because then I won't have them to use.

Dave the audiophool effect is most simply stated as "The more you \$pend the better it WILL \$ound"

There are some funny quotes at the Audiophool BS page:

[http://www.geocities.com/CapeCanaveral/Hall/8701/Audio\\_BS.htm](http://www.geocities.com/CapeCanaveral/Hall/8701/Audio_BS.htm)

It appears that the very latest craze is cryogenically soaking your tubes, connectors, etc, for it will result in "A stunning improvement in every perceivable parameter". <http://www.cryomusicsystems.com/>

Cryo-treated 3tf7 anyone? Happy New Year! John

From ham at cq.nu Sat Jan 1 14:34:10 2005

Subject: [R-390] Off Topic - Transistor R390A sounding good.

Hi

About all I can figure out is that different tubes overload in different ways. The guys I sell stuff to are all guitar amp people. They worry about what happens when they go into overload. About all I can say is that they can spot the "good" tubes in blind tests (I swap them and they tell me which one is best).

I would \*think\* we would have the same issue with front end tubes on a 390. If it's a significant issue we should be able figure out what the best front end tubes are. I think I have a couple hundred in stock. Time to prove they are the best .... Take Care! Bob Camp KB8TQ

From bill at iaxs.net Sat Jan 1 14:49:20 2005

Subject: [R-390] Off Topic - Transistor R390A sounding good.

There's an enormous number of transistor types because of Moore's Law - the device performance improves by an order of magnitude every 18 months or so. The result is an enormous number of obsolete transistor types that can be replaced by the latest, soon to be obsolete, types.

Of course, you can't replace Germanium with Silicon devices without making some circuit changes for the lower base to emitter voltage.

There are high-priced tubes because there are people who have too much money. They attract predators who know how to prey on their emotions. They do not have enough tube knowledge to be able to think rationally. They read too many magazines designed to market emotional stuff. It does not matter if they are suckers, they have the money and they crave the very best that money can buy. The fact that something advertised to suck the bad stuff out of their amplifiers is a polished rock just doesn't matter.

"Did you see the article on the rock that cures bad stuff?"

"Oh, yes. I've got ten of them, and everything sounds so much better!"

Did you see anything quantitative in that conversation? I mean, besides the "I've got more rocks than you" statement.

Understand, not just anyone can create value where there is none. First you have to build a group of loyal followers by offering stuff that really does improve things, or otherwise build a reputation within a group of wealthy people. Think of the marketing efforts of the tailors in "The Emperor's New Clothes."

Happy New Year, group. Bill Hawkins

From chacuff at cableone.net Sat Jan 1 15:21:18 2005  
Subject: [R-390] Off Topic - Transistor R390A sounding good.

Hey Guys!

Well I can't speak to the latest of the audio hype but I have been in and out of the audio business over the years and dabble in the tube guitar amp area as well and can tell you there are differences in tubes. In the guitar world tubes are used a little differently than in the rest of the world. Distortion is desired at times and how a tube handles being over driven has a lot to do with it's sound. As was mentioned by another poster, most guitar players who are familiar with tube amps can pick the desirable tubes by ear. What comes of that is that consistently what sounds good turns out to be certain brands in certain tube numbers. So those brands are sought after as a somewhat general assurance that the desired sound will be achieved. That's not to say that certain run of the mill tubes won't at times sound just as good but they don't consistently sound that way.

How and when a tube breaks into distortion and what type of distortion is delivered makes all the difference. Most of the old Blues music that was recorded many years ago was done on old Fender Tweed amps and that sound is sought after today and hard to duplicate. That's why 12AX7's, 12AU7's, 6V6's etc of the right brand names go at a premium. If you have European varieties of those they seem to be the most sought after. Especially Telefunken and Mullard...

Now those same tubes used the way we use them in radio gear probably won't sound much different than a half used up (soft in the guitar world) GE. So we are lucky we can get away with using just about anything. I agree that maybe the RF/IF amp tubes would make the most difference to hand select.

In the audio world there are some tubes that sound more musical than others...I guess it's got to do with how the tube handles harmonics, overtones and transients which music is full of. Beyond that...things like silver plated this's and gold plated that's....oxygen free wire...I think are more like the endless array of fishing lures...they lure more fisherman than fish.

I can say we used to have a display set up for Monster Cable speaker wire where there was 50' of what most folks used...something like 14ga zip cord and 50' of the Monster Cable speaker wire with a switch on one channel of nice stereo system and one could tell a MAJOR difference between the two...in level and low frequency audio quality. Sold a lot of wire that way...one could quantify the difference! Happy New Year!

From r390a at bellsouth.net Sat Jan 1 16:51:46 2005  
Subject: [R-390] Re:Off Topic - Transistor R390A sounding good-Audiophools

I always thought the phenomena was caused by the oxygen free brains of the audiophiles. Just one man's opinion, you understand.

From barry at hausernet.com Sat Jan 1 17:42:55 2005 Date: Sat Jan 1 17:45:20 2005  
Subject: [R-390] Off Topic - Transistor R390A sounding good-Audiophools

Well, "Joe" <winky winky> ...

Not exactly ready for production, though we've turned the general specs over to the marketing department to come up with some wild claims, er, appropriate and tasteful ad copy.

At the moment, we're working on the fourth prototype design. First one froze the receiver, somebody bumped into it and it shattered into pieces -- and, no, we can't exactly part that one out as we cannot quite indentify the parts.. Second one .. cracked all the tubes. Third -- Igor fell into the nitrogen tank. When thawed out, he seemed to be about the same, but it's hard to tell. Fortunately, nobody bumped into him.

The fourth is the most promising thus far. No shattered radio, no broken glass, no frozen Igors, but one technical problem as pointed out by the kid in the white coat with the spiked hair: "The liquid nitro juice is overpowering the filaments. It's like there's no thermionic emissions goin' down, dude. O' course, the tubes will last a long time this way, but .... Maybe if we replace the filaments with small pieces of monster cable?"

Those dampening rings sound interesting. Maybe we'll diversify. Philo T. Barnumsworth

From craigmc at pacbell.net Sat Jan 1 20:11:13 2005  
Subject: [R-390] wiring harness for R-390A

Richard,

American trans Coil had some for sale in the recent past; they were fairly complete as I recall. The URL is: <http://www.atc-us.com/>

At the moment I get no response there, however. I think I read that someone on the list (Barry?) took over from them. Perhaps he or someone more knowledgeable will jump in and help you. Craig

From barry at hausernet.com Sun Jan 2 01:16:14 2005  
Subject: [R-390] wiring harness for R-390A

You rang? My ears were burning .. ;-)

Yes -- I have the ATC stuff at my place including the wiriring harnesses.

Saw the original post and went to look it up on the ATC site, but apparently it's down. I don't have the pricing handy, but they're fairly cheap.

They include all the module plugs, but were clipped on the panel side -- no controls or switches as I recall. They're in pretty good shape.

Let me know if that will work for you. Barry

From odyslim at comcast.net Sun Jan 2 20:04:57 2005  
**Subject: [R-390] manual comparisons**

**I was reading my 1956 Army R390-A manual and is says not to substitute type 6C4W for a 6C4. It**

**is written that the differences in characteristics are such that the type 6C4W will not operate properly in the receiver. OK...**

What changed between 1956 and 1970? My Navships 1970 manual lists the 6C4W as the tube to use.  
Scott W3CV

From w3np at atlanticbb.net Sun Jan 2 20:38:21 2005  
Subject: [R-390] manual comparisons

I have heard the same thing. Look at this tube list: <http://209.35.120.129/faq-tubes.htm> Dave - W3NP

From w3np at atlanticbb.net Sun Jan 2 21:45:50 2005  
Subject: [R-390] T-205 Core needed (390-A)

I have been able to repair all of these that I have run across. I use 5 minute epoxy and have never had one break the 2nd time. The trick is to rig up a little jig ahead of time for the 10 min or so that the epoxy needs to set up. Its sort of tricky getting the shaft screw to stand up straight but it can be done. I usually use my Pana-vise. Sort of build up a little bead from the top of the core up the little flexible shaft. Don't get any on the side of the core. Even if you pick up a replacement later on, this will give you an emergency spare. Dave - W3NP

From ka4prf at us-it.net Mon Jan 3 07:10:13 2005  
Subject: [R-390] Veneer Knob

Hi all

Anyone know where I can purchase a Veneer Knob from a Web internet source? Tnks Chuck

From ham at cq.nu Mon Jan 3 07:57:06 2005  
Subject: [R-390] manual comparisons

Hi

There's a long story about this. I forget the exact details and am to lazy to look it up.

Bottom line is that the 6C4W seems to work just fine. None of the field changes in the Y2K manual seem to directly impact the 6C4's so they didn't change the radio any to make them work.

Since the 6C4's are being used as a mixer the normal things you would do to make a "super tube" version (more gain, higher linearity) probably are not going to make a super mixer. The conversion gain with the 6C4W may be a bit lower than a 6C4. If so it's not enough to significantly impact the sensitivity of the radio. The one thing that would really be an issue would be if the 6C4W has worse overload performance. We check measure sensitivity all the time. We don't seem to do many overload (third order) tests. Take Care! Bob Camp KB8TQ

All the best for 2005 - Bryce Date: Mon Jan 3 09:39:14 2005  
Subject: [R-390] Veneer Knob

Are we talking about the main tuning knob on the 390 series? If so I would imagine Fair Radio would be the best bet. Cecil....

From ka4prf at us-it.net Mon Jan 3 11:13:00 2005  
Subject: [R-390] Veneir Knob

hi again

Please correct my spelling to read Vernier instead of vereeir. Also, disregard the request. I went to **Mouser** and found what I wanted. Thanks a Chuck

From bipi at comcast.net Mon Jan 3 12:02:41 2005  
Subject: [R-390] Mechanical Filter Issue

Hi Gang,

On the a different subject. My restoration R-390A project is just about finished. I rebuilt the RF deck and recapped the IF deck and AF decks. The smoke test was positive with signals on all bands, although it is way out of alignment. But I have a couple of issues.

1. Three of the four mechanical filters appear to work fine. But, when I switch to the 0.1, 1, and 2 bandwidth positions, there are no signals. Is there any quick check I can make to ensure it is the 2 khz mechanical filter and not something else in the circuit? It looks like a bit of work to replace and I would hate to go through that effort only to find out it is actually something else.

2. I tore the RF deck apart with the idea I would get it rebuilt within a week or 2. No such luck...work issues caused a significant delay of almost a year before I was able to get back and finish it. During that time, I lost track of the ordering of the slug racks and was forced to go with a "best fit" approach to reassembling them. Other than the fact that the alignment is totally hosed up, will I be faced with any other issues, i.e., are they all identical or are there differences I cannot see visually. I saw something on the FAQ page that some are different. They all looked the same to me. Thanks for any help. Happy New Year73 de Mike

From chacuff at cableone.net Mon Jan 3 12:45:38 2005  
Subject: [R-390] Mechanical Filter Issue

High Leigh and Group,

I did the same thing. From what I understand there is no problem mixing up the slug racks in the A model. If it were an R-390/URR it would be a problem. Seems all the slugs in the big racks are the same...but don't mix them up with the slugs in the small racks. Someone else jump in here if I am misleading him! Cecil..

From N4BUQ at aol.com Mon Jan 3 14:24:52 2005  
**Subject: [R-390] Mechanical Filter Issue**

Mike,

As I recall, if they aren't interchangeable, it will be obvious that they are not. What you can do is make sure the slugs are centered and inline with each transformer. There are two phillips-head screws that hold each slug in the slug rack. You can loosen these and allow the slug to center itself and then re-tighten them. This can allow the slugs to move much more freely than if they are mis-aligned. Barry(III) - N4BUQ

From JMILLER1706 at cfl.rr.com Mon Jan 3 14:27:17 2005

**Subject: [R-390] Mechanical Filter Issue**

I have heard it said that there are slug permeability differences between some of the racks, not sure which. Seems they may have colored dots on them to indicate their category. I think the differences are between the mixer slugs and the RF slugs, but I am not 100% sure. Sorry, that's the best I can do without opening a radio and looking.

From N4BUQ at aol.com Mon Jan 3 20:19:31 2005

Subject: [R-390] Need cable clamps

Anyone know where I can get some replacement cable clamps for an R390A? Almost every one on my latest rebuild have disintegrated. The aluminum oxidized(?) and the rubber inserts just flaked to almost nothingness.

I think they make these for the aircraft industry, but not sure where I can get 3 or 4 nor am I sure of the size(s) I need. Thanks!! Barry(III) - N4BUQ

From bipi at comcast.net Mon Jan 3 20:49:25 2005

**Subject: [R-390] Mechanical Filter Issue**

Thanks all for the responses to my questions. I appreciate the help. A couple of finds today.

1. Either Figure 3-6, page 3-16 of the Y2K-R2 manual is wrong or my R-390A is wired differently than most. All of the input trimmers shown in this figure are correct but the output trimmers are all incorrectly marked. This is what I find:

FL502 2 khz filter - input C567/output C570  
FL503 4 khz filter - input C566/output C568  
FL504 8 khz filter - input C565/output C571  
FL505 16 khz filter - input C564/output C569

Can anyone confirm these findings? If so, might be a candidate pickup for revision 3 of this fine manual (thanks to all for the hard work on this great resource).

2. Based on going through the 2 khz filter circuit, it appears the 2 khz filter is indeed bad and I am in the process of replacing it, ugh!

3. I looked at the slug racks in the RF deck, and they all appear to be identical (i.e., RF versus IF). The RF slugs are all marked identically with both a white and red dot. The variable IF slugs have no



markings. Thanks again.... 73 de Mike K7PI

From fraserb at quasc.com Mon Jan 3 21:04:41 2005

**Subject: [R-390] AGC/MGC**

Is this normal:

RF gain at 10, AGC at FAST, on a local AM station, audio is absolutely excellent.

I switch to MGC and audio becomes very badly distorted. If I back off RF gain to about 5 or 6, audio gets nice again.

Normal?

Yes, the way it is supposed to work, however, you might want to use "slow" for listening. YMMV. Les

From hankarn at pacbell.net Mon Jan 3 21:23:05 2005

**Subject: [R-390] Need cable clamps**

**I have a few hundred NOS pliable 5 for 5 bux mailed** Hank KN6DI

From bipi at comcast.net Mon Jan 3 21:40:36 2005

Subject: [R-390] Mechanical Filter Issue

Very sorry for my last post. I had the trimmer numbers cocked +90 degrees. The Y2K manual, figure 3-6 is correct. My humble apologies to the list for my mistake! Other data in the post stands as is :-)  
Sorry about that! 73 de Mike K7PI

From dwade at pacbell.net Tue Jan 4 00:30:56 2005

Subject: [R-390] Venecir Knob

Charles,

Can you elaborate a bit on what issue you're trying to address on the 390? Is it for the BFO control, or to address the tuning rate of the Kc/s knob, or.....? Thanks, Dennis

From hankarn at pacbell.net Tue Jan 4 13:15:52 2005

**Subject: [R-390] RE: Tinnerman Clamps Size**

Any one ordering the Tinnerman clamps please specify the. They are small #2, Medium #3 and large #4. The number is stamped on the clamp under the Tinnerman name.

5 for \$5.00 or 3 of each size for \$10.00 mailed. NOS pliable rubber

Dan Arney

c/o Global Pack & Mail

21315 Saticoy St. Unit R

Canoga Park,CA 91304-5685

Thanks, Hank KN6DI

From N4BUQ at aol.com Tue Jan 4 14:24:42 2005  
Subject: [R-390] RE: Tinnerman Clamps Size

Does anyone know what sizes are needed for the R390A harness? The ones in my latest radio disintegrated so badly that there wasn't anything much left of them to tell sizes. I don't know what size opening a #2, #3, or #4 will hold so I'm still not sure what to order. I assume a clamp capable of about 3/4" diameter would probably work, but the harness is different sizes at different places so there may be more than one size involved. I could get the assortment, but if I need four of a given size, then...  
Thanks! Barry(III) - N4BUQ

From hankarn at pacbell.net Tue Jan 4 15:50:37 2005  
Subject: [R-390] Mechanical Filter Issue

**I have NOS slugs.**

Hank KN6DI

Gee, Hank,

That's awful.-- probably because of all the rain on the left coast. Just sprinkle some salt on 'em and they'll explode.

Oh -- you mean the other kind -- nevermind. Forget the salt. Some use a little talc if they're sticky -- so as to make them more slippery -- like the other ones(but not gooey or slimy).

Are the springy-thingies of regulation height? Barry

From David\_Wise at Phoenix.com Tue Jan 4 16:43:53 2005  
**Subject: [R-390] AGC/MGC**

<Laugh> I should hope so! Note the reading on the Carrier meter when you're in AGC mode. It should be up the dial a ways, indicating that the Automatic Gain Control system is lowering the radio's gain. When you switch to Manual Gain Control, this is no longer done for you, and that strong local signal overloads the IF amplifier with attendant distortion, unless you back it off by hand. By the way, the Carrier meter circuit is designed to go upscale on overload as well as on AGC action, so in your scenario it should be off 0 in both modes.

Related topic: I'm an SWL and most of my radio time is spent listening to international broadcasts. I have found that the SLOW position gives the most uniform and listenable audio across fades, and I have gradually become convinced that the receiver's slow-attack AGC design contributes to this. This strikes me as counterintuitive, but I believe what I hear. Can anyone who's applied the Lankford or any other fast-attack AGC mod compare notes? Remember, I'm talking about AM voice/music, not SSB or CW. Does fast attack have a downside? Why? Discuss.

On the other hand, FAST is better when I'm cruising looking for signals; then when I find a good one I go to SLOW. Because of this habit, I repeatedly experience the blast when entering SLOW and the Moment Of Silence when exiting. If you have replaced C551, it can be avoided to some extent by turning the knob as fast as possible, minimizing the time spent in MEDIUM, but this kind of clumsy workaround annoys me no end. Now and then I wonder if it would be possible to eliminate or reduce it without too much hacking. A quick glance at the Y2K suggests an interesting possibility, to wit:

**Disconnect S107 (AGC) pin 9 (MEDIUM) from ground, and instead connect a new capacitor between pin 9 and pin 8 (SLOW), sized to make a series combination with C551 that gives the same time constant operating in the V608A feedback loop, as was afforded with C551 in its original connection to ground and not using V608A. I haven't done the math, but it's probably between .1uF and .5uF . Also, connect a 22 meg resistor between pins 7 (rotor) and 8 (SLOW) to charge C551 to the average V608A plate voltage. The IF deck does not need to be modified, only the front panel.**

This would be very easy to test out with jumper leads clipped onto the switch (using the FAST position), no soldering or cutting. 73, Dave Wise (SWL in Portland OR)

From crips01 at msn.com Tue Jan 4 18:41:25 2005

**Subject: [R-390] Autotuners**

I have the RF/IF module out of my R390A checking to see why the BFO is failing and I was wondering I have the 12BH7A mod' in place for the 3TF7 and have read on this forum about jumpering the socket and installing 12AB7's in place of the 6AB7's in the BFO and PTO positions. Is this a better setup then what I have now? Ken

From DJED1 at aol.com Tue Jan 4 19:49:44 2005

Subject: [R-390] Autotuners

I don't see why one choice should be better than the other. Both give up the regulation provided by the 3TF7, but most agree that it works well without it. Incidentally, the two oscillator tubes are 6BA6s, to be replaced by 12BA6s if you choose. I've been using a resistor for about 20 years now, but am saving two 3TF7s to cash in when i retire. Ed WB2LHI

From wewilson at knology.net Tue Jan 4 20:44:41 2005

Subject: [R-390] Autotuners

Ken,

The 12BH7 mod jumpers pins 2&4 and 5&7 underneath the 3TF7 tube socket. It works very well if your ballast tube dies. I can't tell any difference. Just check continuity between these pins from the top with the tube pulled to see if you have it installed.

See [http://r-390a.us/R-390A\\_Modifications.htm](http://r-390a.us/R-390A_Modifications.htm) for this and other modifications. Walter - KK4DF  
<http://www.r-390a.us>

From: bill at iaxs.net (Bill Hawkins) Date: Wed Jan 5 02:24:01 2005

**Subject: [R-390] Autotuners**

wrote, "The worm drive goes through several sintered bronze Oilite bearings. These are porous bronze bushings that were permanently lubricated. But, "permanent" generally assumes for the "life of the tool" or whatever, not necessarily 50 years going on another 50. Those bearings were pre-soaked in a special lubricant -- but I don't know what."

Sintered bronze is porous, but you can't relube it by soaking. You need to pull a vacuum on it while it sits in a jar of light oil. But first you have to clean the old, gummy oil from the pores with the usual solvents and vacuum, then heat to evaporate the solvent.

OTOH, soaking the bearing in solvent, heating it a bit (no smoke!) and then soaking it in, say, 3-in-1 oil will work for a while. The problem with soaking in air is that the air in the pores is not displaced, so not much can soak in. Regards, Bill Hawkins

From barry at hausernet.com Wed Jan 5 09:17:00 2005  
Subject: [R-390] Autotuners

Hi Bill & list:

I don't know how practical it would be to apply a vacuum -- don't exactly have a vacuum pump on hand. It may be that penetrating oil -- which has solvent mixed in -- would leach into the bronze sufficient to replenish. However, that oil might be too thin.

May well be that the bearing is typically too worn by the time the oil is spent. They still make a wide assortment of these bearings and the correct size -- inside & outside diameter could be found. The existing ones are pressed into or glued into the casting and possibly peened over a bit. They are mostly (4 or 5 of them) mounted in small, fragile protrusions. The casting is aluminum, aluminum alloy or pot metal and probably fairly brittle. The geometry is such that I doubt if they can be pressed out on a standard arbor press. There are other approaches to removing them, but anything involving impact -- hammer blows, etc. -- would be dicey. Might have to be drilled through and ground out with a Dremel or something. Similar approach that modern dental surgeons use in extracting big molars <ugh>. They drill through the bifurcation (junction of roots in the base), breaking it up into 3 or 4 pieces in the jaw, then extract each separately to minimize trauma to the gum and jawbone socket. (Aren't you all glad you read this far?) It would be a piece of work. Barry

From paul at pdq.com Wed Jan 5 13:57:42 2005  
Subject: [R-390] Autotuners

My guess on removing them? If you can get to the back side, like you can on the various RF decks, the right size punch will pop them out with no trouble at all. I scavenged a junk 390A RF deck and removed all the bearings this way with no damage to them (that I could see) nor to the RF deck. Of course, the RF deck is stainless steel, but my sense was that the forces involved were so small, even brittle pot metal wouldn't be a problem.

I scavenged the bearings with the intent of seeing if they were the same as the ones in the R-391 autotune mechanism line shaft, but I haven't had a chance to look that closely yet. Paul

From drewmaster813 at hotmail.com Wed Jan 5 18:48:12 2005  
Subject: [R-390] Which Ballasubstitution? You decide.

Hello All,

On the subject of ballasubstitutions a question was raised by Kenneth.

He inquired as to which of two methods is the better. Each has advantages and disadvantages:

1. 12BH7 modification: same heat production as 3TF7, needs another tube, keeps the stock 6BA6's, looks reasonably authentic. 12BH7, 12BY7, 12BV7 can be used and can have gas, shorts, and/or no emission so long as the heater is good. Using a defective tube as a power resistor gives you a sense of accomplishment; that you got something for nothing.
2. Two 12BA6 and a paperclip: about 3.8 watts less heat on the IF deck, needs other tubes, big empty socket. 12BA6 are easy to find. I did not use the traditional paperclip to jumper the ballasocket; instead I wrapped a fine wire around the two correct pins on the defunct 3TF7 and plugged it back into the socket. Except for missing the very faint glow of the 3TF7 now gone dark, looks original.

Make your choice (Remember also many other substitution schemes). Drew

From barry at hausernet.com Wed Jan 5 19:50:57 2005  
Subject: [R-390] Autotuners

wrote: I would not risk the casting with a punch. The bearings may have been pressed in with some kind of glue. They take up a large proportion of the small protrusions of the casting. Very high probability of snapping off one of those. Something like a miniature gear puller might work -- also heating with a torch -- maybe the aluminum casting expands faster than bronze?

Anyway, I have a spare casting with shaft and bearings in good shape, so I'll go that route first. But, what I need first is to get a round tuit. ;-) Barry

From rtmay at htn.net Wed Jan 5 22:30:19 2005  
Subject: [R-390] re: wiring harness

Thanks to all who helped me find a wiring harness for my receiver. After tracing the wiring, I found that E124 located on the circuit board above the readout was burned beyond recognition. Darned if I can find it in my TM. Can somebody help? Thanks, Richard May, W8FCW,

Sorry, that should read "resistor R124" , Richard

From wd5jwy at tekwav.com Wed Jan 5 22:40:42 2005  
Subject: [R-390] re: wiring harness.

R124 RESISTOR FIXED, COMPOSITION: 2.7 OHM 1 WATT Per the Y2K manual. 73

From r390a at bellsouth.net Wed Jan 5 22:45:12 2005  
Subject: [R-390] Re: Autotuners 'n' bearing pullers

At one time I made such a puller to remove the bearings on an old-old score board timer mechanism I was rebuilding for my high school. Seems to me I used a simple thing made from a machine screw, a small socket from a cheap wrench set, a fender washer and an appropriate nut to fit the screw. I first threaded the old bushing, screwed the bolt into the threaded bushing, then using the socket affair as an "anchor." slowly tightened the nut until the bearing/bushing popped out. The replacement bearing was tapped into place with a rubber mallet driving a piece of dowel.

Dunno if that would work with the bearings in the '391 mechanism. Tom NU4G

From wd5jwy at tekwav.com Wed Jan 5 22:51:16 2005

Subject: [R-390] re: wiring harness.

FYI - from looking at the schematic, R124 is used as a current limiting resistor and supplies current to both I101 and I102 (dial lamps) from the 6.3 volt winding on T801 (power supply chassis). If R124 is open, both I101 and I102 should not be working. Possibly one of the lights developed an internal short which forced R124 to act like a fuse and burn open. I would check and/or replace the dial lamps prior to replacing R124. The dial lamps are both type #328 bulbs, by the way. Just some thoughts.

Good luck. 73

From bipi at comcast.net Thu Jan 6 20:31:17 2005

Subject: [R-390] Mechanical Filter Issue

Well, I'm making progress. The 2 khz filter has been replaced and is working fine now. I have completed an alignment of the radio and it is working reasonably well but needs some additional tweaking. It was interesting that although all of the RF slugs appear to be identical, I had to switch a couple of them to get them to peak at a reasonable spot in the coil form so I am not confident that they are same. I recommend marking them in a clear and concise manner prior to removal so you don't run into the same problems that I have had.

On to a new subject. I read that one can check the AGC capacitor C551, by switching between fast, medium, and slow AGC attack and that the signal strength should not change. Well, when I switch to the slow position, the audio increases dramatically and the signal strength, as measured by the carrier meter, drops approximately 20db. Should I replace C551? This cap is a fixed paper dielectric, 2.0uF +-10% rated at 500VDC. There are no direct substitute caps available that I am aware of. I have a 2.2uF electrolytic rated at 450VDC. Has anyone replaced this cap with a an electrolytic with success? I guess I'll leave it installed in the chassis and install the replacement cap below.

Any thoughts?

Thanks again to all that have provided responses to help me with my issues. 73 de Mike K7PI

Leigh, the high voltage rated plastic caps from computer monitors may supply you with a cheap, but high quality replacement for you 2uF paper job. They are used in the scanning circuits and the higher capacity ones (2.2uF in some models) are used as waveform correction in series with scan coils.

Also some models (17 inch and up) have a 2uF 400v or even 630V cap (at least in Australia, where we use REAL line power!) across the line input socket Usually largish rectangular jobs often white in colour, but should fit.

The others in the scanning circuits are in the 'J' series intended for high current pulse work and would provide very reliable service in the R390 where they would be merely idling along. Usually you can get old monitors off junk heaps, but if you have trouble finding one then I have a bundle of brand new ones somewhere in my shed and will post you one if you can give me a physical mail address Cheers John Byers

From bipi at comcast.net Thu Jan 6 22:49:26 2005  
Subject: [R-390] Mechanical Filter Issue

Well, for the record, the 2.2uF electrolytic worked fine in replacing C551 but did nothing to cure the problem describe below. So, more investigative work is required to correct this issue. In the process of reapeaking the IF and RF alignment, however, I found a significant problem with with the IF can, T207. As it peaks up, there is a pop and the sensitivity immediately drops way down. It can be brought back up by detuning the coil slug and then adjusting it back slowly. When peaked, the voltage slowly decays back down so I'm guessing I've got a bad cap in here to replace. I'm having fun now. I won't bother the list anymore until I get this puppy running correctly. Thanks to all for the help. 73 de Mike K7PI

From ghayward at uoguelph.ca Fri Jan 7 08:49:03 2005  
Subject: [R-390] AGC Cap

I wouldn't use an electrolytic. At the best the ones I've seen have a tolerance of +80/-20% and they leak. It would be like putting a resistor across the AGC! I did find a suitable substitute - I think its either 1 or 2 polycarbonate caps which give a replacement smaller than the metal box in there now. I put them in a box of stuff waiting to be installed when I pull the set out of the rack. I have a few things to do but currently, if it ain't broke, I ain't fixing it. Cheers es 73 de Gord, VE3EOS

What Gord said. Even a new electrolytic will leak about as much as your bad old oil/paper cap. The new cap \*must\* be "no"-leakage, for example any of the plastic film varieties. I suppose ceramic would be up to the job, but I've never seen one at 2uF/400V. It would be quite a lump!

I replaced mine with a small AC motor cap, again with a plastic dielectric. It fitted easily in the original can after gutting. That's not a pleasant job, but since it wouldn't fit under the chassis it was my only choice.

When cruising, the cap won't see more than about 200V, but if you have a SS power supply there will be more during warmup but not more than about 350 for sure. Since cap life depends more on cruising voltage than transients, even a 400V cap will last for generations.

**On a related note, I breadboarded my anti-moment-of-silence mod, and it looks good. As expected, 0.15uF is the optimum value if you like the old time constant. 0.1 and 0.22 are perceptibly off. Next week I'll do quantitative measurements. I'll modulate the signal generator with a slow square wave, and watch the AGC line on a scope. 73, Mike Andrews**

From barney.bindler at comcast.net Sat Jan 8 15:32:02 2005  
Subject: [R-390] motorola r-390 for sale

hello everyone,

i have a r-390 in excellent condition refurbished by rick mish that i need to sell..i also have a cy979a/urr that houses the radio.. many spare 6082's and 26z5w's among others .. those interested please call barney at 847-352-0662 thank you

From eldim at att.net Sat Jan 8 18:10:29 2005  
Subject: [R-390] AGC Cap

Is that AGC Cap an metal encased OIL BATH TUB with mflange mtg holes on each side? Or, is it a plain axial lead type? I know I have many here in the inventory. What was the Part Number? I concur, that using an electrolytic is not a good solution.

73, Glen Galati, KA7BOJ Tacoma, WA eldim@att.net

From ham at cq.nu Sat Jan 8 18:41:29 2005  
Subject: [R-390] AGC Cap

Hi

The AGC cap is an oil in metal type. I don't think it's a standard one though. Given the state of most of the oil and paper caps it's probably best to replace this one with a plastic insulation part. Popcorn noise on the AGC line is the last thing you want to have. Take Care! Bob Camp KB8TQ

From JGolden365 at aol.com Sat Jan 8 22:15:59 2005  
**Subject: [R-390] r390a problems**

My Motorola R390A, which Rick Mish reworked in August, has a recurring problem:

6 mHz: weak, images

7 mHz: dead

8 mHz: no true signals, but images

9 mHz: no true signals, but images

11 mHz: dead

12 mHz: dead

13 mHz: dead

14 mHz: dead

15 mHz: weak, no true signals, but images

anyone got any ideas about the source of this problem?

From pdulaff at earthlink.net Sat Jan 8 22:19:07 2005  
Subject: [R-390] Servicing Advice on Signal Generator URM-25D

Blank L117 has failed on my signal generator. The choke shorted to ground and also took out the 6X4 power supply rectifier. While I am waiting for the parts to arrive to complete this fix, what else in the unit should I change as a preventative maintenance item ? Paul - WB2NMI



From N4BUQ at aol.com Sat Jan 8 22:27:19 2005

**Subject: [R-390] r390a problems**

Are all the other bands working properly? Barry - N4BUQ

From JMILLER1706 at cfl.rr.com Sat Jan 8 22:45:10 2005

**Subject: [R-390] r390a problems**

Did a gear clamp come loose, causing the tuning chain to get out of sync?

From dallas at bayou.com Sat Jan 8 23:14:43 2005

**Subject: [R-390] r390a problems**

For the 6 and 7 look for a hanging rack in the 4 - 8 band. Ditto for the 8 - 15. Also, for the 8 - 15 look for a missing core, or a bad transformer. Best regards, Dallas

From odyslim at comcast.net Sun Jan 9 07:42:41 2005

Subject: [R-390] r390a problems

Maybe you should give rick a call. I am sure he can fix it right up.

From ham at cq.nu Sun Jan 9 10:22:45 2005

Subject: [R-390] Servicing Advice on Signal Generator URM-25D

Hi

The basic experience on an R390 seems to apply to a lot of older tube based gear. Pretty much:

- 1) Replace the electrolytic capacitors, especially the ones in the power supply.
- 2) Replace any of the black or brown body tubular paper and foil capacitors.
- 3) Look for any high wattage carbon comp resistors and check them. Replace if they are more than 30% out of value.

Different pieces of gear run at different temperatures. That seems to make some of them more prone to parts failure than others. I still claim that it is just a matter of time for some of the parts. The parts listed above show up on lists for just about every piece of gear out there.

I'm not sure what took out your choke. It may have been a wear out mechanism or it could have been some kind of line transient. One of the interesting failure mechanisms on a choke is a short on the output that heats the poor thing up. Heat attacks the insulation on the winding. Insulation breaks down next time power is applied. Result is a short to ground. Makes for a good argument to fuse the B+ lead. In an R390 it makes for a good argument to be sure the B+ fuses (we all do the B+ fuse mod don't we ...) are the correct size and type.

I would replace the tube rectifier with a pair of silicon diodes and a 47 ohm 5W resistor. The rectifier tubes just aren't worth tracking down any more. The same comment goes for just about any supply in any of these older pieces of gear.

Now for the nasty part.

Once you get the URM back to life you have to calibrate it. Like all military gear there's a manual somewhere that tells you more than you would ever want to know about how to do it. The same thing applies to stuff like TV-7 tube testers. We all (my self \*very\* much included) seem to overlook this little chore all too often .... Take Care! Bob Camp KB8TQ

From RLucch2098 at aol.com Sun Jan 9 12:27:54 2005  
Subject: [R-390] FS: US ARMY FL-5-C Audio Filters w/Pics!

Hi All;

I have about 8 of these filters which I don't need. They appear new, although I have not opened all up, just the one for the picture. They are heavy to ship so please be aware of that! If anyone is interested, I can weight up the amount wanted & send a total. I would like to get \$5.00ea for these gems. Pics:

<http://www.myradioroom.com/armyfilter1.jpg>

<http://www.myradioroom.com/armyfilter2.jpg>

<http://www.myradioroom.com/armyfilter3.jpg>

Tnx & 73...Rich WA2RQY

From stevehobensack at hotmail.com Sun Jan 9 14:09:59 2005  
**Subject: [R-390] r390a problems**

I might add to James Miller's email: Turn the MC change knob and the KC change knob until the dial reads 7+000. Look at the egg shaped cams. Are they reasonably close to the scratch marks?

From r390a at bellsouth.net Sun Jan 9 15:34:24 2005  
Subject: [R-390] OT: Need info on Central Electronics MM-2

Yea, it's off topic...

I am looking for a manual or at least a schematic for a Multiphase Products/Central Electronics MM-2 monitor scope. Thanks Tom NU4G

From JGolden365 at aol.com Sun Jan 9 16:10:34 2005  
Subject: [R-390] Re: R-390 Digest, Vol 9, Issue 14

those are all good suggestions. it came back from Mish with all bands working well until last month when the problems surfaced. it hasn't been moved so I presume that an impact-related event isn't the cause of the problem.

From barry at hausernet.com Sun Jan 9 16:18:54 2005  
**Subject: [R-390] r390a problems**

While that's a fundamental check -- lineup of the indexing marks -- nevertheless it's possible, even if

they do, that the situations Dallas described are still at work.

Slug racks can hang for a portion of their travel. You have to crank the RF deck up and down through all the MC positions and pay particular attention to the racks as they move downwards -- or are supposed to be -- that the cam follower rollers are truly in contact with the cams. Tap gently on the rack(s) to make sure of this as it is often difficult to see. I had a similar situation and the symptoms sound very familiar - - dead bands, images and other strange stuff. Do the same with the KC knob and watch the cams at various MC positions.

A loose or broken clamp can also play clever tricks. There may just be a hairline crack that is barely visible. The clamp is tight on the screw side, but loose on the split side and may act like a clutch -- grabbing through part of the rotation, slipping on the other part, depending on the mechanical resistance, which varies. This can be such that at "7+000", the marks on the cams line up on their respective index points - at least I think so. Watch the gears and shafts while working the MC knob -- a gear may rotate in synch with the shaft for part of the travel, then slip the rest of the way. Crank it backwards, slips then grabs, etc.

If a slug rack is in fact hanging up, detach the two rack springs from the top (they may stay attached at the bottom) and lift straight up. See if any slugs are hanging at a substantial angle. If so, gently bend the "springy thingy" -- coiled rod -- to straighten. If when straight, one or more still doesn't line up well enough with the coil center, make use of the lateral adjusters. While you're at it, wipe off the slugs with a clean dry cloth and use a cotton swab (dry) to clean any dust out of the coils. Don't force anything. Line up the slugs with the coils and re-install the rack. It should be able to move up and down without any binding or sticking. Reattach the rack springs and try again.

You might also have a broken or dropped slug. Sometimes the "springy thingy" comes loose from the brass bristol screw. This can be epoxied. Slugs can also be glued back together if broken. Use a very thin coating of epoxy. I have variable results with crazy glue on things, but might be OK. Clean off any excess ASAP.

Very likely based on what you report that it's one of the three. Just look very closely at the mechanicals as you turn the knobs -- don't get distracted, don't assume, and ... don't blink.

Hope this helps & good luck .. Barry

From pdulaff at earthlink.net Sun Jan 9 21:42:46 2005  
Subject: [R-390] Servicing Advice on Signal Generator URM-25D

Bob

Thanks for the input. I have it on the bench now. It is very well built. There aren't any black beauty caps in this thing. They use metal tubular decoupling caps that is flange mounted with a glass seal for the terminals. Resistors look like new but I will check them for increase in value. The RF choke that shorted to ground looks like the plastic terminal that holds the end of the wire had cold flowed over the last 40 + years and changed shape enough that the terminal contacted the ferrite core of the choke and shorted that side of the choke to ground. I have the manual for the unit and was studying it since I figured I had better check both frequency and signal output calibration after I get it back together. Another thing to consider on these units is lubricating the worm gear for the turret drive . Works OK but the grease is all dried out. Paul - WB2NMI

From N4BUQ at aol.com Sun Jan 9 21:50:36 2005  
Subject: [R-390] Silkscreening a back panel

Has anyone on the list ever tried restoring a back panel's lettering? I have one that I'd like to scrub clean, have it alodined, and then the lettering redone. It has some corrosive streaks and spots that would look so much better if refinished. I hate to lose the lettering, but I don't know how to reproduce it. Anyone have a "do-it-yourself" silkscreening kit?

By the way, I managed to straighten the back panel I have that was dented so badly. Just some strategically placed wooden blocks, a protective sheet, and a regular hammer did wonders for it. Whatever dented left two small marks that won't come out, but it's hard to tell it was ever damaged. Now if I could get the other panel looking good too... Thanks, Barry(III) - N4BUQ

From dallas at bayou.com Mon Jan 10 09:08:04 2005

Sure. Let me preface my remarks by saying that much of what is said about preventive maintenance on the reflector is baloney.

Take, for example, the "resistor replacers." You can't measure most resistors accurately in circuit unless you "lift at least one end," and if you do that, you might as well go ahead and replace it. Ditto for the "capacitor replacers." Unless there is some strong reason to replace a component (it is burnt dark brown or black, cracked case, oil leaking out, hot enough to boil water, etc.), leave it alone. Just because the case of a capacitor is black or brown does not mean it should be replaced. To illustrate how silly that is, I could say (tongue in cheek) replace all capacitors with a yellow case. Would you do that?

There are, of course, a few cases where you should replace capacitors. The mechanical filter blocking capacitor of an R-390A is an example of such a case. Now I don't really believe the story that the R-390A filter blocking capacitor failed in some R-390A many moons ago, and the operator switched through all the filters "killing" all the filters before he discovered what had happened. But because I don't want to tempt fate, I have replaced that cap with a disc ceramic cap having a much higher voltage rating in all of my R-390A's. And any black case cap in an SP-600 should be replaced immediately before you even turn it on (but you can usually see the cracks in the cases of the SP-600 "black beauties").

As for the URM-25D, every one I have seen has tan cased MicaMold oil filled capacitors, and at least one of those is leaking oil. Some of them are tough to get to, but every one should be removed and replaced. I like the "yellow wraps" available from AES for replacements.

Personally, I would never convert any tube rectifier power supply to solid state, if only for aesthetic reasons. Tube rectifier power supplies "come up gently." If you convert to solid state, every time you turn your gear on is like hitting it with a big hammer. And anyway, what is the point of removing tubes from tube gear? Too cheap to buy the appropriate rectifier tubes? If we are going to remove the rectifier tubes, let's remove all the tubes!!! And then why buy tube gear and convert it? Let's just buy stuff that is already all solid state!!!!

And electrolytics... dare I bring up that topic again.? I think not because the doctor is probably lurking and I am not in the mood right now for a tussle. But here is a war story I don't think anyone can object to. A European friend of mine sent me his Telefunken E 1501 to fix. While fixing it I noticed that the power supply was quite noisy (loud mechanical hum). The E 1501 is modular, so I removed the power supply module to give it a look-see. While I was examining the power supply I noticed that a previous

owner replaced two of the electrolytics in a misguided attempt to reduce the mechanical hum. Why have I concluded this? Because the "zipper crew" did not remove the old electrolytics, but merely "scabbed in" the replacements. So I measured the resistances of the old electrolytics with my DVM. They seemed fine (no shorts, no leaks, reasonably high resistance after charging for a while). Later I will actually power up the electros with a DC supply and check them for leakage under operating voltage. If they pass that test, I will remove the replacements and restore the originals. I have seen this kind of thing before in a Hammarlund HQ-180A. Fortunately, that zipper crew also left the old electrolytic can in place, and I restored it. Have fun, Dallas

From jrg.dk3ng at t-online.de Mon Jan 10 10:41:00 2005

**Subject: [R-390] Weak receive volume**

Looking for ideas as to the possible source of this problem:

Very low receive volume when using AGC, very strong volume when in MGC and RF gain control cranked fully clockwise.

Also, RF gain control seemingly active over only, say, last 10 percent of pot with very sharp transition from no signal and to full blast at the 90% point.

Thank you in advance for your suggestions. 73 J R "Jo" Groeger

"During times of universal deceit, telling the truth becomes a revolutionary act." George Orwell

From ghayward at uoguelph.ca Mon Jan 10 15:25:19 2005

Subject: [R-390] Re: Weak Receive Volume

It looks like there's an open in winding (carbon film) the RF gain pot. It biases the cathode of the RF amp so no current, no signal. It might not be completely open so you get a bit of signal. Deoxit?

Something looks like its driving the AGC negative (check the voltage on the back panel). Failure of the .1 uF in the AGC time constant section might do it? Cheers es 73 de Gord, VE3EOS.

From rtmay at htn.net Mon Jan 10 16:16:03 2005

Subject: [R-390] Cleaning sub-chassis

Wonder if anybody can give me some tips on cleaning an R-390A sub-chassis. I want to clean a crystal osc module. I think if I remove the oven cover, the T-207 cover and remove the crystals, I can give this thing a bath. I remember reading somewhere how this is done but can't find the article. The inside is pristine but the outside is really dirty. Any tips? Richard, W8FCW

From JMILLER1706 at cfl.rr.com Mon Jan 10 17:12:51 2005

Subject: [R-390] Cleaning sub-chassis

I wouldn't recommend a water bath, no telling what water will do to materials when absorbed. Just my personal preference. I use Q tips and "simple Green" diluted, then "Big Bath" degreaser spray, also removes moisture. You hear of people "bathing" or "dish washing" their old radios, but that's not my cup

of tea. 73 JM

From ham at cq.nu Mon Jan 10 20:25:06 2005  
Subject: [R-390] Cleaning sub-chassis

Hi

There are three items on a 390A that probably are not a good idea to drown in water. The crystal enclosure, the PTO, and the plug in crystal oven. All have insulating material in them and will be a bear to dry out.

Opinions differ on the value of water dunk cleaning the rest of the radio. Personally I would advise against it. The metal chassis parts and disassembled gears are fine to scrub and wash all you want. The modules full of electronics are not going to take a soak in water very well. You will not kill the radio this way - they have sat out in the rain and survived. It just doesn't improve them any.

Most of the dunk cleaning was done back in the days of big open tanks of solvents. The EPA frowns on almost all of the things that we once used for this kind of stuff. If you are a part of the world where Freon or Tri-chlor is still legal then dunking might be a reasonable approach. I still would not dunk the stuff with insulation in it though.

WD-40 or alcohol on Q tips seems to be the most common way to clean the modules. With the WD-40 you can get residue and the alcohol often contains water. In both cases less is better. Blowing the whole assembly off with compressed air is a nice touch once you are done. It will get trapped solvent out from under stuff and you have to get pretty wild before you will blow parts out of an R390 with an air hose ... Take Care! Bob Camp KB8TQ

From ham at cq.nu Mon Jan 10 20:43:26 2005  
Subject: [R-390] Servicing Advice on Signal Generator URM-25D

Hi

I asked this back a few years ago and maybe it's time to ask it again.

Has anybody seen any of the black or brown body / epoxy coated paper and foil capacitors made in the 1950's and 1960's show up good?

As originally asked the question was specific to the R-390. Since then I have seen a bunch of posts on a number of reflectors about these parts. They all seem to indicate these parts are a problem.

At least in my experience, testing pulls from a couple dozen radios they show up leaky (as in 5X out of their original specification) roughly 80% of the time. They show up at least 2X the specification >90% of the time. Certainly there are places where you will not notice leakage even if it is 5X the specification. Most of these seem to get used in high impedance circuits where you will notice the effect though. Take Care! Bob Camp KB8TQ

**From chacuff at cableone.net Mon Jan 10 21:33:08 2005**  
**Subject: [R-390] Cleaning sub-chassis**

Hi Richard,

**I spray em down with a solution of Simple Green or 409 and work it around with a brush then wash it off with the water hose on fairly low pressure. You can then rinse it off with Distilled Water to deionize everything. Needs to be rinsed real good. Then lay the thing out in the bright sun for a couple hours in a dry spot. I guess one could also blow it out with a blow dryer and get the whole chassis pretty warm to bake out any moisture.**

**Treat any contacts to some deoxit and reassemble. Works for me... Cecil...**

From dallas at bayou.com Mon Jan 10 21:19:18 2005  
Subject: [R-390] Servicing Advice on Signal Generator URM-25D

I have never seen a black capacitor in an R-390A. You must be confused. The bad black capacitors were in the SP-600's (except for some of the very last production, which had disc ceramics). If any of those black beauties were in an R-390A, you wouldn't have to test them to figure out they were bad. You could see the cracks. I seem to recall that there were other black capacitors from the 50's that were O.K., but don't quote me on that. Have fun, Dallas

From DCrespy at aol.com Mon Jan 10 21:45:10 2005  
Subject: [R-390] Servicing Advice on Signal Generator URM-25D

Dallas' note below.. He makes a great point, if it isn't broken, don't .....

About resistors, just check the resistances from the tube pins to ground (most manuals have a chart). I usually find at least one with a problem to correct. Otherwise, no wholesale replacements. (I confine recapping to electrolytics and black beauties.) 73 Harry KG5LO Saline MI :

Sure. Let me preface my remarks by saying that much of what is said about preventive maintenance on the reflector is baloney.

Take, for example, the "resistor replacers." You can't measure most resistors accurately in circuit unless you "lift at least one end," and if you do that, you might as well go ahead and replace it.

From RIKKA3TXR at aol.com Mon Jan 10 21:48:07 2005  
Subject: [R-390] Cleaning chassis suggestion

TO W8FCW : RE;Cleaning chassis.... I'm working on my first ' 390a and was stumped with the same problem, tried every cleaner I could find, tried them ALL. **My wife (N3MAR) handed me "Mr. Clean Brand" scrub sponges and a spray bottle of his Mean Green equiv....**Just apply, wait 20 seconds and wipe..I was amazed. It was the only thing that would remove tobacco crust. Try an old tooth brush with a bit of the spray on it and the chassis came out great. GREAT job on front panel that I thought was hopeless using the sponges... thank's to the XYL....KA3TXR

From dallas at bayou.com Mon Jan 10 21:47:28 2005  
Subject: [R-390] Servicing Advice on Signal Generator URM-25D

The tube pin resistances seldom correspond to the values of resistors in an R-390A (or other receiver). And some of numbers in the tube resistance charts are not even correct. I have yet to see a resistor in an R-390A, other than one that was burned brown or black (due to a short or whatever), that needed replacing. Like I said, if you want to know the value of a resistor in an R-390A, you will usually have to "lift" one end, and then you might as well go ahead and replace it. But then we are back to the "resistor replacing" game, aren't we? (though perhaps not what the original resistor replacers intended)

Black beauties? Where are the "black beauties" in an R-390A? I have seen lots of R-390A's, from the first production Collins's and Motorola's to the 1967-68 EAC's, and I have never seen a black capacitor in an R-390A. Surely you are confused, and thinking of the SP-600. Have fun, Dallas

From bipi at comcast.net Mon Jan 10 22:07:57 2005  
Subject: [R-390] e-mail for Chuck Rippel

Anyone have a current e-mail address for Chuck Rippel? The one posted on his site keeps bouncing my e-mails back to me. Thanks73 de Mike K7PI

From N4BUQ at aol.com Mon Jan 10 22:17:34 2005  
Subject: [R-390] Anyone know where I can get some alodining done?

I called a local place and they quoted me a rather high price (\$175 minimum charge). I have the two side panels, the two center supports, and the center shelf from two R390A's that I'd like to have alodined. I'm not exactly cheap, but I think \$175 is a bit high to do this small lot. I figure someone might know where they can be done a lot cheaper than that and it would still be worth it shipping both ways and all.  
Thanks, Barry(III) - N4BUQ

From chacuff at cableone.net Mon Jan 10 23:09:17 2005  
Subject: [R-390] Servicing Advice on Signal Generator URM-25D

There are brown colored capacitors that resemble the design of the black beauty cap. I think it has been accepted by most that those caps are as prone to failure as the black beauty and they are being replaced for that reason.

Personally I haven't had a chance to check any of them to see if they have the same leakage characteristics as the infamous black beauty or not. I can't say I have noticed any that are cracked, but I do believe I have heard stories about some that were found to be.

I'm not sure what the Pro's who are restoring these radio's for profit (I use that word loosely...I've been there) are doing...I expect a wholesale replacement of paper caps as evidenced by the cap kits that are offered by some. Problem is if you leave them in you will always be nagged by that question floating around in your mind about whether the performance could be improved by replacing them. You could lift one end and check them as long as you do it correctly by measuring them at their rated voltage...but by that time you are half way to replacing the darned thing so why not go ahead and finish the job...right! I don't know...what's the right answer...is there really any harm in replacing them if you are up to doing the job and it's done properly. Is there any documented evidence that replacement degrades performance...I would guess not.



Resistors...now they are a little easier. Not hard to measure usually. Some spot checks will usually give you a pretty good idea if work is needed or not.

I certainly don't advise unnecessary replacement of parts....but for the most part paper caps have a very bad reputation. I don't trust them! Cecil Acuff

From N4BUQ at aol.com Mon Jan 10 23:26:23 2005  
Subject: [R-390] Servicing Advice on Signal Generator URM-25D

I know the brown beauties in my Motorola decks were visibly cracked and, therefore, had probably taken in moisture and as a result were most likely bad. I replaced them wholesale with OD's. Not sure if I'll do the same on the current unit as the ones in it appear physically in better shape, but I think I'll probably replace them. I've just heard too much about the life expectancy of them to take chances.  
Barry(III) - N4BUQ

From jamminpower at earthlink.net Mon Jan 10 23:49:05 2005  
Subject: [R-390] Anyone know where I can get some alodining done?

Don't bother. You can do it yourself.

**Get a bottle of Alodine 1201 and Alumiprep 33. Clean the panel real well. Then clean it again with Alumiprep 33 and a scrubby sponge. Be sure and wear rubber gloves - the stuff is phosphoric acid and is quite nasty. Your alluminum will never look so shiny as when you finish scrubbing it in phosphoric acid. Rinse immediatly with lots of distilled water, then paint with or dip in the Alodine for a few minutes. Rinse again with distilled water, let it dry out, and voila! One corrosion-proof finish. Watch the temperature - the solutions need to be room-temperature.**

**The problem is getting the stuff. You can get it at [www.aircraftspruce.com](http://www.aircraftspruce.com), but they will hit you with a \$30 or so hazardous materials charge. You can probably find it locally at some aircraft shop or machine shop or professional tool supply. Good luck! James A. (Andy) Moorer  
[www.jamminpower.com](http://www.jamminpower.com)**

From barry at hausernet.com Tue Jan 11 09:27:41 2005  
Subject: [R-390] Cleaning chassis suggestion

Tobacco "crust"? The tar deposits from smoke generally come off easily with many cleaners, though may take repeated wiping down. Are you sure you didn't strip off the MFP coating? It's of similar color, but very tough and usually has a gloss to it. Not particularly a good idea to remove it and it's somewhat hazardous when loose -- it's a varnish laced with mercury compounds and other nasty stuff. Many more times hazardous than tobacco tar with traces of nicotine. Not aware of any casualties though. Barry

From hankarn at pacbell.net Tue Jan 11 10:15:27 2005  
Subject: [R-390] Anyone know where I can get some alodining done?

**You can use RD DEvil lye to clean it and rinse in plain old water then dip immediatly in the Alodine for several minutes then into another bath of regular water. NONE OF THE PROCESSORS THAT I KNOW OR USE USE "DISTILLED WATER" It is a waste of money. I**

**Speak from experience and the several 100's of pieces that I process and sell all of the time.**

**BE CAREFUL WITH THE LYE, it is cheaper than alumiprep and is caustic to about the same extent. Does as good or better. Hank KN6DI**

From ham at cq.nu Tue Jan 11 18:18:09 2005  
Subject: [R-390] Cleaning chassis suggestion

Hi

The effects of MFP removal all depend on how good you are at resisting the temptation to eat the removed varnish .... Take Care Bob Camp KB8TQ

From ham at cq.nu Tue Jan 11 18:35:35 2005  
Subject: [R-390] Cleaning chassis suggestion

Hi

Actually the biggest issue with MFP is a bit more simple. When you do a repair on a MFP coated radio you often will have to solder an MFP coated solder joint. The stuff that burns off of it probably isn't very good for you. Of course neither are lead and rosin fumes ...

Best bet is to remove the MFP before you hit the joint with the solder. That makes them look nice and pretty when you are done. Charred MFP in the solder joint is sort of ugly looking. Take Care! Bob Camp KB8TQ

From bill.riches at verizon.net Tue Jan 11 19:51:19 2005  
Subject: [R-390] Fw: Hmmmmmm!

WOULDN'T IT BE GREAT TO TURN ON THE TV AND HEAR OUR NEXT PRESIDENT GIVE THE FOLLOWING SPEECH?

And I wouldn't care what party he represented.

My Fellow Americans:

As you all know, the defeat of Iraq regime has been completed. Since congress does not want to spend any more money on this war, our mission in Iraq is complete.

This morning I gave the order for a complete removal of all American forces from Iraq. This action will be complete within 30 days. It is now time to begin the reckoning.

Before me, I have two lists. One list contains! the names of countries that have stood by our side during the Iraq conflict. This list is short. The United Kingdom, Spain, Bulgaria, Australia, and Poland are some of the countries listed there.

The other list contains everyone not on the first list. Most of the world's nations are on that list. My press secretary will be distributing copies of both lists later this evening.

Let me start by saying that effective immediately, foreign aid to those nations on List 2 ceases immediately and indefinitely. The money saved during the first year alone will pretty much pay for the costs of the Iraqi war.

The American people are no longer going to pour money into third world Hell-holes and watch those government leaders grow fat on corruption. Need help with a famine? Wrestling with an epidemic? Call France.

In the future, together with Congress, I will work to redirect this money toward solving the vexing social problems we still have at home

On that note, a word to terrorist organizations. Screw with us and we will hunt you down and eliminate you and all your friends from the face of the earth. Thirsting for a gutsy country to terrorize? Try France, or maybe China.

To Israel and the Palestinian Authority. Yo, boys. Work out a peace deal now. Just note that Camp David is closed. Maybe all of you can go to Russia for negotiations. They have some great palaces there. Big tables, too. By the way Palestinians, we are no longer going to restrain Israel!

I am ordering the immediate severing of diplomatic relations with France, Germany, and Russia Thanks for all your help, comrades.

We are retiring from NATO as well. Bon chance, mes amis.

I have instructed the Mayor of New York City to begin towing the many UN diplomatic vehicles located in Manhattan with more than two unpaid parking tickets to sites where those vehicles will be stripped, shredded and crushed. I don't care about whatever treaty pertains to this. You creeps have tens of thousands of unpaid tickets. Pay those tickets tomorrow or watch your precious Benzes, Beamers, and limos be turned over to some of the finest chop shops in the world. I love New York.

A special note to our neighbors. Canada is on List 2. Since we are likely to be seeing a lot more of each other, you folks might want to try not pissing us off for a change. Mexico is also on List 2. President Fox and his entire corrupt government really need an attitude adjustment. I will have a couple of extra tank and infantry divisions sitting around. Guess where I am going to put em? Yep, border security. So start doing something with your oil.

Oh, by the way, the United States is abrogating the NAFTA treaty---starting now. We are sick and tired of the one-way highway.

It is time for America to focus on its own welfare and its own citizens. Some will accuse us of isolationism. I answer them by saying, "darn tootin"

Nearly a century of trying to help folks live a decent life around the world has only earned us the undying enmity of just about everyone on the planet. It is time to eliminate hunger in America It is time to eliminate homelessness in America. It is time to eliminate World Cup Soccer from America.

To the nations on List 1, a final thought. Thanks guys. We owe you and we won't forget. To the nations on List 2, a final thought. Go to Hell. God Bless America. Thank you and good night.

If you can read this, thank a teacher. If you are reading it in English, thank a soldier!!!!!!!!!!

From bill.riches at verizon.net Tue Jan 11 19:59:40 2005  
Subject: [R-390] Hummm forward

My apologies to the list - I hit the wrong address in my address book and an email got forwarded to this list by mistake. 73, Bill Riches, WA2DVU Cape May, NJ

From polaraligned at optonline.net Tue Jan 11 20:12:01 2005  
Subject: [R-390] Fw: Hmmmmm!

Yeah. I would not hold my breath waiting for a President and congress with balls. Just never going to happen. Politicians, like the asshole hollywood folks, are just too far detached from reality. Scott

From chacuff at cableone.net Tue Jan 11 20:20:44 2005  
Subject: [R-390] Hummm forward

Bill....You're holding back buddy....I think you should tell us what you really think!

Bubba....donning my Nomex underoos!

From ham at cq.nu Tue Jan 11 20:35:17 2005  
Subject: [R-390] Caps and more caps

Hi

I must be shopping for my R-390A's at the wrong store.

Of course I don't seem to see very many modules from later builds. Certainly the later modules I have seen have plastic insulation parts rather than paper insulation capacitors.

I have found both black and brown coated tubular paper capacitors in R-390A's. I agree that cracking is pretty common in the black version and less common in the brown ones. As far as I can tell the contractors either got a deal on black ones or brown ones. The modules rarely have a mix of black and brown parts.

What got me started on all this capacitor stuff was a pair of IF decks both with black caps. Both decks had at least some of the capacitors cracked. In both cases all of the paper caps leaked a lot. I carefully removed each of them in a fashion that I could reasonably solder them back in. Needless to say this is a bit more work than just yanking them out. All that work was wasted in those cases.

Now I normally check one capacitor in a module by lifting the ground lead. If it is leaky then I step through the rest of the caps on that module clipping each one out and testing each of them. I have yet to find very many of the paper caps (brown or black) that did not leak quite a bit when biased at > 60 volts and observed for long enough to stabilize the current.

The plastic insulation capacitors I replace them with test just fine on the same test. Interestingly they don't even leak at a level close to their specification. That's what I would expect from a good capacitor of this type, leakage well below the specified maximum.

The only exception I make are for the filament and thermostat bypass capacitors. As far as I can see they could leak an awful lot and not have much affect on anything. I generally don't fiddle with them unless they are cracked or otherwise visually defective.

One thing that I started out doing on the paper caps and then stopped doing was to check the capacitance. I found a number of parts that leaked but never found one that was off value. I don't know if this is true across the board or not. I assume it's valid though.

Electrolytics on the other hand certainly leak, change value and change ESR. I never have checked ESR on the paper parts ... I check the electrolytics for both leakage and value. With an electrolytic I don't worry about the leakage until it's about 5X the specification. I don't see how an extra few ma of current in a power supply bypass cap is going to bother the radio much at all.

By no means am I suggesting we throw away good parts. Life is so short to spend it bulk swapping one good part for another. I simply have not seen enough of the paper caps show up good yet to make it worth saving any of them. If four out of five are bad who knows how long the fifth one will hold out .... I agree that in one case out of 4 that makes for a good part / good part swap but that's the choice I make. Take Care! Bob Camp KB8TQ

From dallas at bayou.com Tue Jan 11 20:54:14 2005  
Subject: [R-390] Re: Caps and more caps

Perhaps you are shopping at the wrong R-390A store, but it is far more likely that you are mistaken. I have carefully inspected and rebuilt between 10 and 20 R-390A's, and a good friend of mine has carefully inspected and rebuilt well over 100. Neither of us have ever found a bad (cracked or otherwise) brown encapsulated paper capacitor in an R-390A. Neither of us have ever seen a black encapsulated capacitor in an R-390A, period. We have found bad capacitors in R-390A's, but they were all (red or green) silver micas, and most of those were in oscillator decks.

Clearly you and others have decided to replace capacitors come hell or high water. So be it.

If it will make you feel any better, I did replace a brown beauty (or maybe two) in a 1968 EAC IF deck whose BFO long term stability was not as good as I thought it should have been (about 1 Hz per hour or so). But I don't believe the brown beauty was the cause. I believe it was a silver mica. I replaced the brown beauty and other components at the same time rather than replace one at a time because I was in a rush, so I don't really know which one (or more?) was bad. Have fun,

From wewilson at knology.net Wed Jan 12 06:04:46 2005  
Subject: [R-390] Re: Caps and more caps

Dallas,

I keep a bag of old capacitors that I've removed from R-390As. I randomly pulled 10 of the brown tubular ones out of the sack this morning. I counted 7 of those with cracks. While it is certainly true that not all capacitors need to be replaced, I'd err on the side of replacing too many than too few, especially if it is filled with the brown tubulars. Walter Wilson - KK4DF

From dallas at bayou.com Wed Jan 12 07:22:46 2005  
Subject: [R-390] Re: Caps and more caps

Walter,

I do not believe you. The laws of statistics say that if 7 out of 10 brown beauties were cracked (as you claim), then my friend and I would have observed several hundred cracked brown beauties. The odds of us seeing none (which is what we saw) are way beyond 1 in a trillion. Dr. Dallas Lankford

From dallas at bayou.com Wed Jan 12 07:54:53 2005  
Subject: [R-390] Note To The Capacitor Replacers

If you all are talking about those rained-on, snowed-on, sun-baked, frozen, left in the parking lot for years, or otherwise abused R-390A's, then my remarks about capacitors do not apply to them. I would not touch one of those with a 10 foot pole. There are people who believe they can be rebuilt. I don't. I wouldn't buy any R-390A nowadays that I couldn't personally inspect before I bought it, or that didn't come with a return guarantee that it hasn't been abused.

From N4BUQ at aol.com Wed Jan 12 08:29:46 2005  
Subject: [R-390] Re: Caps and more caps

Again, I can only concur with Walter. A large percentage of the "brown beauties" in my '56 Motorola had cracks that could easily be seen. I don't think mine was abused, but just old. Barry(III) - N4BUQ

From dallas at bayou.com Wed Jan 12 08:32:25 2005  
Subject: [R-390] Re: Caps and more caps

What you and Walter have said violates the laws of statistics. That is why I say I don't believe you. Are you and Walter friends?

From: <N4BUQ@aol.com> Sent: Wednesday, January 12, 2005 7:29 AM  
Subject: Re: [R-390] Re: Caps and more caps

> Again, I can only concur with Walter. A large percentage of the "brown beauties" in my '56 Motorola had cracks that could easily be seen. I don't think mine was abused, but just old. >  
> Barry(III) - N4BUQ

From BRingwoo at csir.co.za Wed Jan 12 09:02:36 2005  
Subject: [R-390] Re: Caps and more caps

Doesn't it depend on where the caps are stored / used ? I'm sure that caps in Durban (a hot sweaty salty place) will be cracked and corroded long before caps in a mild dry climate like I'm used to. It might account for the statistical differences. - Bryce

From dallas at bayou.com Wed Jan 12 08:58:20 2005

Subject: [R-390] Re: Caps and more caps

Yes. Of course, you are right. This is basically what I said a few emails ago which, apparently, the capacitor replacers failed to read. So here it is again for those who missed or ignored it the first time around.

If you all are talking about those rained-on, snowed-on, sun-baked, frozen, left in the parking lot for years, or otherwise abused R-390A's, then my remarks about capacitors do not apply to them. I would not touch one of those with a 10 foot pole. There are people who believe they can be rebuilt. I don't. I wouldn't buy any R-390A nowadays that I couldn't personally inspect before I bought it, or that didn't come with a return guarantee that it hasn't been abused. Dallas

From dallas at bayou.com Wed Jan 12 09:20:09 2005  
Subject: [R-390] Old Brown Beauty Statistics Lesson

Disclaimer:

"If you all are talking about those rained-on, snowed-on, sun-baked, frozen, left in the parking lot for years, or otherwise abused R-390A's, then my remarks about capacitors do not apply to them. I would not touch one of those with a 10 foot pole. There are people who believe they can be rebuilt. I don't. I wouldn't buy any R-390A nowadays that I couldn't personally inspect before I bought it, or that didn't come with a return guarantee that it hasn't been abused."

The fact that your R-390A was an (old) Motorola [see below] does not change the fact that your claims violate the laws of statistics.

Among the R-390A's that I have carefully inspected and rebuilt were two 1956 Motorolas. Let's see... how many brown beauties were in those two. I am not sure. There were about 12 each in the IF decks, and at least 1 each in the RF deck. That is a total of 26. If on the average we would expect out of 10 to be cracked (your claim), what is the probability that none were cracked (my observation)? The answer is simple statistics. Multiply 3/10 by itself 26 times. That is 2.5419 time 10 to the -14 power. So the odds that I would observe none when you observed 70% cracked are 1 in 254,190,000,000,000. This violates the laws of statistics.

The above does not include a 3rd Motorola IF deck that I still own, in which none of the brown beauties were cracked or bad. If I included it, the odds would be even more outrageous, namely 1 in 1.3509 times 10 to the minus 20.

BTW, both of those Motorolas are alive and well (about 20 years after I rebuilt them), with none of the brown beauties replaced (and none have cracked or gone bad in the meantime). The only problem which has developed in either is a switch which will not turn off in one of them. The owner, who lives nerby, is too lazy to bring it by for me to fix.

From chacuff at cableone.net Wed Jan 12 09:43:38 2005  
Subject: [R-390] Re: Caps and more caps

Bryce and Group,

The storage issue may be true....

What is also true is that as well versed in Statistics as Mr. Lankford appears to be he should also recognize that the 10 to 20 radio's he has had experience with is way too small a sample relative to the total production numbers of R-390A's through the years to be speaking in the absolutes he is! That holds true even if you can take credit for your Friends 100 or so Dallas. I'm not a math nor statistics Professor but a mere trade school grad with nearly 40 years of hands on experience (and still working 40 to 60 hrs. a week) and one thing I have learned is that in this business anything is possible....except when we close our minds. You never say never and just when you think your experience with something is "Absolute" you find out differently!

On the subject of the "Blue Stripers" there are many on this list including myself that own, have already or are in the process of rebuilding them. I probably requires more work but it's worth it! It's arrogant of you to tell these people that they don't possess the skills to pull it off just because you are unwilling. There are very few of the pristine surplus R-390A in the market anymore..most are tired old depot hounds that deserve our time and expertise too! Heck who wants to do the easy ones....that's no challenge! Keep an open mind Dallas...there's more to learn yet! Cecil....

From bjtatum at ev1.net Wed Jan 12 10:06:05 2005  
Subject: [R-390] Capacitors

Hello-

Regarding the R-390A capacitor thread I will throw in this observation :

On an older IF module { Collins built } the type of capacitors were the large tubular ones that appeared black, as best I remember, with color-coding rings around them. They appeared as if they were made in two halves, with a seam running between top and bottom halves. I recall finding one of them, mounted over against the side wall, in the area of the BFO / detector, that was separating at the seams. It was very noticable. Anyway, the day I bought this IF deck { at a swap meet, by itself } a good friend of mine was looking it over and commented about this type of capacitor. I thought he referred to it as a "Black Beauty". Anyway, he told me these type capacitors were notorious for problems { leakage } and one could actually have a tiny battery type effect in a circuit. { Dallas, this friend of mine purchased your modified 51J4 about 10 years back } I put stock in my friends advice as he has restored many, many older radios and would remove these type capacitors upon sight. Anyway, just a bit of information to chew on. Thanks, Byron, WA5THJ.

From N4BUQ at aol.com Wed Jan 12 10:33:25 2005  
Subject: [R-390] Re: Caps and more caps

Well, if I still had the caps (they're residing in the landfill at the moment), I could send them to you. But, then again, you might not believe I took them out of an R390A so it would be pointless.

While I've never met him, I'd like to think Walter is a friend of mine. Barry(III) - N4BUQ

From chacuff at cableone.net Wed Jan 12 10:38:54 2005  
Subject: [R-390] Re: Caps and more caps

Actually Dallas I went out last evening and looked at two of my "Blue Striped" radios and found no



cracked capacitors. The underside of all the modules were pristine.

Not sure the St. Julians Creek pile was subjected to a whole lot more than some that were deployed in Vietnam from the reports I have heard from actual users of the radios there. Cecil...

From dallas at bayou.com Wed Jan 12 10:32:33 2005  
Subject: [R-390] Re: Caps and more caps

You are right. I wouldn't believe you. Statistics say your claim is impossible, unless your R-390A was abused, which you say it wasn't. The only one of your group that I believe so far is Cecil who admitted his R-390A with cracked brown beauties was rained on, et al.

From sdman at cableone.net Wed Jan 12 11:02:22 2005  
Subject: [R-390] Caps, Caps, Caps

Someone please take a picture of a R390A with "Black Beauties" or "Brown Ones" so Dallas can see for himself.

Dallas you seem like an outstanding guy but aren't you are being a little rude to the guys on the Forum?

Give them the benefit of the doubt. Wasn't there over 50,000 R390A's produced? Seems like a very small sampling that Dallas used.

What was that saying on Statistics? If you stand with one food in a bucket of hot water and the other in cold you are on the average comfortable. Sam

From dallas at bayou.com Wed Jan 12 10:49:35 2005  
Subject: [R-390] Re: Caps and more caps

So now you are changing your story. You sure had me fooled with your first email. We were discussing cracked brown beauties and other defective capacitors. So what was the point of your email? Trying to explain statistics to me? Or just generally jerking me around? I'll bet it was the latter. Why don't you just go away?

From dallas at bayou.com Wed Jan 12 10:53:40 2005  
Subject: [R-390] Caps, Caps, Caps

Speaking of rude. I already told you I have seen many brown beauties. None of them were cracked. You must be another of the capacitor replacers.

Bob,

Anywhere you can get one is a good place. :-)

>... Electrolytics on the other hand certainly leak, ... I check ... for >both leakage and value. ... I don't worry about the leakage until it's >about 5X the specification. I don't see how an extra few ma of current in >a power supply bypass cap is going to bother the radio much at all.

I will suggest a reason:

Leakage in an electrolytic filter cap causes heat. Heat is the enemy of electrolytic caps, especially the old ones. The heat generated inside the cap will accelerate the degradation of the thing and hasten its failure.

This is part of the danger of "bringing it up slowly with a variac" (without monitoring the reforming/leakage current.) When an electrolytic reaches its limit of reforming voltage, further increase in applied voltage increases the leakage current, the heat goes up and the thing leaks even more. Pow goes your transformer high voltage winding. Long live your radios. Roy

> inspected and rebuilt well over 100. Neither of us have ever > found a bad> (cracked or otherwise) brown encapsulated paper capacitor in > an R-390A.

I did. For what it's worth, my used-but-not-abused '56 Motorola, which contained browns\*, had one that was visibly cracked and leaking oil (or whatever it is. The Cost Reduction Report calls them "Prokars", which I seem to remember had a plastic-impregnated paper dielectric\*\*). I can't remember the details (they might be in the archive), but there are at least a few nets in the IF deck that you can charge with a HV power supply and directly or indirectly measure the aggregate leakage of several caps. I did so, with the deck in a low (120F) oven, and it averaged a few hundred uA per cap at their rated voltage of 400V. One cap shorted overnight. I replaced it, the cracked one, and those in high-impedance locations. Left the others. After a couple years of frequent use, I haven't seen any problems.

\* Except for a Black Beauty in the RF deck, which I replaced on sight. \*\* If you know this is wrong, please say so and stamp out bad data.

> period. We have found bad capacitors in R-390A's, but they > were all (red or > green) silver micas, and most of those were in oscillator decks.

You probably mean molded micas. I replaced one mech. filter-tuning one that was intermittent. 73, Dave Wise

From robert.boyd at sdc-dsc.gc.ca Wed Jan 12 11:56:05 2005  
Subject: [R-390] R390A Caps, Caps, Caps ad nauseum

Gentlemen:

Much as the back-and-forth is amusing, the bottom line is that in 40-50 year old equipment (including the undersigned) components may have to be replaced. What is a bit distressing about this is that having been a list/forum member for almost a year and just salivating to get my hands on one of these beauties I'm seeing the level of discourse on the "capacitor replace or not" topic slip, to put it mildly.

Since I have your attention I'd like to request that any member having an extra R390A (or R392) that he'd like to part with to contact me off list. I promise to replace capacitors only when judged necessary  
Thanks, Robert, VE3BE/W1

From hankarn at pacbell.net Wed Jan 12 12:59:40 2005  
Subject: [R-390] Re: Caps and more caps

Well I bought 18 Blue stripe rs and have totally restored 8 of them which have gone to happy homes with no complaints and no cracked Brownies with all of the modules insides is pristine condition. Replaced a lot of caps and rebuilt the 2 cans and have labeled them as rebuilt. I have a few noon blues in worse condition.

They take a lot of effort and TLC to bring them up to speed. Mine will stand up with the best of them.  
Hank KN6DI

From wewilson at knology.net Wed Jan 12 17:27:22 2005  
Subject: [R-390] Caps, Caps, Caps

wrote: >Someone please take a picture of a R390A with "Black Beauties" or "Brown >Ones" so Dallas can see for himself.

Look at the pictures here: [http://r-390a.us/bad\\_capacitors.htm](http://r-390a.us/bad_capacitors.htm)

From wewilson at knology.net Wed Jan 12 17:31:09 2005  
Subject: [R-390] Pictures of cracked brown beauty capacitors

Look here to see pictures of the seven cracked ones I discussed: [http://r-390a.us/bad\\_capacitors.htm](http://r-390a.us/bad_capacitors.htm)  
Walter Wilson - KK4DF

Date: Wed Jan 12 17:50:26 2005  
Subject: [R-390] Caps, Caps, Caps

I have several NOS black beauties of various values available for any interested parties. These are pristine, never used, still with nice long unsoldered leads. Let me know. As with all old electronics, these are offered strictly "as-is".

From polaraligned at optonline.net Wed Jan 12 20:18:19 2005  
Subject: [R-390] Old Brown Beauty Statistics Lesson

You know what Dallas, your statistics and retired professor BS is just that. I restored a early 60's Teledyne that had several cracked brown caps just like Walter posted, and the kicker here is that the radio was NOT abused. It came to me in FINE condition. All caps were tested on a Sencore LC75 that was in good working condition and most caps were showing leakage. You stupid college professors think you are high and might but lack common sense half the time. Book smart does not always apply to the real world. Maybe instead of ripping a fine gentleman like Walter you should find the real cause of the discrepancy....like maybe you need glasses. Sad part is I used to respect you. Now i think you are a Jerk. Dan Arney is about as respected as anyone on this list and has rebuilt many radios you call "Unrebuildable". Is he a liar also? We don't give a crap about your math. Maybe you should look for other reasons for the discrepancies before you rip everyone here. Do us all a favor and unsub yourself.  
Scott

From bill at iaxs.net Wed Jan 12 21:10:36 2005  
Subject: [R-390] Old Brown Beauty Statistics Lesson

This sounds like the rant of someone who thinks that civic virtues are individualism, self-reliance and limited government - which are not civic virtues at all but the emotions of a cave man. They have little to do with civilization.

People who didn't go to college can't tell the difference between an argument and a flame. They also can't tell the difference between a fact and an opinion. Well, that was 40 years ago. Now too many college graduates can't tell the difference either.

Anybody can shotgun a receiver by recapping everything. It takes a marksman to find the things that need fixing and leave what ain't broke alone.

The other side of that is that if you're a marksman, you can't tell the guy with a shotgun to put it down, 'cause he's not a marksman.

Dallas, put on the mental Nomex suit and continue to try to teach us something. Every classroom has its disruptive students.

Sorry it had to come to this. Trying to run someone off because they rub you wrong is the first step in the collapse of civilization. Talking it over in civil language is what holds us together. And we'd better hold together because there isn't room on this planet for 8 billion self-reliant individuals. Self-reliant? A city wouldn't last a week without all the people who make it work. Regards, Bill Hawkins

From pulsarxp at earthlink.net Wed Jan 12 21:12:27 2005  
Subject: Fw: [R-390] Old Brown Beauty Statistics Lesson

First off, I can handle the bickering. I've read all this with interest and will make up my own mind based on logic, and my own experience what caps go bad and which need to be replaced. Personally, I have had a lot of problems with black beauties and other paper caps of that time period. I have chosen to replace them whenever I see them. This is a great list and I can appreciate all viewpoints. I consider myself somewhat of an expert as I stayed at a Holiday Inn Express recently. Also I am working on my GED!

Sure wish you guys could shake hands and make up and lighten up a little. Sometimes things get out of hand because the written word is so powerful and you can not see any expression from someone's writing. Over the years, I have said some dumb things I have regretted saying on a few reflectors. So, I don't expect others to be perfect either. Anyone who likes and restores R-390As in my book is a good guy. You guys have more in common than differences. Restoring a Blue Stripe rig is commendable. Maybe it sometimes is not logical or cost efficient but it is challenging and I am sure the restorer gets a big thrill out of taking a trashed radio and make it perform well and look beautiful again. My hats are off to you. Dallas has written some good stuff over the years too. We need all you guys. I am not an expert on R-390As but love them. I have restored many old boat anchors over the years but not R-390As. I now own 4 of them. I need to get started restoring them soon. (I'm 67 and time is running out)!

Just remember, there are more ways than one to skin a cat! Lee Bahr w0vt

PS: Anyone heard any good Norwegian jokes lately?

From levyfiles at att.net Tue Jan 4 21:52:59 2005  
Subject: [R-390] temper temper

I have been hamming for 43 years. I started with crystals and a CW rig.

Its been fun. Some years I operate, some years I email.

I am writing because I don't like the tone of this discussion regarding various opinions on how to.

This is sposed to be fun boys, there is no reason to get all out of sorts over a radio set that the government doesn't want and either do most hams.

Perhaps because most of us with these and other older sets are older hams we may be a bit set in our ways. If you youngsters want to fight be careful.

Brawn works for brains. That's the way of the world. Tough guys finish last. Lets be civil. Rude will be asked to leave. 73, N2WL

From mparkinson1 at socal.rr.com Wed Jan 12 21:40:43 2005

Subject: [R-390] Re: Caps and more caps

Well I don't know who some of you folks are but the real truth is yes the decks have brown beauty not all of them it depends what manufacture made the R-390a receivers.

I mean all of them have to be replaced just because you didn't see the crack doesn't mean you should not change it. The caps have some cracks that some times you have to look under a magnifier to see them. So if you don't changed them that is your preference but you all are sadly mistaken if you don't.

I have done well over 150 restorations from the ground up on every one of them and the all have many many caps that are leaking most of you folks just don't know what you are talking about.

Dallas is correct in saying change the brown caps and the black caps and for that matter you should check even the yellow audiovox type caps in the 67 and 68 EAC I.F decks they are failing also they just plain short so don't think your in the clear because you have a newer manufactured module that everything is great and you don't have to worry because that is just plain BS and stupid on your part if you don't watch what you are doing and know what you are doing when it come to restoring or trouble shooting your R-390a receiver or any other Boat anchor type receiver

I find some of you folks are just plain cheap and won't change anything and when the receiver fails I see you folks up here on this reflector asking all kinds of question.

Also as for the solid state mod done on the power supply that is a big problem because the B+ hits hard and blows all kinds of thing outs. Please put back the 2 rectifiers 25Z6 that were originally designed to be used that will give the receiver a soft start and don't forgot to put a new 3TF7 Ballast tube in when it fails.

I am tried of hearing my resistor works great that is BS also there is no regulation being done.

Do you all really think that the Collins engineers were stupid when they designed this great receiver?

I think not.

If you rebuild the R-390 series receivers just put everything back the way it was designed.

Here is the biggest lie I have ever heard and I won't say who said it but there are no more 3TF7 Ballast tubes so you must buy my solid state modification for a 100.00 and you will never ever have to worry about finding another 3TF7 ballast tube again.

That tube can be found almost any time you need them for about 29.00 to 35.00.

Look at ebay look at some web sites they are always turning up some where and guess what they don't blow out like everyone says. If yours did burn out so what the damn tube was so old and has been run who knows how long.

If you did blow one out and it was almost new you have something else wrong. Good luck and keep those receivers running

If ever need a restoration on a R-390 series receiver email me I can do the job a lot cheaper than most and a better than most.

I will have to give credit to Walter Wilson he is better than most like me I have not seen in person Walters work but look at his web site that should tell the story.

My name mention on Walters web site for the grease that I use on the gear train on the R-390 series receivers.

From bipi at comcast.net Wed Jan 12 22:03:28 2005  
Subject: Fw: [R-390] Old Brown Beauty Statistics Lesson

Very nicely put Lee! Discussions are great, disagreements are natural, the truth is not absolute! Radios are not black and white but different shades of gray....now, back to my glass of scotch! 73 de Mike K7PI

> PS: Anyone heard any good Norwegian jokes lately?

OK, here's one:

Ole knows everybody. Ole was bragging to his boss one day, "You know, I know everyone there is to know. Just name someone, anyone, and I know them."

Tired of his boasting, his boss called his bluff, "OK, Ole how about Tom Cruise?"

"Sure, yes, Tom and I are old friends, and I can prove it."

So Ole and his boss fly out to Hollywood and knock on Tom Cruise's door, and sure enough, Tom Cruise, shouts, "Ole! Great to see you! You and your friend come right in and join me for lunch!"

Although impressed, Ole's boss is still skeptical. After they leave Cruise's house, he tells Ole that he thinks Ole's knowing Cruise was just lucky.

"No, no, just name anyone else," Ole says. "President Bush," his boss quickly retorts.

"Yes," Ole says, "I know him."

His boss retorts, "If you can prove that you know him I'll fly out to Washington to see him."

And off they go. At the White House, Bush spots Ole on the tour and motions him and his boss over, saying, "Ole, what a surprise, I was just on my way to a meeting, but you and your friend come on in and let's have a cup of coffee first and catch up."

Well, the boss is very shaken by now, but still not totally convinced. After they leave the White House grounds, he expresses his doubts to Ole, who again implores him to name anyone else. "The Pope," his boss replies.

"Sure!" says Ole. "I've known the Pope a long time."

Again the unconvinced boss flies them off to Rome. Ole and his boss are assembled with the masses in Vatican Square when Ole says; "This will never work. I can't catch the Pope's eye among all these people. Tell you what, I know all the guards so let me just go upstairs and I'll come out on the balcony with the Pope."

And he disappears into the crowd headed toward the Vatican. Sure enough, half an hour later Ole emerges with the Pope on the balcony.

But by the time Ole returns, he finds that his boss has had a heart attack and is surrounded by paramedics. Working his way to his boss's side, Ole asks him, "What happened?"

His boss looks up and says, "I was doing fine until you and the Pope came out on the balcony and the Japanese tourist next to me asked, 'Who's that on the balcony with Ole?'"

Submitted by anonymous (14-Jan-04) via Marshall Dues, WB5MYO, Katy, TX

From wewilson at knology.net Wed Jan 12 22:29:04 2005  
Subject: Fw: [R-390] Old Brown Beauty Statistics Lesson

Lee Bahr wrote: >Sure wish you guys could shake hands and make up and lighten up a little.

I've taken no offense at this discussion. It is a lively one, though. Where is Joe? He is usually the one stirring the pot.

Honestly, I'd always replace the brown beauties because almost all that I've tested leak way more than the others (yellow aerovox, metal vitamin Q, or new orange drop). Even the good brown beauties are quite leaky, and the cracked ones are typically much more leaky. I've tested enough to form my own opinion. And yea, we're all entitled to forming our own opinions.

I guess one of the reasons I replace some capacitors without cutting loose one end and checking for leakage is 1) I enjoy working on radios, and replacing caps is not a boring task to me, and 2) I want these 50+ year old radios to last at least another 50 years. I don't want to have to come back in 5 or 10 years and go through the exercise again of searching for a bad capacitor. But that's just my opinion.

Let's all keep having fun, Walter Wilson - KK4DF

From ham at cq.nu Wed Jan 12 22:42:03 2005  
Subject: [R-390] Old Brown Beauty Statistics Lesson

Hi

A couple of thoughts about why the capacitors crack.

There are a significant number of electronic parts out there that get a plastic coating over them when they are manufactured. Some of the coatings are relatively soft and will stretch a little. Others are fairly brittle and don't stretch much at all. Most plastics are made by cross linking long molecules together. The more linking you do the more brittle they get and in some cases the more they shrink.

Other plastics are sensitive to humidity. A great example is Nylon. If you have ever seen nylon hardware that has been out in a hot dry location for a couple of years it's amazing how much the stuff shrinks.

I have personally been involved in a couple of *very* painful recalls on epoxy coated parts over the last 30 years. In each case the epoxy slowly shrank over time. The net result in one case was thermistor that popped open like popping corn. The net result in the other cases were tuning capacitors that went out of alignment and shorted out. I suppose that if necessary I can dig up the GIDEP's on all of them. In all cases these were parts used in military equipment. Rockwell Collins, TI, and Magnavox (Ft. Wayne) were the end customers.

Bottom line in each case:

- 1) The ratio of hardener and resin is pretty important in an epoxy. The normal methods mixing the stuff are surprisingly open to error. Is it equal parts by volume or by weight. Do you mix each can before measuring.
- 2) Regardless of the chemistry plastics continue to cross link after they are judged to be "fully cured". In some cases this is accelerated by humidity. In most cases it is accelerated by radiation. In all cases that I have been made aware of it is accelerated by heat.
- 3) Thermal cycling of the shrinking case wrapped around a hard inner core will also accelerate the cracking, crushing, or moving process.

So much for the intro, but this is a thread for the long winded.

Now for the variables:

Radio A:

Runs 24 hours a day in a tight rack for 20 years on board a ship. Nice salt content in the air even with the high temperature inside the rack.

Radio B:

Sits in a open air hut in far off land for 10 of those years and then is in storage in who knows where for 10 years. Used 6 hours a day 4 days a week when in service. Radio is rack mounted, but the rack has wide open ventilation.

Radio C:

Run in the continental US, inside a climate controlled building. The guard guys run it two days a month



for six hours. Radio is the only thing in the rack.

All of these radios have a very plausible carrier in the military. Certainly we would all like to get radio C if we could. I would suggest that a lot more radios fall in the A and B categories. Somehow I doubt we are arguing about radio C so we'll simply drop the "baby doll" radios at this point.

If you just look at time and temperature on radio A and radio B there is an enormous difference in what happened to each radio. This is not to say that is the only variable. It certainly isn't. Radio A saw 10X the time on power over the 20 years as compared to radio B. Common temperature measurements of the inside of the Navy racks put them up at about 60C or so. Best guess on the average hut would be 20C. If the acceleration factor is 2X per 10C rise (activation energy below 20C ...) then radio A gets  $2^4$  more stress. Net result is that radio A sees about 160 times more stress than radio B.

I would humbly suggest that radio A is going to have a \*different\* set of problems than radio B. Most of us would be hard pressed to say that radio A has been more abused than radio B by visual inspection.

Regardless of weather the caps crack or something else goes radio A is a lot more likely to have had problems of a certain type over it's life than radio B. So far I \*hope\* none of this is to controversial. It's pretty much straight out of MIL-HBK-217.

Here's the part that makes for the problem.

Depending on how good the maintenance on the radios was it's a total toss up as to weather radio A, B, or C is in better condition today.

It is my contention (and I suspect that you \*might\* agree with this) that we routinely go well past the previous "standard" when it comes to working on these radios. I won't argue weather we are going above or below the standard, only that a lot of people these days do a lot more work on these radios than was done in the past.

Is a leaky capacitor for instance a problem? That depends on who is doing the maintenance. In one case a radio that meets minimum specifications on the bands of interest never gets pulled or worked on. In another case the radio is worked on until it meets "bragging rights" specification levels. The first case probably has a very different opinion of what is a bad cap than the guy in the second case.

Unless we agree on what is and isn't a bad capacitor I suspect we'll be at this for the next hundred years. Somehow I doubt we will come to anything other than an agreement to disagree .... Take Care! Bob  
Camp KB8TQ

From chacuff at cableone.net Wed Jan 12 22:45:21 2005  
Subject: Fw: [R-390] Old Brown Beauty Statistics Lesson

Sounds like a good philosophy to me....especially if you are taking someone's hard earned cash to do a restoration. Who wants to get one back only to find one of the paper caps that you didn't replace has caused you so much grief. Cecil Acuff

From ham at cq.nu Wed Jan 12 22:48:41 2005  
Subject: [R-390] temper temper

Hi

Well I for one would pretty strongly defend the guy who came up with the solid state AGC mod I have in *\*all\** of my R-390A radios. If he wants to get a little excited from time to time he's earned the right and then some.

I agree that this kind of thing can get out of hand. When it does then yes that is a problem. I do not personally believe that we have quite reached that point yet. I would *\*much\** prefer a spirited, active list with give and take discussion over a dead list mainly populated by requests for the same items again and again. Without discussion we learn nothing. I certainly will take a few more "before" pictures on IF decks in the future. Take Care! Bob Camp KB8TQ

From face1941 at iprimus.com.au Wed Jan 12 23:42:20 2005  
Subject: [R-390] Re-R390 Putting a Cap on Caps

This subject is getting out of hand and seems to have been aided and abetted by a post making an overly simplistic statement on statistics. (Accurate on paper, perhaps, but not in practice)

With some trepidation I submit these observations.

1. WE all know there were many manufacturers of the R390 series, apart from Collins
2. Its HIGHLY unlikely the caps referred to were ALL sourced from the same manufacturer so that its equally unlikely ALL R390's EVER made had caps fitted which were came from the same production line
3. The quality of caps made by different factories WILL vary, even if the initial tests on these caps satisfied the military procurement criteria.... which dictated a 'normal' service life of these components, and which ALL of them seemed to pass OK
- 4 These fine receivers are all well past their (military) 'use by' date .
- 5.. O ANY STATISTICS DONE MUST ALSO INCLUDE A 'Q' FACTOR ALLOWING FOR SUCH MANUFACTURING DIFFERENCES ON THE EXTENDED LIFE OF THE 'C's' ! Ie : Consistency of potting mix, property spread of dielectric material, sealing of wire ends to mould and probably many other things I don't know about to boot !
6. Dummer was a respected UK scientist , specialising on component reliability, who published a great deal of information on this subject via UK HMSO. There were a few of his articles in the old Wireless World on this and I remember reading one of his text books which discussed such moulded types as discussed here.. He mentions that a major source of failure was moisture creepage along the wire ends getting into the mould cavities (Ie cavities filled by wire and the 'C' guts).

The effect of corrosion caused by moisture is to pressurise the internals which can lead to cracking of the casing. This leads to more moisture ingress and is cumulative. Improvements to wire sealing within the mould were one of his suggestions at the time. (Of course there are other failure modes apart from this)

So any 'statistics' should show runs of receivers with failures rates higher than others based on the MANUFACTURERS FACTORY through which component sourcing may be traced. (I am merely repeating what an acknowledged expert on component reliability has already said) Indeed, it may be that a single R390 had MULTIPLE CAP SOURCES from different manufacturers in order to keep contract

production rates going !

SO: WALTER was quite correct in his statement that such caps were consistently cracking.

And the others may well be correct in thier observation that none had cracked !

Its likely that the spread band of good and bad 'C's may well be due to effects as noted above (in addition to many other 'noise' factors as well, such as exposure and electrical overstressing, etc etc.)

NOW I am restoring my own R390.

I WILL RETAIN AS MANY OF THESE COMPONENTS AS I CAN simply because I like the look of them and they ARE part of the history of the receiver. !!! YES, ITS A NOSTALGIA THING !!

I can afford to do that as I am capable of and will be fixing it myself

(I will replace ALL critical 'C's' as gleaned from all you experienced fellows out there, which is what Mailmans excellent service is all about)

BUT: If I were given the job of restoring someone else R390, I WOULD TEND TO REPLACE MOST, IF NOT ALL these parts ,,.,.,.,.,.,., depending on what my clients wishes were. After all, resistors and wire end capacitors are relatively inexpensive things to replace

And my reputation on doing a professional job of repair would depend on so doing

To check each Cap PROPERLY you have to lift off at least one end, and to my mind once youve gone that far your half way to replacing the thing with a modern, much more reliably made one . But.... and there's the rub.... its not 'original' any more, is it? That too may be important to both a repairer and a client.

Lets end this silly bickering BOTH sides may just be right enough in there own observations John Byers

From w5or at comcast.net Thu Jan 13 00:37:03 2005  
Subject: [R-390] List rules

Gentlemen!?

Let us be civil. Spirited disagreement and discourse is good but being rude or mean will get you an invitation to leave the list. Don Reaves R-390 list manager w5or@comcast.net

Subject: [R-390] Re: Caps and more caps

Um, could "it" be something as simple as Dallas' experience is several years older than those that are starting to see age, among many other factors, affecting what appears to be such different experiences ?

On second thought - NAH.

Dallas has to be right and all of us that work on thousands of pieces of both old and new electronic gear for a living and have to replace capacitors are just plain wrong.

Removing my tongue from my cheek: Quite simply I service equipment that has NEVER - EVER left a climate controlled environment, quietly doing its' specific job(s) and sitting along side other such equipment in racks. And I replace capacitors all the time. Been doing this for over 35 years. And I am paid to look at many such pieces of gear EVERY working day. I replace may more capacitors than resistors, ics, transistors, etc. Capacitors are a close second ONLY to the fuses I replace. And modern capacitors are MUCH better made than the older paper ones.

(Fuses often need to be replaced simply due to aging effects. i.e They often tend to sag over time and eventually break in equipment that (almost) never gets turned off. Capacitors also show various susceptibility due to a variety of factors. More on other factors immediately below.)

Why is my experience so much different that Dallas and his friend?

Even the new stuff can fail repeatedly in ways; such factors as issues during a manufacturer's specific batch runs, atmospheric control issues during manufacture or stock storage BEFORE initial installation. I am sure many of us can thing of MANY other such factors that Dallas simply has not take into account with his simplistic math.

Dallas I appreciate all you have done for the r390 community to date. I would prefer that my opinion of your talents remain focus on that and not in your quite unbelievable argument(s) concerning capacitors. Yes it IS possible to have your experience, but it is statistically too small a sample to have any meaning. As is your friends' experience. Very best regards; Bob Finch w9ya

From rjmattson at hvi.net Thu Jan 13 00:48:53 2005  
Subject: [R-390] Fw: Hmmmmm!

I feel sad when I hear airhead stuff like this. Lets keep it to R-390 studies. bob...w2ami  
[www.qrz.com/callsign/w2ami](http://www.qrz.com/callsign/w2ami)

From ku4yp at verizon.net Thu Jan 13 08:55:22 2005  
Subject: [R-390] Re-R390 Putting a Cap on Caps

to change the pace,

i have never owned an r-390 (a) and am looking to purchase one this year. i found this list last year and have enjoyed reading the conversations from the list.

could someone offer a newbie some pointers on hwat to look for? i don't mind doing resoration work but want to start with a complete receiver so i can see what to replace. as i become more experienced i may tackle something like building one from parts.

the receiver will go with my dx-100 and other am transmitters. like many hams, i am also a swl and enjoy the broadcast bands.

so, any help anyone is will to give will be appreciated. i know you can buy r-390a's from with sub meters for \$575.00. used repairable for \$325. checked for \$520.00. has anyone purchased from fair radio? or can someone suggest another source.

i know r-390's are for sale on the auction sites but from what i have seen, they have often been more

expensive than one i can purchase from fair. i understand the manufacturer of the r-390 will have some bearing on it's price. maybe that's why most have been more expensive.

this is surely the well of knowledge for r-390s. your attention in this matter is appreciated. 73 mike  
prevatt ku4yp

From ks1u at prodigy.net Thu Jan 13 09:43:53 2005  
Subject: [R-390] Re-R390 Putting a Cap on Caps

Mike:

Hello and welcome to the list. I have dealt with Fair Radio and they really are good guys, I have never had anything but good luck with them. However, I have always used them for parts and not the whole radio. Since you have been thinking about this for a year or so, I wouldn't discount finding one "in the wild". Buying from a commercial source is a lot like going to the fish market for dinner versus getting one from a swap meet or local auction. Going on the hunt, armed with patience and knowledge is probably the least expensive way to get one. There are also guys on the list who could probably help you out as well.

If you do start hitting the swap meets and auctions, I wouldn't walk away from a basket case if the price was right, most of us have parts and sub chassis filed away in our basements and garages. Since these sub chassis can be easily swapped out, my philosophy has always been, you can never have enough replacement parts or tubes. I have for instance about 40 complete sets of NOS tubes for the R-390A. I keep a list with me when I go to swap meets and when the price is right I grab them even if I don't need them.

QRZ.com lists your address as Bartow, FL which, means the Orlando Hamfest is coming up and you'll almost certainly see one or more R390's / R390A's there. There's also a nice hamfest in Stuart as well as a few other places within a few hours drive. Personally I like to get there early and stay late, you'd be surprised how the prices drop on some of these heavy radios when it's time to pack them up. I particularly like my chances of a good deal when the XYL is helping pack up these radios as the show is breaking down and the crowds have dwindled. Anyhow, the best deals are those radios which are complete, dirty and not working. There is enough expertise on the list and through numerous websites that getting a complete, non working 390 to play is really quite reasonable a project. Let us know how you make out. George

From chacuff at cableone.net Thu Jan 13 10:13:30 2005  
Subject: [R-390] Re-R390 Putting a Cap on Caps

I'll add to what George said by saying don't pay a lot of attention to the tag on the front of the radio. It in most cases don't mean a whole lot because when you get home with it you will most likely find a "who's who" of manufacturers names on the modules. They usually came out of the Mil Depot that way after being overhauled.

I certainly wouldn't pay more just because it had a certain tag on the front. Except in the case where you may find a 67 EAC with all EAC modules for example. But verify the modules to be EAC if you can. That would be one case where it might be worth more money. Try to get one with original meters if you can...don't worry too much about top and bottom covers....if their in place OK but don't pass on a radio that's missing them. If it has covers pull them and look around before committing to the purchase.

Know the difference between an R-390A and a R-390/URR there both good radio's but some folks aren't

sure how to identify each in the wild. Look for the antenna trimmer control location. Top center is an "A".

I've done business with Fair Radio and they are good folks. Most of the radios they have had for the last few years are from the Blue Stripe pile of St. Julian's Creek. They are more of a challenge than just your average surplus 390A just be aware of that. And as George said Welcome to the list. Cecil Acuff

From N4BUQ at aol.com Thu Jan 13 11:48:16 2005  
Subject: [R-390] Alodine and hexavalent chromium

I've been doing a bit more looking into getting the panels for my R390A's re-alodined. Turns out this stuff is hazardous as it contains hexavalent chromium (chrome?). Around here, you have to dispose of this stuff properly so I might not be trying this at home after all. Fortunately I've found a place that will do the lot of parts for a reasonable price.

This got me to wondering how hazardous it is to remove this coating. Is it safe to wet-sand the parts to remove the old coating? Is the amount of coating removed so small that it is insignificant?

Just wondering... Barry - N4BUQ

From wb7vdn at knology.net Thu Jan 13 13:30:17 2005  
Subject: [R-390] Excess Power plugs for R-390(non-A)

I have acquired several 4-pin Plugs that fit the power connector on the rear of the R-390(non-A). I only need one for the Dumpster Refugee R-390 I just got.

Most have a 1 to 2 foot High Current pig-tail. The cable clamp fits a .5 inch cable.

I am asking \$10 each plus postage for them. Please reply via E-mail off-list.

My Address is: calbrguy@knology.net Ron Lamb WB7VDN

From tetrode at comcast.net Thu Jan 13 13:51:01 2005  
Subject: [R-390] Alodine and hexavalent chromium

After Alodine is applied and dried I believe it's totally safe (as long as you don't eat it). It is commonly used as a surface finish on all kinds of aluminum parts or as a surface prep for painted aluminum to increase paint adhesion, like on the R-39x dial bezel. It is a very, very thin coating, usually 0.5 to 3 thousands of an inch, and is easily removed by sanding or by phosphoric acid metal prep solution or a lye bath as Hank suggested.

If you are sending your pieces to an Alodiner are you sure you need to remove what's already there?; they will probably throw the parts in an acid bath first thing.

It IS something you can do at home, but aside from the cost of buying a gallon and having it shipped, you need to practice a bit to get the coating to be uniform and the correct thickness to match the other parts. (longer soak or brushing = heavier coat = darker color). If you screw up the part you can always throw it back in the lye bath and start over :^) I've done the R-390 IF coil cans, dial bezels, and a back

panel with good results, but it's not something I'd want to do frequently.

For \*small\* quantities of the stuff that are used for home projects I wouldn't worry about disposal issues, but please don't throw the used stuff on the ground. You definitely want to wear gloves to protect your skin (and to keep hand oils off the prepped part), and it can permanently stain anything it touches.  
John

From N4BUQ at aol.com Thu Jan 13 14:23:15 2005  
Subject: [R-390] Alodine and hexavalent chromium

The reason I wanted to wet-sand the pieces is they weren't in really great shape. Scratches, small oxidized patches, etc., made me want to get them in physically better condition before any surface finishes.

The center shelf seemed to have a rough texture about it that I wasn't sure would come out if just chemically stripped. I got a lot of the old finish off and it went down the sink. I assume there wasn't enough of anything in that to be a hazard. As someone else mentioned, once it has dried and done its thing, it isn't as hazardous as when in liquid form.

As I said, the local place is quite reasonable and I'd rather someone do it right than have me messing it up on top of creating a potential biohazard. There's a lot of things I can do, but some things I'd just rather leave to the pros.

You mention you did a back panel. Did the process destroy the lettering? I assume it did. What did you (if anything) about that? Thanks to all for the kind responses and advice. Barry(III) - N4BUQ

From jay\_coward at agilent.com Thu Jan 13 15:13:25 2005  
Subject: [R-390] Alodine and hexavalent chromium

Here's an alodine story that really burned me up at the time: Years ago I was a production lead on a mil qualified component that had two end bells that were yellow alodined. The bells were slightly different so they got alodined as separate batches in the alodine tank. After mounting the parts, and final wiring harness and final electrical test the completed assemblies went to final QA.... ..where they were rejected because the shade of yellow of the two end bells didn't exactly match. There was no spec for color match anywhere in the contract documentation but there was no convincing the QA inspector. Back to re-work where the assemblers then had to line up all the bells and then try to pick matching pairs. Arrrrrrggggggg! No one liked QA inspectors at our plant. They led lonely lives... Jay

From tetrode at comcast.net Thu Jan 13 16:21:40 2005  
Subject: [R-390] Alodine and hexavalent chromium

Oh OK, yeah the chemical stripping only takes care of the surface, scratches and pitting need sanding or grinding to clean up. Out of curiosity how much is the plater charging for how many parts? Might need to go this route someday.

The rear panel work that I did was a couple of years ago and the radio isn't in front of me now so I can't take a peek, but as I recall the damage was only in one area on one side (I think the inside), where some kind of corrosive gook had seriously damaged and discolored an area.

The lettering in the back was in good condition and I didn't want to mess with it or take on a re-lettering job so basically what I did was mask it, or possibly even masked the entire back side with ordinary masking tape which worked very well while I did the metal prep and Alodining. Anything that can keep the surface dry for several minutes will work as a mask, and for masking small areas wax or crayons would probably work well.

(Arggg, did you ever have hot and sour soup go down the wrong pipe?, you should have seen what just happened the monitor!) =:^0 John

> The reason I wanted to wet-sand the pieces is they weren't in really great shape. Scratches, small oxidized patches, etc., made me want to get them in physically better condition before any surface finishes.

>

> The center shelf seemed to have a rough texture about it that I wasn't sure would come out if just chemically stripped. I got a lot of the old finish off and it went down the sink. I assume there wasn't enough of anything in that to be a hazard. As someone else mentioned, once it has dried and done its thing, it isn't as hazardous as when in liquid form.

>

> As I said, the local place is quite reasonable and I'd rather someone do it right than have me messing it up on top of creating a potential biohazard. There's a lot of things I can do, but some things I'd just rather leave to the pros.

>

> You mention you did a back panel. Did the process destroy the lettering?

I assume it did. What did you (if anything) about that?

From N4BUQ at aol.com Thu Jan 13 16:51:10 2005  
Subject: [R-390] Alodine and hexavalent chromium

I may try masking. If I can work with the guy at the plater, then it would be worth it.

He said it would be about \$40 to for 8 parts. Sounded like it wasn't set in stone and a few back panels wouldn't run it up much past \$50. Worth it to me to have these looking good again.

Be sure to wash down that hot-n-sour soup with a little wasabe. :P Barry(III) - N4BUQ

From tetrode at comcast.net Thu Jan 13 17:25:05 2005  
Subject: [R-390] Alodine and hexavalent chromium

That's not bad at all considering the messy work that it saves. Keep in mind that if your Alodining and masking adjacent areas then there *\*will\** be a visible difference in the color of the new coating as compared to the original under the mask. If the masking around the lettering is done very neatly then it might even give it a "label" effect which might be interesting.

As Jay pointed out a couple of posts back there is no standard for color matching between batches. Heck even within the same batch and on the same part I've seen color differences. John

From ham at cq.nu Thu Jan 13 18:15:46 2005



Subject: [R-390] Old Brown Beauty Statistics Lesson

Hi

The only parts being talked about here are leaking capacitors in high impedance circuits. The reason we know they leak is because we measure the leakage. We replace the capacitors that are broken. Your position seems to be that a part that is broken (it is out of spec) AND is in a part of the circuit where that affects the performance of the radio should be left in place. I simply do not understand this approach at all. Bob Camp KB8TQ

From mjmurphy45 at comcast.net Wed Jan 12 21:29:13 2005

Subject: [R-390] Old Brown Beauty Crack Problem

Dallas, if you are insinuating that we are changing out those capacitors just for fun, I don't agree. I think we do it because we have been indoctrinated and we have to... It just feels good. We are in fact- Brown Beauty Crack addicts.

Clearly we also need to be archiving our cut out components in the proper environment which slows down the aging process; if only for the historical record. I've found that Mason jars work. Mike Murphy WB2UID

From vk2abn at batemansbay.com Thu Jan 13 23:36:11 2005

Subject: [R-390] capacitor thread

Dallas you may not have found many cracked capacitors ,but I can assure you that if you had subjected the black tubular caps with colored stripes to a leakage test you may have been suprised , I snip one end of all this type and Meggar test with a 500v insulation tester and most are below 500K and some below 100K , the flat plastic yellow type in some IF strips are very good I havnt found any failed caps in the Stuart Warner & Capehart recievers but the teledyne and some motorola rx s with the black beauties as you people refer to them are certainly candidates for replacement , and **Something else I have noticed is that the Noise Floor is improved by replacing the leaky caps**, lets face up to the fact CAPACITORS are not meant to be RESISTORS and Having pretentions to GREATNESS and waving your Degrees isnt going to change this fact, I have restored 22 R390A receivers and 5 R390s, capacitors are problematic in lots of recievers, I know there is a tendency for people with tertiary qualifications to ride roughshod over us mere mortals without them BUT Dallas hands on experience does count for something, and Cecils experience is born out by mine, As you are aware dallas Statistics are funny things and can be doctored especially by people like yourself for your own ends, your quallifications in mathmatics dont cut much ice with me ON A RADIO SITE, I dont know why you would mention them, Are you CRAVING CREDABILITY? For the record my background was the SCHOOL OF HARD KNOCKS, and I am self educated in the electronics field, and left school at 14 years, I am now retired after 40 years in the workforce ,and still enjoy electronics as a hobby, Kind Regards to everyone Bernie N

From ghayward at uoguelph.ca Fri Jan 14 08:28:56 2005

Subject: [R-390] Old Brown Beauty Crack Problem

I just render old paper caps to recover the Marconi wax to grease up my antennas for better DX. Cheers, Gord.

From rtmay at htn.net Fri Jan 14 08:45:04 2005  
Subject: [R-390] Fair radio blue strippers

Mike. I would like to tell you my experiences with Fair radio. I bought a "Blue stripper" from them about a year ago.

If you order one from them, expect about a three week wait before it is shipped. Gary at Fair explained to me that it takes this much time to get the radio up to their advertised "Checked out" condition. Here is what I found when I received it:

1. Broken wire on VU meter: Repaired.
2. Separated RF slug: found it in the can and epoxyed it.
3. BFO inoperative: BFO can replaced. Unit had been screwed beyond its limits.
4. Crystal Calibrator out of tolerance: Replaced crystal.
5. RF rack spring missing: installed spring to stop hangup (This could have happen when shipped).
6. Electrolytic (C609) in AF deck charred: Replaced, common problem.
7. Frame bent. Replaced side panel and rebent back panel best I could.
8. Filter choke (L602) damaged: Replaced choke. (This happened when the chassis was damaged. Somebody used this thing for a football, probably at the disposal site).

In all fairness, Fair radio supplied the necessary parts free to repair the unit. I also decided, since I was there, to pick up some additional parts (PTO, etc). Gary gave me the run of the place to select the best parts. All sub-units have been removed from the unrepairable receivers and thrown into large bins. If you order an IF deck for instance, you probably will receive the unit with all connectors attached and undamaged. The reason it is advertised as "With no connectors" is because some of the have been cut off or damaged. My guess is that about 80 percent will be OK. Gary also told me that it won't be long before he will be in the parts business only. I saw only three palats of receivers that were still sealed. My guess is about 125 left and that was last Feburary.

Hope this gives you a better understanding of what to expect. If I had to do it again, I probably would buy a "uncheck, repairable" At least I know it will will turn on and receive at least one station. (His words). Good luck, Richard W8FCW, richardmay@hotmail.com

From chacuff at cableone.net Fri Jan 14 10:05:51 2005  
Subject: [R-390] Fair radio blue strippers

Yea....only blue ones though....you know like those blue guys on TV doing the computer chip commercials...I guess they were surplus....not much call for a blue stripper these days....except the occasional smurf. Cecil...

From chacuff at cableone.net Fri Jan 14 10:14:38 2005  
Subject: [R-390] capacitor thread

Bernie and Group,

A quick check of the Subscribers list indicates that unfortunately Dallas appears to have parted company with the group....He is quite knowledgably but I guess he didn't want to listen to any of our noise about statistics and paper capacitors any longer....right or wrong. Cecil...

From pstaupe at qwest.net Fri Jan 14 10:19:45 2005  
Subject: [R-390] Fair radio blue strippers

Now the secret's out. The last time I was at Fair, I was glad to see that they were providing housing for a bunch of old blue strippers in a warehouse in the back. All I can say is that I'm glad that there's a place for all those old blue strippers to stay.... It's sure a lot better to have a roof over your head....

From r390a at bellsouth.net Fri Jan 14 12:59:54 2005  
Subject: [R-390] You call \*THAT\* cracked???

Now \*this\* is cracked!!! The screen \*resistor\*, if I remember correctly, was a crunchy black piece of carbon that glowed red with power applied. I think the cap sputtered a bit as well before it blew its brains out.

It came out of an SP-600 a few years ago and I've kept it around to serve as a warning to others. :-P

<http://www.fernblatt.net/miscpics/hellcap2.jpg>  
<http://www.fernblatt.net/miscpics/hellcap1.jpg> Tom NU4G

From pulsarxp at earthlink.net Fri Jan 14 13:09:11 2005  
Subject: Fw: [R-390] Fair Radio Blue Strippers and other Ramblings

How do you restore a blue stripper when it does not have an engraved front panel? Did you have the front panel re-silk screened or did you just replace it with an engraved front panel from another radio? Or have both methods been employed? Seems to me a radio with no meters and facing a re-silk screen process would get the project up into big bucks fast. (Maybe the blue comes off leaving a nice grey panel) I guess if you got lucky and got a blue stripper with an engraved front panel it would not be too bad a project if you had to repaint it. Missing meters really bugs me though.

Since getting interested in R-390As a year ago, I have been able to find 4 of them now and they were not too expensive. In fact, they cost me less than a blue stripper and they all have meters. (\$75 to \$250). I have not restored them as yet so I don't know what is totally facing me. I bought two replacement cap kits and a couple extra IF decks and a couple extra RF decks to get me going. Two of the R-390As were missing the power supplies but a member on here was kind enough to sell me two replacements at a reasonable cost. I also purchased the R-390A and SP-600 videos from Hi-Res. I also downloaded from the internet the manual. (It took 3 ink cartridges to do it)! (It's wonderful)! Now I need to start restoring before time runs out! (I am 67).

If I was going to start this quest all over again, I think I would approach it the same way as I have done in the past. Don't be too quick to buy but look around. Maybe I just got lucky, but I think finding a R-390A locally or within driving distance will probably provide a better project requiring less work for a better price. There are no shipping charges and you can see what you are buying. I guess if I bought a blue stripper I would want to restore it too as I am dumb enough to believe every R-390A should be restored, although not a project for everyone. It sure would be a great accomplishment to do this. You certainly would want to take a lot of "before" and "after" pictures to appreciate the project once completed.

The amount of knowledge on R-390As on this reflector is awesome. Lee w0vt Houston

From N4BUQ at aol.com Fri Jan 14 15:21:15 2005  
Subject: Fw: [R-390] Fair Radio Blue Strippers and other Ramblings

Lee,

The front panels can be re-silkscreened. I had my first one done that way. Looks pretty good to me.

**<http://members.aol.com/n4buq/r390a/>**

<http://members.aol.com/n4buq/r390a/> As does Howard Mills W3HM [\\_W3HM@nfis.com](mailto:_W3HM@nfis.com)  
(<mailto:W3HM@nfis.com>)

There was a gentleman who did this, but he no longer does them. He sold the setup to someone else and I don't know if they still do that or not. I think Hank (on this list) does re-screening as well. Good luck with it. Barry(III) - N4BUQ

From millsend at alltel.net Fri Jan 14 17:22:31 2005  
Subject: [R-390] Re: R-390 Digest, Vol 9, Issue 32

Subject: Fair Radio R-390A "Blue Strippers"

I have attended the Dayton Hamconvention the past several years and have made the trip to Fair Radio before the hamconvention. Last year, I was surprised that Fair Radio had not pulled a dozen of the receivers from their storage area and gotten them ready for sale. I spoke with the tech and he stated their policy was to pull, test, repair and align only after receipt of a sale order.

While I was at Fair, I was able to poke around in the back storage area. Fair has cardboard boxes full of R-390A sub assemblies. Most are stacked 4 to 6 deep in the boxes. I purchased several assemblies to include a VFO and audio deck and had to go through the entire box to find assemblies that had cables, not damaged, etc. It will not be too many more years before Fair's supply of R-390A assemblies will be available.

If you have the time and are in the Dayton, Ohio, area it will pay you to make a trip to Lima and a visit to Fair Radio Sales. Reserve several hours time to polk around in Fair Radio because what they display in their catalog is a fraction of whan they sell. Best 73, Bill Mills KC4AA

From ba.williams at charter.net Fri Jan 14 21:02:43 2005  
Subject: [R-390] Hey what is this?

We have been including select political comments for quite a few years, so get used to it. I don't want to see the list change again because of one or two complaints. You may also see occasional references to the gays, Hillary Clinton, instructions on gutting deer, cat piss, and Joe Redda. You just gotta get a sense of humor and have a laugh or two.

Besides, it was funny and dead on target. I don't know what your Canadian news system is telling you, but a lot of people appreciate that kind of thing. Have a nice day, the other other Barry

From dallas at bayou.com Fri Jan 14 20:56:11 2005

Subject: [R-390] Capacitor Replacers And Other Matters

Several people have written me requesting that I return to the r-390 reflector. While I appreciate the invitation, there seem to be entirely too many people subscribing to the reflector who fall into one or more of the following categories: confused, liar, cheat, verbally abusive, hidden agenda, flim flam artist, confrontational, in denial, in need of a 12 step program, in need of counseling, in need of psychiatric help, vicious, unruly, arrogant, spiteful, unfriendly, name callers, unable to think clearly, intolerant, and the list goes on.

These people seem to believe the r-390 reflector is their private club, and anyone who has an opinion different from theirs is to be ejected by any means at their disposal. So I can't find any good reason to return to the reflector any time soon. If you are a reasonable person and can carry on a reasonable conversation with me, I will be glad to discuss anything about R-390A's that you wish off the reflector. I should warn you that I have zero tolerance for liars, cheats, verbally abusive people, and any other serious negative behaviors. Don't try to con me. I spent 30 years in classrooms where more than 10% of my students held me in contempt and thought they could conceal it from me. If you don't like what I have to say, just go your merry way. **I am in the process of posting much of my major work on R-390A's at <http://www.kongsfjord.no/>. So if you want to know what I have been up to lately, you can check in there from time to time.**

From dallas at bayou.com Fri Jan 14 22:07:01 2005

Subject: [R-390] R-390A Buying Tips

There are so many of those parking lot of doom R-390A's floating around (puns intended) that one should be extremely cautious about buying any R-390A's. For a long time I couldn't think of a foolproof way to identify them, so as not to get burned (or should I say rained on?). But duuhhh. The answer is as plain as the nose on my face. Look at the capacitors dummy says me to myself! If it has a bunch of bright orange capacitors in the IF deck, there is a high likelihood that it sat in a parking lot for several years. You might miss a few good R-390A's by culling the ones with the bright orange capacitors, but such is life. Or if it has a bunch of brown beauties with big cracks, especially with cracks painted white, then you know you have a loser. Be sure to bring an 8X loupe and look for microscopic cracks along the mould lines. Those are also losers. The capacitor replacers have done us fastidious R-390A buyers a wonderful service by helping to identify the ones we do not want. Also look for grit in all the nooks and crannies. It is really difficult to get all the grit out of a parking lot R-390A. And look closely at all the screws. If you see any rust, don't buy. The screws are stainless and can tolerate damp environments, but if you leave stainless out in the rain for a while, it will start to rust. I must admit that I did not think of all of these tips myself. And I would like to give credit where credit is due. But to keep the rotten tomatoes directed at me only, I have kept my sources anonymous.

From hbreuer at debitel.net Fri Jan 14 22:30:22 2005

I am just a bystander and maybe I missed something because English is not my first language but even after I read your postings from the last days again and again you seem to fit well into any of these categories. There is a German saying: "Somebody should sweep in front of his own door as well". I don't know if there is a similar saying in English but I hope it is clear what I mean.

This might probably put me into the doghouse ... Anyhow I have a two R-388, R-389, R-390 non A, several R-390A, R-391 and R-392 and enjoyed this group.

I still miss Nolan and the other white meat ... 73 Heinz DH2FA, KM5VT

From JMILLER1706 at cfl.rr.com Fri Jan 14 23:02:13 2005  
Subject: [R-390] R-390A Buying Tips

And don't forget the diodes to replace the flaky rectifier tubes' Or the surge limiter; Or the 10 turn pot to replace that poorly designed single turn meter adjust circuit; Or the PTO that has been torn down, rebuilt and linearized to within 50 Hz everywhere;

Or the DISC ceramic caos that have been replaced anywhere they touch the AGC line and screens (yes, their dielectrics leak too)... added about 20 dB to signal levels.

How far shall I go?

Both of my 390As arrived as basket cases, practically dead. Now they will probably outperform 95% of the untouched museum pieces around. And I have a couple of degrees in EE and Advanced Calculus, for what that's worth. But I didn't let that get in the way of truth and reality. Now let's put our Jacobians, LaPlace transforms and matrix inversions aside and enjoy our valves.

From r390a at bellsouth.net Sat Jan 15 00:24:16 2005  
Subject: [R-390] Help locating surplus place?

I'm looking for a surplus place that was talked about off and on here on the list. I don't remember if it was ocean state or something that sounds similar, this particular place had tons of things, older meters and switches, etc.

I remember folks fussing about them getting orders wrong and being rude with customers, but I can't remember the darned name! It's somewhere in NY or NJ I \*think\*. (heck, I'm not even sure where it is, but it's up in that direction.) No, it's not Fair Radio.

I apologize for the vague description of the place. Please reply directly. Tom

From r390a at bellsouth.net Sat Jan 15 01:36:35 2005  
**Subject: [R-390] Surplus Place Found!**

It appears I was looking for Leeds Electronics. I suppose the name would sound a bit like Ocean State if you were drinking heavily.... Thanks to all that helped. Tom NU4G

From r390a at bellsouth.net Sat Jan 15 01:52:56 2005  
Subject: [R-390] 6082 Question

Anyone series'd the filaments on a pair of 6080's to replace the 6082's in a 390? Any reason why I can't do that? 6080's are a dime a dozen, whereas 6082 are getting expensive. Tom

From barry at hausernet.com Sat Jan 15 02:56:24 2005  
Subject: [R-390] Surplus Place Found!

That's who I was going to suggest you were thinking of, but the "Ocean State" business threw me off the track.

**Located in Brooklyn. Web site is <http://www.leedselect.com> .. in case no one supplied the URL.**

Barry

From dmetz at ntelos.net Sat Jan 15 07:45:36 2005  
Subject: [R-390] 6082 Question/posting in my sleep

Tom,

There is an article in Hollow State Newsletter within the last couple of years detailing a conversion that eliminates them and the huge heat they create. By Dr. Jerry dave

From chacuff at cableone.net Sat Jan 15 10:05:36 2005  
Subject: [R-390] R-390A Buying Tips

I agree with that....

Participation on a list like this is a give and take.... and certainly if you are willing to dish it out you had better be willing and able to take it.

I've been here for many years...way back into the Nolan Lee years...and I don't plan to go anywhere. I'm certainly in the camp of replacing what needs to be replaced whether it's done out of me determining it's need for replacement (I am capable) or based on common wisdom. (that does exist here) I also believe some things can be done better than were done back in the 50's...Such as the 10 turn pot upgrade. Live and let live.... Cecil...

From N4BUQ at aol.com Sat Jan 15 10:22:38 2005  
Subject: [R-390] Surplus Place Found!

Tom,

Glad you found what you were looking for; however, I'm curious about the description you gave. I ordered some "replacement" meters for my R390A (have yet to decide whether to implement them or not) and I found them to be quite nice and helpful. YMMV, Barry(III) - N4BUQ

From fev at ciudad.com.ar Sat Jan 15 10:21:36 2005  
Subject: [R-390] Searching for sockets tube extender 7 ,9 and 8 pins

Hi, I am searching for sockets tube extenders to have some in my shack to check in more simple way the voltage on the tubes from my R390A receiver and other boatanchors . If someone have some to sell please contact me direct. I have shipping address in Gurnee, Illinois so the shipping and the payment will not be a problem. Thanks in advance , Francisco LU3EEC

From dhallam at rapidsys.com Sat Jan 15 10:40:02 2005  
Subject: [R-390] 6082 Question

The substitution of 6080's for 6082's is a standard modification for the R-390. **Details are explained in A. J. Carmody's R-390 Cookbook.** David C. Hallam KC2JD

From djed1 at aol.com Sat Jan 15 10:41:10 2005  
Date: Sat Jan 15 10:46:02 2005

After this dose of verbal abuse, I, for one wish Dallas farewell and suggest that we continue without him. I can see why some hold him in contempt. And, for the record, I have not replaced any of the capacitors in my R-390A. Ed

From bobs at pacbell.net Sat Jan 15 11:08:48 2005  
Subject: [R-390] Re: R-390 Digest, Vol 9, Issue 34

I have a question which may seem trivial but I have been following the postings for quite a while and own a R390A-URR. I have seen the R390A and the R390A-URR referred to individually. What is the difference between these two? I had always thought they were the same - but I have been wrong before. Thanks Bob a Ham wannabee

From ham at cq.nu Sat Jan 15 11:17:52 2005  
Subject: [R-390] Searching for sockets tube extender 7 ,9 and 8 pins

Hi

I have not seen these as a standard item sold in stores for quite a while. They do often show up on the auction sites for fairly modest prices. If you have any local hamfests they are a better bet since you can actually see their condition. I have had good luck with the ones I have bought at auction but that may not always be the case. The socket side of these things can wear out.

One alternative is to build some from scratch. Tube sockets and tube base sized plugs are required but at least you can find those new. It's a bit more work to do it this way. I'm not sure it's a whole lot more expensive. Take Care! Bob Camp KB8TQ

From redmenaced at yahoo.com Sat Jan 15 11:31:35 2005  
Subject: [R-390] Re: R-390 Digest, Vol 9, Issue 34

They are the same! It's that R-390 that is different. But be careful you could start a thread with this one, might even start a dead horse beating session. Joe

From tetrode at comcast.net Sat Jan 15 12:36:18 2005  
Subject: [R-390] 6082 Question

Hi Dave, well I wouldn't go so far as to say that it is a "standard mod" just because old A.J.C. wrote up his mods on MARS letterhead, and I haven't seen any of his mods done (fortunately) to any 390s or 391s



to cross my path, even my latest 390 that has a colorful MARS decal on the front panel. This mod was not authorized by Collins or the Military, and he even included the disclaimer "The Author, however, assumes no responsibility for the operation of these circuits."

My beef is that his 6082 conversion method is seriously flawed. He substitutes a pair of 6080s with series connected filaments (fine) but then attempts to derive the required 12 V RMS for the filaments by half-wave rectifying the 25 VAC (incorrect). This is a common error in electronics thinking which actually puts about 50% more RMS volts (emphasis on the RMS) on the filament string. Yes, they will work like this for a time but the 6080 filaments are getting \*seriously\* cooked.

As usual this topic has been cussed and discussed here before, just poke around the archives for any posts on relating to 6080, 6082, or ballast tube voltage conversions, same problem applies to them as well. I just hate to see any R-390s abused by a bad mod and wish that this particular one would stop propagating through cyberspace ;^) R-390 Archives => <http://mailman.qth.net/pipermail/r-390/73>, John

From dhallam at rapidsys.com Sat Jan 15 12:59:16 2005  
Subject: [R-390] 6082 Question

Well, let's put it this way. It won't harm the radio any, it's easily reversible, and if you want to improve on it, I guess you could substitute a 3 terminal 12 volt regulator for the diode. David KC2JD

From N4BUQ at aol.com Sat Jan 15 13:08:56 2005  
**Subject: [R-390] Searching for sockets tube extender 7 ,9 and 8 pins**

Hi,

I think Fair Radio ([www.fairradio.com](http://www.fairradio.com)) has a set of them in a nice metal box. Kind of expensive, though, if you don't need all the sizes. I see these at the hamfest here from time to time. Perhaps someone else on the list has a source. Good luck, Barry(III) - N4BUQ

From ham at cq.nu Sat Jan 15 13:21:07 2005  
Subject: [R-390] 6082 Question

Hi

One of the recurring threads on the 390(not an A) is the power that goes into the regulators. The power can warm up the radio. Things can get pretty warm in a restricted airflow situation.

Dropping from 24 to 12 volts with a linear regulator will dump more power into the radio. It will also pull more current out of the filament transformer. You need the same filament power at 24 or at 12 volts. That makes for 2X the current at 12 volts as at 24 volts.

Needless to say there are a variety of odd thing done to try to address the 6082 situation. I guess I'd rather mail out a couple 6082's than get into more off the wall mods to these radios right now.

Every so often 6082's show up at auction for reasonable prices. I totally agree that the "normal" asking price for these parts is a bit more than I think it is reasonable to pay. Take Care! Bob Camp KB8TQ

From wjneill at lcc.net Sat Jan 15 13:42:24 2005  
Subject: [R-390] Re: R-390 Digest, Vol 9, Issue 34

And then there's the Navy's R-388A/URR, for which I have a manual. Nothing but a military 51J4. Of course, there were some receivers used on certain submarines that had an ending prefix of BRR because of the novel antenna system they used. Bill Neill Conroe, Texas

By the way, here's the full link to that item: <http://www.fairradio.com/0mx-1258.htm> Barry(III) - N4BUQ

From pstaube at qwest.net Sat Jan 15 19:43:10 2005  
Subject: [R-390] First they chased off Nolan...

Tom,

Thanks for your courage in sending us your thoughts. This list has been such a great inspiration to me over the past few years.... it's almost like talking to one of your best friends every day when I see the posts. I was crushed when Dr. Jerry in Iowa left.... he had such great insight. I always enjoyed Nolan's posts, and was amazed at the time and energy he spent in educating us with hours of sweat equity to prove his point. And not long ago when Dallas Langford... who I consider "Mr. R-390" came back, I was thrilled.

I don't think any one of us has malice in our hearts... we all have a well deserved sense of pride in our individual accomplishments. But as Rick Mish told me years ago... these radios are going to be working long after we're gone.... we're only custodians of them, and we owe the R-3xxx gear we discuss on a daily basis... and more importantly...each other, a truly grateful respect for a truly wonderful design....

Best regards, Paul W?AD Minneapolis

From pstaube at qwest.net Sat Jan 15 22:05:22 2005  
Subject: [R-390] Black tube shields

Guyz,

I'm the new custodian of two non-As... as Rick Mish told me... we're not owners... we're custodians of these gems.

Since my new non-As are all original... including the original chrome tube shields.... is there anyone out there who would be willing to part with two sets of IERC black tube shields? I'm hoping that someone out there has some extras that they're willing to send to a good home... Best regards, Paul W?AD Minneapolis

From ham at cq.nu Sat Jan 15 23:11:00 2005  
Subject: [R-390] 6082 Question

Hi

Well the main way you get the power out is to use regulating devices that do not have filaments in them.

That puts it more in the category of redesign rather than modification.

I hope that doesn't stir anything more up. Take Care! Bob Camp KB8TQ

From sparks at codepoets.com Sun Jan 16 09:29:17 2005

Subject: [R-390] First they chased off Nolan...

Everyone,

As a recent subscriber to the list I would like to point out that you guys are your own worst enemies. Why can't you accept others technical opinions with an open mind, why the personal attacks over capacitors and ballast tubes. Your negativity towards one another is what is killing this hobby. These conflicts are in every group but just sit back, take a breath and think. Stay away from personal attacks and keep your opinions to yourselves and don't use the list for venting. When the experienced members leave who will the complainers look to for advice? You will even close the door to those of us that enjoy our 390's. I don't know Nolan, I don't know Dr. Jerry or Dallas but if you kick a dog often enough it will know to stay away. Some of you have done a great job of kicking... happy? Why not transform that negative energy into something positive... to the good of the hobby.... the way Ham Radio once was ...  
73 K4NCG

From mjmurphy45 at comcast.net Sat Jan 15 10:01:42 2005

Subject: [R-390] 6082 Question

True Bob,

An efficient switcher running at a nice high frequency like say 455 kHz - could double as a BFO?.. hmm

How about a combined 100 kHz power supply marker generator?

Speaking of heat, My ART-13 would melt if I did not do something to get the heat out. The design is just too darned tight and the 813, 811's and 1625's really heat up when the thing is in standby at the higher (450 VDC medium voltage and High V 1500V) that I run . If I was in a B-24 at 12000 feet I suspect all would be OK. I will admit it - I use a big-ol muffin fan with a sand resistor in series with it to slow it down a bit, blowing out. Keeps the radio cool and helps to heat the radio shack and best of all the tubes have never had to be replaced. Why not apply this primitive approach to the R390 series? Mike Murphy WB2UID

From ham at cq.nu Sun Jan 16 10:58:22 2005

Subject: [R-390] 6082 Question

Hi

A fan is not a bad idea at all. The main issues with one seem to be noise and how to mount it. Probably the only better idea is two fans (one above and one below the radio).

These days you can get fans that are pretty quiet acoustically. One of the common things to do seems to be to run a DC fan at half it's rated voltage. The air flow goes down quite a bit at half voltage but you don't need a hurricane to cool off a R-390. About all that leaves is RF noise from the fan....

Coming up with a way to mount the fans without cutting up the radio is an important part of the process.

I can see no reason to chop holes in the radio simply for cooling, though that has been suggested in the past. One way or another you would need to come up with an external mount for the fans. Simply setting them on the radio sounds like an accident in the making ....

Air flow at least takes the temperature of the top of the modules down. It indirectly impacts the temperature inside the module as well. That said there's still some heat inside the modules.

There are a couple of high power resistors in the cathode's of the 6082's that seem to run a bit hot. Often these are reported as being well out of tolerance (like say 2 or 3X the rated value). If you do replace them recommendations have been made in the past to bump up the dissipation rating of these parts. Obviously the resulting radio would not be "100% natural / organically grown".

A lot of this comes down to what your objective is. Everybody would love to have a 100% original radio and have it work perfectly in all respects 24/7. Those of us without access to 100's of radios may have to choose between one or the other.

From w9ya at arrl.net Sun Jan 16 11:26:10 2005  
Subject: [R-390] First they chased off Nolan...

Geez Tom, it sure seemed like Dallas was busy throwing out the "stuff" first, \*and\* was very unkind to others repeatedly.

IF he left because of the response he got, well I feel sorry for him, but he is a grown-up and should expect such responses.

Personally I think it appeared as if he stopped taking his medication.) <- And I do \*not\* consider that an unkind statement. Just a spot-on observation.

The truth be known -> I am sorry when people in our age bracket begin to loose their facilities. Makes me sad to watch it. I also wish there was some way to let them know without their getting defensive, as Dallas did here. I also hate watching when they insult others for no apparent reason, as is often the case, and then ride a high horse when someone replies in kind.

Thanks for sharing your thoughts Tom. and VY 73 OM de Bob w9ya

From DJED1 at aol.com Sun Jan 16 13:49:27 2005  
Subject: [R-390] First they chased off Nolan...

I too was pleased to see Dallas' name back on the board, and am sorry to lose his technical expertise. However, his e-mail, which I responded to, is one the most obnoxious one I have ever seen on the board, and I go back to the days of Nolan. I also believe Dallas came looking for an argument, and lead in escalating the verbiage. This in marked contrast to the publications he has posted elsewhere, which are well-written and modest in tone. Sorry it has to end this way, but I believe no one on the board deserves the kind of name calling Dallas has indulged in. My 2 cents worth. Ed

I agree with Bob - it is easy enough to look back at the emails from Dallas and others and see a fair bit of behaviour on Dallas' part as he wound up accusing other of.

I'm not sure what happened on the part of Dallas - he may be tired, stressed out, overworked, under-

appreciated, I don't know. I've certainly responded the way Dallas did in my own life, and upon reflection, found it usually to be related to lack of sleep (the screaming 3 month old 2 feet from me as I type has that affect, for example).

I wish Dallas well - his contributions no doubt are many, but I won't miss future discussions with the tone of this last go-around on capacitors. I honestly found much of the perplexing behaviour to be originating from Dallas' own messages.

I think the earlier discussion with Nolan and so forth evolved from a focus of the topics on the list - is the list primarily about R-390 radios, or is it a group of like minded folks sharing a discussion which frequently is about tube radios?

I personally strongly prefer that a list with the title R-390 in it remain on topic to the R-390's themselves as much as reasonably possible. The notion of 'use the delete key' really doesn't apply to folks reading a mail list as a digest, since you have scroll through all the off-topic messages.

A list for like minded people who are comfortable with meandering discussions about is certainly appropriate, but mixing it with lists like this one makes it difficult to stay on this list, simply from a time perspective. Paul

From hankarn at pacbell.net Sun Jan 16 14:13:14 2005  
Subject: [R-390] First they chased off Nolan...

ED WHO?? Hank KN6DI

From dmetz at ntelos.net Sun Jan 16 14:23:30 2005  
Subject: [R-390] 6082 Question-- Fans

At the risk of the sharp tongues, here goes. I added a 220v muffin fan to blow on those hot devils and run it on 120v. Very quiet and solves a big problem. However, one needs to make room for it so my solution was to remove the big electrolytic and replace it with a new modern version that was much reduced size. It's been running that way for at least 5 years about 6 months at a time and no failures. The "replaced" cap is carefully stowed away for future generations but in the mean time, I want to use it without concerns as to heat which the signal corps knew was a problem from almost day one.  
73's dave

From tetrode at comcast.net Sun Jan 16 15:33:07 2005  
Message-ID: <004901c4fc0a\$96d46170\$7c629318@compy2>

Hey Tom, pardon me from snipping your text, it's just convenient.....

>As a recent subscriber to the list I would like to point out that you guys are your own worst enemies.

Have you turned on a TV lately?; the whole human race is it's own worst enemy :^) It's just plain impossible to get along with everybody all the time.

>When the >experienced members leave who will the complainers look to for advice? (shrug) People come and people go, and eventually everybody goes. Today's newbie can become tomorrow's expert.

>I don't know Nolan, I don't know Dr. Jerry.....

I did, at least from reading and some correspondance. The Dr. J situation reminded me of my early experiences in my electronics career, and that was that some of the most talented or educated engineers also had some of the most difficult personalities to get along with. I also found it amazing how these accomplished folks genuinely had no clue as to how badly their attitude, language or even tone could affect others. Since they were usually a corporate superior there was usually not much you could do except remain silent, but here on the internet everyone has a voice. I guess folks like this just don't respond well to feedback!

The Nolan situation was completely different. Nolan was not one to run or to be chased away from anything. I also loved his colorful tales and he was my inspiration for catching R-390 fever again. But he knew *\*exactly\** what he was doing when he would post his wildly off-topic exploits to the list, and I would often get a double belly-laugh, one from the story itself and the next from anticipating the howls of discontent that would arise from deep within the list. (Nolan had an interesting observation too, the biggest complainers were usually those who never contributed any other posts!). He also had a lot of other interests besides radio, and I remember him telling me about some health and family situations to deal with which contributed to his absence.

I for one appreciate the simple list rules of conduct, the presence of the moderator, and also those who speak up if their toes are stomped on. I have seen totally open bulletin boards and Usenet groups go down the toilet when there were no controls. Just check out rec.radio.shortwave or the CB band for perfect examples of anarchy. Hey, we're all big boys playing here, and are responsible for what we say and how we say it. Now I gotta get back to the radios! 73, John

From kgordon at moscow.com Sun Jan 16 15:47:07 2005  
Subject: [R-390] First they chased off Nolan...

John KA1XC wrote: > The Dr. J situation > reminded me of my early experiences in my electronics career, and that was that > some of the most talented or educated engineers also had some of the most > difficult personalities to get along with.

I have had much the same experience.

In addition, I must remind Tom and certain others that Dallas FIRST publicly called at least two people, Walter Wilson, and Cecil, LIARS because they dared to mention that they had experience, and physical evidence, with photos, of bad capacitors.

If anyone had called me a liar for simply reporting what I had experienced, and for which I had physical evidence, I would tend to be rather irritated, and would probably respond in kind.

As I see it, the problem was not with those reacting to Dallas' attacks, but with Dallas' attitude from the beginning of the discussion. I was rather amazed at his vehemence, and quite surprised and dismayed.  
Ken Gordon W7EKB

From bhagen at msn.com Sun Jan 16 18:52:37 2005  
Subject: [R-390] 6082 Question-- Fans

Hi All:

If I may put my two cents worth in here - from what I've learned in the audio business it does not take a whale of a lot of air movement to go from fried to happy. Bruce

From buzz at softcom.net Sun Jan 16 16:06:39 2005  
Subject: [R-390] 6082 Question-- Fans

Dave,

Bruce is 100% correct. Over the years I have cooled a lot of equipment using 220 VAC equipment fans, and they run quieter too. Buzz

Hi

As long as the modification is no holes / reversible it sounds fine to me. I have heard stories that AC fans can have trouble (run hot) when run at half voltage. I have never seen a problem but you do see notes about it. Take Care! Bob Camp KB8TQ

From g4gjl at btopenworld.com Sun Jan 16 16:18:23 2005  
Subject: [R-390] Caps, Caps, Caps

Do we have any proof that this is the REAL Dallas Lankford?

Are ther any others here who would recognise him through his style(sic)?

I am amazed at the traffic that has been generated by this thread, and wonder if it is not just someone out posing as an otherwise respected technicl contributor.

Much more of this stuff and Im out of here too. Peter, London UK G4GJL

From ham at cq.nu Sun Jan 16 16:35:30 2005  
Subject: [R-390] First they chased off Nolan...

Hi

Well since we are going to beat this to death. (Hey, it's the R390 list - old habits die hard).

I started this one off with a less than perfect response to a question about URM-25 signal generator repair. I responded with a more or less generic (and not terribly well phrased) response. I also responded in the context of this list. By that I mean that the URM-25 is just another piece of test gear rather than an item to be treasured and restored. I view TV-7 tube testers in the same light. Make them as reliable as you can rather than as authentic as you can. And that's an \*opinion\* rather than a fact. People have a variety of opinions ....

Dallas (rightly) pointed out that my phrasing was a bit off. A re-reading my initial response to the question showed it certainly sounded like rip and romp through the generator. He (a valid opinion)

suggested that the URM 25 was worth restoring. He's certainly far more into URM 25's than I am. His view of them is different than mine.

All of the URM-25 stuff got the juices flowing and the temperature nice and toasty long before we slid over to the fate of the same parts in an R-390. Once we made that slide the frustration level got a bit higher since I look at an R390 in a \*very\* different light than a URM-25.

Needless to say we all are getting older. I certainly have a temper (and then some). Often it gets in the way. If it did so this time I apologize to all involved. Lets get back to radios and have some fun. Enjoy!  
Bob Camp KB8TQ

From bill at iaxs.net Sun Jan 16 16:49:57 2005  
Subject: [R-390] First they chased off Nolan...

wrote, "Have you turned on a TV lately?; the whole human race is it's own worst enemy :^)

Lately? It's as old as humanity. Remember the Merry Minuet from 1953? This is part of it. The rest is on the web, in 440 places. Think Kingston Trio.

"The whole world is festering with unhappy souls.  
The French hate the Germans.  
The Germans hate the Poles.  
Italians hate Yugoslavs.  
South Africans hate the Dutch  
And I don't like anybody very much!"

New hates are added to the list all the time. Regards, Bill Hawkins

From DJED1 at aol.com Sun Jan 16 17:18:22 2005  
Subject: [R-390] R-390 sideband adapter

I've found it interesting watching eBay the last couple of days- A CV-591 SSB adapter went for \$475, yet a solid-state SSB adapter kit by Jan Skirrow at \$150 hasn't seen a bid. Is it just tubes versus solid state, or are most not interested in SSB? I've been using the adapter I built several years ago, and I think it works better than the CV-591 I used to have. Ed

From W4QG at CFL.RR.COM Sun Jan 16 17:27:27 2005  
Subject: [R-390] RE: New R390A owner with some questions.

Hello All,

I have been lurking around for a while on the list, my complements to all for this great resource. This is my first post and I have a few questions for the newsgroup.

I recently acquired 2 R-390As.

One is a mostly functional Stewart Warner radio.



While twiddling knobs I have discovered a few things: Radio works on all bands that I have tested so far except 1000kc to 2000kc. Seems stone dead on that band. Any ideas where to look first for problems? The radio appears to be very clean and so far I have not found any obvious modifications (still has a functional ballast tube).

Also, engaging the sharp position with the audio response switch seems to kill the audio no matter what mode it is in.

I am in the process of downloading/printing the maintenance and operators manuals today. Any other documentation I should be thinking about acquiring?

The second radio is somewhat of a mystery. Not operational yet but it does power up.

The nameplate says "ITT Electro-Physics Laboratory". I did find a list on a website of the dozen or so R-390A manufacturers and ITT was not listed. So, I am assuming that someone else made this one and ITT just put their label on it. My question is, how do I go about finding out by who and when was it made?

Finally, I am planning on making the inrush limiter modification, and changing both radios to a three prong plug. Is there a preferred way to handle the 2 wire to 3 wire power cord change? Thanks! Paul W4QG

From chacuff at cableone.net Sun Jan 16 17:33:09 2005

Subject: [R-390] Caps, Caps, Caps

Group,

I have made a serious effort not to further contribute to what we have all experienced this past week by posting further about Dallas....but...Peters thoughts about Dallas's ID being Hijacked are exactly what has been on my mind for the last day or so. I have gone back and re-read many of Dallas's published articles and I am beginning to believe it was two different people. The posts of this last week don't have any of the tone nor the exacting grammar and spelling demonstrated in his published writings. Either that or Dallas is going through some medical or emotional changes/crises. (I hope not!)

Maybe someone that is close to him and can talk to him personally on the phone can clear this whole thing up.

Personally I don't plan to mention any further about the matter on this list so as not to cause any further damage to the list family as Peter has made mention of. Hang in there Peter.... Cecil...

From ham at cq.nu Sun Jan 16 17:36:01 2005

Subject: [R-390] R-390 sideband adapter

Hi

I think that the CV-591 is a known item in the market. The newer "ham" solid state stuff is not as well known. I like my Sherwood just fine, but it's not as well known as a CV-591.

There's also the approach of doing this all with tubes and avoiding any solid state stuff in the reception chain. That is understandable, but it's not what everybody might want to do. Take Care! Bob Camp

KB8TQ

From chacuff at cableone.net Sun Jan 16 17:38:36 2005  
Subject: [R-390] R-390 sideband adapter

I think it's all about perceived investment value.....that and us baby boomers are in a nostalgic phase I'm told.

From ba.williams at charter.net Sun Jan 16 17:38:22 2005  
Subject: [R-390] First they chased off Nolan...

We did abide by strict rules a year ago and look what happened....if you were here then. The damned list dried up, a lot of great old time members left in disgust, and we maybe had one message every few days or so. I can see the 'totally out of control' viewpoint, but I think everyone has to see the 'dried up, no humor, dead list' view too....since we experienced it here.

Maybe if everyone looked at the list as a group of real, live people it would help. For instance, would any of us care to chat and ask questions from a roomful of humorless experts who only allow R-390 talk? Hell no. People smile, joke, and break the ice. They do the same things here too.

Or, you could go to the pay list and see how you like that for a while. I was on it for a couple of years because they overlooked charging me and I just ended up staying. From what I remember, a person could be run out of town for asking an antenna question fer crying out loud. The 'stay on topic' goons would descend on you like stink on s\*it. If someone is really that adverse to humor, or others enjoying the humor, that is a good list to join and ask R-390 questions. There are enough experts over there. It's cheap to join.

This list was miserable and on deaths door when humor was banned. Let's not suck the life out of the list again, digest or no digest. I keep hoping that all of the old crew finds us again.

From chacuff at cableone.net Sun Jan 16 18:01:05 2005  
Subject: [R-390] RE: New R390A owner with some questions.

Hi Paul,

Congrats on your being a new owner of a couple of R-390A's. I probably won't be able to answer all of your questions fully but I can comment on a few.

The dead bands may be caused by problems in the Crystal Osc. deck. There is a cover on the top that contains the assortment of crystals and an associated heater. I would check to be sure all crystals are present and accounted for and are seated well. You may need to clean some of the sockets. Good thing is you have two radio's...always a recommended practice. You can barrow the crystals in question from the non-working radio and try them in the somewhat working radio. The next thoughts might be a dirty switch that selects the crystals. It is accessible from the bottom of the crystal deck. Not too hard to get out. Beyond that the posts of others will probably be of more help with the dead bands.

As far as the Sharp filter setting...my experience is that it has a bunch of attenuation in that position and it appears that the world went away when in fact more volume and better centering of the signal usually brings things back. It is possible of course that yours is broken. I've not seen that mentioned as a common problem area so I would have to refer to the schematic to form a game plan.

As for identifying your radio...that's a tough one. The tag may have come from anywhere. There are several suppliers of re-pop tags even. I would pull a few of the easy modules and check their markings...if you are extremely lucky and they are all marked the same you probably have your answer. Sometimes you can see whose name is marked on the Veeder Root counter (mechanical digital readout mechanism) and tell the origin. I've seen Electronic Assistance Corp. stamped on the back panel and you can sometimes look for the inspectors stamps on the main chassis and tell a little from that. Some are marked SW, some EAC etc inside of some shape such as a triangle or a square. The ITT thing is a little unique though...you may have something there....another Helena Rubenstein (spelling?)

On my radio's I have just attached the green wire in your new 3 wire cord to the nearest convenient place and the other two to where the power normally lands. Be sure not to plug into a GFI protected outlet as there are problems usually with leakage current that will trip those. Another story...

Anyway... Good Luck and Welcome to the group! Cecil Acuff....

From wewilson at knology.net Sun Jan 16 18:06:26 2005  
Subject: [R-390] First they chased off Nolan...

wrote: In addition, I must remind Tom and certain others that Dallas FIRST >publicly called at least two people, Walter Wilson, and Cecil, LIARS >because they dared to mention that they had experience, and physical >evidence, with photos, of bad capacitors.

>If anyone had called me a liar for simply reporting what I had >experienced, and for which I had physical evidence, I would tend to be >rather irritated, and would probably respond in kind.>  
>

Having known Dallas from earlier postings, I did not really take offense at his calling me a liar, amidst all his "statistically impossible" ramblings. I've gained from his experience in the past. In particular, there is a page on my website that was added after some emails (both online and offline) regarding how to measure sensitivity of an R-390A receiver. Dallas corrected me and taught me in this case. I hate to see him get mad and leave for any reason.

I appreciate all those who stood up for me and Cecil, but I cringed at the tone of some of the emails that followed. Yes, we will have some different opinions about R-390x receivers, but we are all here to learn. I hope we can welcome the newcomers and relish the experience of the oldtimers as we go forward. Over the past week, I'm not sure we've shown our best side. Walter Wilson - KK4DF

From wewilson at knology.net Sun Jan 16 18:16:10 2005  
Subject: [R-390] RE: New R390A owner with some questions.

Paul,

**If the problem is only in the 1-2 MC range and does not include 18-19 MC, it won't be a crystal. It will be the 1-2 MC section of the RF deck. You may have the slug rack getting stuck, an RF can gone bad, a busted gear clamp, or broken slugs. First, set the frequency to 7+000 (1KC above 7 999) and see if the camshaft at the back of the 1-2 MC range aligns properly. Then move the KC knob throughout the 1-2 MC range, watching the movement of this slug rack in particular. Walter Wilson - KK4DF**

From ka4prf at us-it.net Sun Jan 16 19:14:16 2005  
Subject: [R-390] Limiter

Hi all,

I've been playing around with the Limiter. It seems that the signal seems more clear with the Limiter off, even when it's on and turned the max, it doesn't seem to help much. Can someone explain if the limiter is just a bell or whistle that was put on the R-390A for "Eye Candy" so to speak? In layman's terms if you please. Chuck

From polaraligned at optonline.net Sun Jan 16 20:00:15 2005  
Subject: [R-390] First they chased off Nolan...

> Having known Dallas from earlier postings, I did not really take offense > at his calling me a liar, amidst all his "statistically impossible" > ramblings. I've gained from his experience in the past. In particular, > there is a page on my website that was added after some emails (both > online and offline) regarding how to measure sensitivity of an R-390A > receiver. Dallas corrected me and taught me in this case. I hate to see > him get mad and leave for any reason.

I am glad you were not upset at his calling you and Cecil a Liar. He also insinuated that Hank Arney was a liar because Dallas claimed that the blue stripers could never be restored and work properly, contrary to what Hank has done.

I certainly had the rudest post of all and am not proud of it. I appologized to him for my post because it is the right thing to do. I do not concede what I was trying to say, just that I could have gone about it in a much less inflamatory way. After reading his posts I was seeing red. He was the unprovoked agressor here. He was looking for a fight.

In a private e-mail to me Dallas wrote: "I am glad I have pissed you and the others off. It was about time someone stood up to you flim flam artists." Dallas also called several members "liars and cheats" based on his personal experience with them. (I won't mention the members names).

Dallas picked a fight and got it. Nobody chased off Dallas. He wanted to fight and leave. With his attitude, he does not belong here. Maybe his better days are behind him. I think the list is just fine. This is life..... Scott

From ba.williams at charter.net Sun Jan 16 20:33:53 2005  
Subject: [R-390] First they chased off Nolan...

> Dallas picked a fight and got it. Nobody chased off Dallas. He wanted to > fight > and leave. With his attitude, he does not belong here. Maybe his better > days > are behind him. >> I think the list is just fine. >> This is life..... >> Scott

I don't know about all the other stuff being said, but what you just said is pretty damn rude, in my opinion. Who appointed you in charge of saying who belongs and who doesn't? Besides that, aren't you a little new around here?

And another thing- the comment made by somebody about him being off of his medication gave me a

case of the red ass. That was uncalled for and just mean to say, regardless of who is right or wrong.

Hank, Dan and I once got into it big time and it got a bit ugly. Neither of us was going to back down. One of us, I forget who, finally wrote off-list and he jumped at the opportunity to mend fences. I'll always give him a ton of credit for dropping the beef and never bringing it up again even though we never resolved it....and I don't remember what it was about either. Anyway, I sure am glad that nobody started saying the either Hank or I didn't belong on the list or that we were off of our meds. Barry non Hauser

From chacuff at cableone.net Sun Jan 16 20:51:39 2005  
Subject: [R-390] Limiter

The other guys can straighten me out if I get off course here but my understanding is that it is a simple diode peak clipper implemented with tubes of course and the control just sets how deeply it cuts down into the waveform. The problem with peak clippers is that they create distortion and that is what you are hearing. Works pretty well with ignition noise and electric fence hash but that's about all. Just my 2 cents worth... Cecil...

From ba.williams at charter.net Sun Jan 16 20:59:54 2005  
Subject: [R-390] Limiter

> The other guys can straighten me out if I get off course here but my > understanding is that it is a simple diode peak clipper implemented with > tubes of course and the control just sets how deeply it cuts down into the > waveform. The problem with peak clippers is that they create distortion and > that is what you are hearing. Works pretty well with ignition noise and > electric fence hash but that's about all. >> Just my 2 cents worth... >> Cecil...

>From what I remember, the limiter sets the audio waveform clipping at the top of the spectrum when you use the lowest limiter setting. As you increase the limiter value, the clipping level gets lower and lower, approaching the quieter voice/music waveforms. The best use is to lower the clipping level, by increasing the limiter value, to clip (lop off) the offending spikes before you increase the value enough that speech or music audio becomes clipped too. Spikes can be lightning, auto ignition noise, etc. I've used it with success in the past. Barry

From bill at iaxs.net Sun Jan 16 21:14:25 2005  
Subject: [R-390] First they chased off Nolan...

wrote, "Hank Dan and I once got into it big time and it got a bit ugly. Neither of us was going to back down."

And so it goes. There are situations that can't be resolved because the facts can't be tested. Where I worked, when I worked, there were discussions that were terminated because we all recognized, when it was pointed out, that we'd had this discussion before and couldn't resolve it. Such discussions were called "ratholes". Go down a rathole and you had no idea where you'd come out.

Others we called religious wars. No proof was available here on Earth. In the R390 group we have those who believe (some think they can prove) that complete capacitor replacement is an end to all of your worries. Never mind the resistors, coils and tubes, not to mention the mechanisms. Others are equally sure that capacitors only fail under stress, where a Blue Striper represents maximum stress.

Many years of ratholes and thousands of years of religious wars have shown that these are pointless discussions. Nevertheless, the religious can still get very hot about their issues. That's the way we are, the way God designed us, if you can't handle evolution.

The next time this sort of thing breaks out, someone should holler "Rathole" or "Religious war." Then no matter whether we've been drinking or not taking drugs, we should back off.

Ah, but God designed us to fight, so that the best man may win. The problem is that continuous fighting prevents any kind of progress. If we fall back into continuous fighting, as some political parties have encouraged, then we lose the ground we have gained in civilized behavior. We either get along in a civil manner, or we fight until nothing is left that is worth saving.

Is that what's troubling you, Binkey? Then lift your head up and never give up, never give up, that ship!  
Regards, Bill Hawkins

From polaraligned at optonline.net Sun Jan 16 22:05:11 2005  
Subject: [R-390] First they chased off Nolan...

> I don't know about all the other stuff being said, but what you just said > is > pretty damn rude, in my opinion. Who appointed you in charge of saying who > belongs and who doesn't? > Besides that, aren't you a little new around here?

Watch out. There is a pecking order around here now. I bow to my senior, and superior, members. (talking about RUDE) A keyboard, for many, is not the best possible way to convey their thoughts. (Myself included) The problem we seem to be experiencing is that folks read way too deep into each post. I appologized to Dallas and I stand behind that apology. On the otherhand I don't think I want him here if he is looking to fight. I am not trying to stop anyone from being on this list. I just voiced an opinion that was read into too deep and now I have to defend it. This place is too nuts for me. I am going to just go the Dallas way myself. Maybe he is right. Scott

From rdavis7 at comcast.net Sun Jan 16 22:11:06 2005  
Subject: [R-390] Healing the Hurt

Gentlemen, my name is Rick K8PJQ and I've had that call since 5-59. I have a small military working knowledge of R-390's ,as I long ago plied the undersea world on nuclear subs as a radio operator, including taking the Skate SSN 578 to the North Pole. I been reading the incident that occured on this reflector ,and I'd like to state this:

1. Each and every one of you possesses talent and experiance which you freely share with anyone.
2. When someone offers us a gift-and we choose to accept that gift, then we accept it with graciousness and gratitude.
3. Everyone, whether newbie (myself), or old timer, has the choice of accepting these gifts be it advice, referrals etc...
4. This is what you do when you post responses- you offer a gift. I personally appreciate any knowledge I can gain from your collective experiance. At 62, I consider myself a "midtimer", not an "oldtimer" ,and thoroughly enjoy reading and taking notes from this reflector. I belong to another hobby/club/group whose national monthly magazine states in each issue "Join Us and Have it All". I guess I've said what I needed to say, thankyou, keep this group together and "Have it All".

From DJED1 at aol.com Sun Jan 16 22:46:05 2005  
Subject: [R-390] R-390 sensitivity measurements

Here's another bit of trivia which I hope will entertain. In looking at Dallas' other postings, he discusses a method of measuring receiver sensitivity. From my view, I'm not sure there is an absolute correct way, but just for fun I looked up the MIL spec for the R-390 (MIL-R-13947B) to see what the test requirement was. It's pretty close, but not exactly what Dallas discussed. The spec has two tests: AM and CW. The AM is performed by turning the generator modulation on and off, with 30% at 400 cycles modulation. The signal level is set for 10 mw audio out with modulation, and 1 mw with no modulation. The only difference from his test is that it is done at 8 Kc bandwidth, and a 125 ohm matching resistor is in series between the generator and the receiver. You still need to do the correction for the generator reading to get the voltage at the receiver.

For the CW case, the setup is the same, except the generator is unmodulated, where signal is carrier on and no signal is carrier off (still in the 8 Kc bandwidth). The AM spec is 3.3 uv except in the 16-32 bnd, where it is 4.4 uv. The CW spec is 1 uv.

This, I believe, was the final spec for the R-390 and was used for acceptance testing. I never did much like the concept of turning the modulation on and off, but this gives that approach significant legitimacy.  
Ed

From chacuff at cableone.net Sun Jan 16 23:39:52 2005  
Subject: [R-390] Healing the Hurt

Hi Rick...

I'll bet you can tell some stories....Love to hear them sometime!

We ought to plan an annual R-390 group get together....we would probably better appreciate each other if we could put a face with a name. It would certainly "Humanize" the group....something banging on a keyboard at each other doesn't do very well. Thanks for serving Rick...and for your thoughts!

From r390a at bellsouth.net Sun Jan 16 23:43:58 2005  
Subject: [R-390] R-390 sideband adapter

I think that Jan is relisting the various kits as folks buy them. Within a couple hours of my buying one of the kits, he had another relisted. I think they're all Buy It Now items aren't they?

The CV-591 has become "collectable" over the years. Ages ago you could pick one up for nothing. It is a decent SSB demod, but the circuit in Jan's kit looks like it would do as good, if not better a job. The only thing missing is the \*CLACK\* as you change from upper to lower sideband. Well, that and the tubes.

Tom NU4G -- Who reaaaaly wishes he could find a \*CV-157\* somewhere cheap

From dathegene at hotmail.com Mon Jan 17 10:14:49 2005  
Subject: [R-390] Limiter

As you say, the limiter doesn't do much for AM signals. The real functionality is removing static crashes

(lightning) from RTTY signals. A major use of R-390As was the regular routine "chatter" between the various ships in the Fleet, done with RTTY, and the limiter can remove the peaks, while providing a recognizable signal to the RTTY unit in the next rack... 73 de NA0G Gene

From ham at cq.nu Mon Jan 17 10:37:05 2005  
Subject: [R-390] R-390 sensitivity measurements

Hi

As with many things, what matters the most in sensitivity measurements is that you define how you got your numbers.

There are a number of ways to change the setup that will impact the result that you get. That's neither good or bad in it's self. What is a problem is a undefined method. If I use method A and you use method B we really can't be sure that the results are comparable to each other. If we each have fully characterized and defined (no small task) our methods then we may be able to guess at a comparison.

A lot of restoring these radios comes down to "I got 0.001 uv on all bands, time to tell the world". I think that has lead to a number of conversations about measurement technique ....

A far more interesting question - does \*any\* single sensitivity number actually tell what's going on in the real world? I would claim that the answer is no and that is the root of the problem. At that point (no one number) we more or less divide into those who give up on numbers and those who measure a whole bunch of numbers. That makes for interesting conversations .... Take Care! Bob Camp KB8TQ

From DJED1 at aol.com Mon Jan 17 10:40:27 2005  
Subject: [R-390] First they chased off Nolan...

Don't worry- I've never changed a cap in mine and never will unless it kills the radio- my story and I'm sticking to it- in a gentlemanly way Ed

From DJED1 at aol.com Mon Jan 17 10:43:39 2005  
Subject: [R-390] R-390 sideband adapter

glad to see you've picked one up- I'd be interested in how it works out. It's similar to my design but a different way of doing the BFO. I'm wondering if he included the AVC circuit I used, which makes a big difference in SSB reception. Of course, you can also use the Lankford modification. Ed

From peuhs at bellsouth.net Mon Jan 17 10:53:41 2005  
Subject: [R-390] trash

Friends,

I no longer post as a result of bad tempers from some and the sophistry of a few... Too bad...Regards, jlap...John....Related to Cathy....



From DJED1 at aol.com Mon Jan 17 10:54:41 2005  
Subject: [R-390] R-390 sensitivity measurements

I think the test serves two functions- first, you can tell if a particular repair to the radio has improved the performance in a relative sense, and you can compare two radios in a relative sense. The test is probably useful in an absolute sense only if you define all of the test conditions- then a knowledgeable person can calculate the differences in measured performance based on the setup. For example, testing at 8 Kc bandwidth versus 4 Kc gives a degradation in sensitivity of 3 dB.

I think tweaking the radio for the best sensitivity has led to its reputation as one of the best weak signal receivers ever made. I've found it to be as good as my R4C and distinctly better than my SP-600. But I won't try and argue that it's got 0.0XX microvolt sensitivity. Maybe the uncertainties in measurement is why the spec numbers are so loose. Ed

From DJED1 at aol.com Mon Jan 17 10:58:57 2005  
Subject: [R-390] R-390 sensitivity measurements

Good point. Maybe the company QA people took advantage of that feature, although the spec was so loose that it should have been easy to get the radio through that test. I would expect the vibration test would have been tougher. Incidentally, the spec is on the R-390 FAQ web site if anyone is interested. Ed

From ham at cq.nu Mon Jan 17 11:46:38 2005  
Subject: [R-390] R-390 sensitivity measurements

Hi

The nice thing about a relative measurement as you align the radio is that your setup stays more or less the same. For instance the output impedance of your generator doesn't change.

The point of an absolute measurement is to know when to stop. There's nothing wrong with working on radios but at some point you probably should haul it off the bench and *use* it.

You can spend a couple of weeks going over all the possible variables in an absolute sensitivity test. At some point you either need a fairly fancy lab or you need to accept that the number may be off by 3 or even 6 db in either direction. Unfortunately 0.7 uV is a lot harder to brag about than 0.35 uV. They both may be a reading on a radio that is really 0.5 uV .....

The real point is how does *your* antenna work into *your* radio. That's a tough one to characterize except by actually using the radio. Take Care! Bob Camp KB8TQ

From dmetz at ntelos.net Mon Jan 17 11:51:42 2005  
Subject: [R-390] 6082 another question

I guess I'll float another question on the 6082 thread. Would it be so simple as to use another transformer to give either 12v series or 6V parallel filament voltage to use the plentiful 6080 6V tubes? While not ideal, I would think one could just hang it on the back panel under a convenient screw to avoid any drilling. 73's dave

From ham at cq.nu Mon Jan 17 11:56:26 2005  
Subject: [R-390] New Advance in Modern Technology

Hi

I just can't help my self .....

I'm sitting here reading an ad for a radio that probably costs more than a new car. It's a Yaesu FT dx 9000D. One of the major claimed advances in this radio is:

"Three permeability-tuned, motor -driver "u" RF Tuning modules with  $Q > 300$ , for ultra-sharp RF selectivity found nowhere else in the Amateur Radio industry"

Gee I wonder if I can find any other radios around here with coil racks in the front end....

Seems like the world is finally re-learning what they already knew > 50 years ago.

I wonder if 6C4 front ends are going to make a come back when they break the \$20,000 barrier.

Like I said I just can't help myself ... somebody get a net ... Enjoy! Bob Camp KB8TQ

From chacuff at cableone.net Mon Jan 17 12:06:23 2005

That's hilarious!!! Cecil...

From DJED1 at aol.com Mon Jan 17 12:21:54 2005  
Subject: [R-390] New Advance in Modern Technology

I wonder if they have an expensive radio because of the improvements, or the improvements to get to an expensive radio. Reminds me of the latest super cars for \$250K and up. More an exercise in conspicuous consumption than necessary performance.

I can understand the R-390, where shipboard installations in particular required a radio with superb strong signal performance. Except for a few DXpeditions, I doubt that most hams would see any difference. Ed

From r390a at bellsouth.net Mon Jan 17 12:31:22 2005  
Subject: [R-390] A \$500 12AU7?

Yes, \$500. For a single tube, not a truck load of them. It must be a \*really\* special tube for that price. You know where it is. Item 5744997827 \*twitch\* Tom

From tetrode at comcast.net Mon Jan 17 12:39:10 2005  
Subject: [R-390] 6082 another question

Yup, that would work well Dave. Unfortunately the 390 is so crammed with modules that there's not

much room left inside. But there is some room behind the front panel, so if you had a compact enough transformer and were clever with some mounting hardware it might be possible to attach it to the X-frame between the KC and MC shafts.

Another no-holes 6080 mod which I've thought of is to mount them on a small outboard chassis along with their own filament transformer, and connect them back to the audio deck via the side vent hole with a foot or two of cable and an 8 pin octal plug (just need one plug and it moves all the heat outside the radio). It's really the same thing as tube socket adapter except that it's outboard because of the space requirements.

Before anyone dismisses this as too bizzare take a look at the CV-157, it's got seven tubes (including a 6080) in a seperate power supply tube chassis which is then connected to the main chassis below via a cable. I just wish they would have connectorized it as it would make servicing easier. John

From r390 at al.tirevold.name Mon Jan 17 12:45:36 2005  
Subject: [R-390] Wei Li's latest "Pearls"

**Wei Li's latest installment of his "Pearls" of wisdom is available on the R390A FAQ site.**  
**<http://www.r-390a.net/Pearls>** Enjoy!! Al

From redmenaced at yahoo.com Mon Jan 17 13:05:03 2005  
Subject: [R-390] A \$500 12AU7?

His other tubes are quite ridiculous, too. \$80 for two 6AL5's? Isn't Latrobe, PA where they make Rolling Rock beer? Maybe he lives too close to the factory. Joe

From dmetz at ntelos.net Mon Jan 17 13:28:28 2005  
Subject: [R-390] 6082 another question

That sounds like a great idea to move the tubes outboard too. . I have a pretty good supply of 6082's but will file that tip away.! thanks dave

From ghayward at uoguelph.ca Mon Jan 17 16:48:12 2005  
Subject: [R-390] R390 Sideband Adapter

I added an outboard dual product detector with the crystal BFO fed to the two in quadrature (90 degrees out) and listen to the two in stereo. It does nothing to the SSB signal but seems to make the noise three dimensional and almost pleasant. Later I'll extend this into an ISB detector but I haven't got the time right now. So far the AGC hasn't been an issue. Cheers es 73 de Gord, VE3EOS

From wa6knw at sbcglobal.net Mon Jan 17 18:17:58 2005  
Subject: [R-390] First they chased off Nolan...

First off no one chased of Nolan. Nolan has decided to do some work that requires him to be transparent. He IS VERY MISSED.

Dallas Langford has been around for a long time doing a lot of studies and papers on selectivity and

sensitivity improvement to numerous boat anchors and loop antenna design. I respect him for his knowledge and his willingness to share it with others. Mr. Langford is like that old Sergeant Major or Colonel who's shorts are always chaffing them and their hemorrhoids are flaring up. They will chew your head off for some minor infraction and then turn around and ask you how your mother or your family is doing. He's PO'd today but will forget about it in a few days and will be back to his helpful self. He HAS been a little shorter fused since his stroke several years.

Dr. Jerry could be a real horse's rear at times but he had some really good information. He may have made you feel real stupid for asking the question but you got an answer that was complete.

There are several other tricksters about who from time to time start a thread that they know will rile up some of the list members and they do it because they get a kick out of it. Quite personally I do sometimes too. Some of you are so predictable.

Yeah, I've stepped on toes a few times, probably PO'd a few also, but guess what? Who really gives a s\*\*t? This list is a slice of life. We are all here because we have some form of attraction to the R-390(\*) series of receivers. Some of them are real performers some of them are just so, and some of them are real dogs. Just like US..... Hell who else would want us?

So what's with all the p'ing and moaning? This isn't a perfect world. It will never be no matter how hard we try. So let's all go play and be happy.

I'm really interested in finding out more about Dallas' thesis on putting a roofing filter in the R-390(\*) and what it will do for the noise floor and overall sensitivity. RICH WA6KNW

From levyfiles at att.net Mon Jan 17 22:45:30 2005  
Subject: [R-390] A \$500 12AU7?

I thought there was no one dumber than us screwing around with old ancient radios. But when you see the prices the McIntoshes are getting then..... who are WE?

I guess we should start claiming our radios sound better with NOS MIL Tubes or whose going to be the first to sell the newbies \$ 500 tubes? What a world. As if it mattered remotely!!!

From r390a at bellsouth.net Mon Jan 17 21:23:34 2005  
Subject: [R-390] R-390 sideband adapter

Well, I could always put 12AU7 buffers in the input and output, and for the \*CLACK\*, I could add a large relay mounted in the middle of a piece of sheet metal (for max noise) and wire it so it clacks when changing sidebands.... Maybe build some sort of version of the AFC system used in the CV-157, complete with spinning disk. LOL

From ham at cq.nu Mon Jan 17 21:45:12 2005  
Subject: [R-390] R-390 sideband adapter

Hi

Probably the biggest single thing that needs to be done for any SSB adapter to work well is the (dare I

bring it up ...) Dallas Lankford AGC mod. Without a better attack / decay ratio on the AGC SSB will be a problem. To work properly the AGC needs to be applied to the full receive chain and not just the IF. If you don't mod the radio internally then you need to derive the AGC externally and feed it back into the radio.

Another interesting challenge is that the output level from the R-390 is a bit lower than the level that comes out of most modern radios. That makes matching up the radio with just any adapter a little tough.

Do you really think this SSB stuff will be around long enough to make it worth setting up for? Enjoy!  
Bob Camp KB8TQ

From ba.williams at charter.net Mon Jan 17 21:45:26 2005  
Subject: [R-390] Healing the Hurt

Cecil,

We were going to do that a few years back. I think the get together was to center around the Dayton fest. It took a while to agree on the right spot and conditions, but from what I remember it was: A place where we could shoot guns freely (Nolan started this one, of course) Near a drag strip so we could watch the races A place where big fires could be built while we drank Near an airport so we could watch the planes It had to be free

I think the negotiations ran afoul when the types of beverages were being haggled out. Some insisted on beer, others argued over the brands of hard stuff, and just about everyone bitched over imported beer.  
Barry non Hauser

From crips01 at msn.com Mon Jan 17 21:49:31 2005  
From: crips01 at msn.com (Kenneth Arthur Crips)

That is very interesting my ELDICO SBA-1 "chinks" when I change from upper to lower SBB. Ken

From ham at cq.nu Mon Jan 17 22:16:49 2005  
Subject: [R-390] First they chased off Nolan...

Hi

Back before "they chased off Nolan" we also had these tiff's here on the list. At about this point he would go back and take a look at the message history on the list. In his honor I went back and did the same thing just now. It's interesting to look at the pattern and not too hard to do. Take a year's worth of messages and sort them by "from". You can then take a look at date patterns.

As far as I can see, regardless of what is going on here there are some people who can only take us for about four or five days at a time. Apparently we're exciting enough that those couple of days are enough of us for about three months. Take Care! Bob Camp KB8TQ

From ba.williams at charter.net Mon Jan 17 22:59:18 2005  
Subject: [R-390] Healing the Hurt

It sure sounded like a fun event and made sense at the time. Barry

From r390a at bellsouth.net Tue Jan 18 01:26:32 2005

Subject: [R-390] HP-606\* vs URM-25\*?

I've had a URM-25D for years and have never had any problems. I ran across an HP-606A recently and it's in the process of being shipped.

I've never used a 606, (though I've used a 608 for higher freqs.) How does the HP-606 compare to the URM-25D? At the very least, it seems to be heavier. Thanks Tom NU4G

From eldim at att.net Tue Jan 18 04:39:05 2005

Subject: [R-390] HP-606\* vs URM-25\*?

Hello Tom & Crew,

The HP-606A is definitely a step up from the vintage AN/URM-25(\*) series Signal Generators.

However, the URM-25 Series did have a feature that I admired and appreciated which was the external X200 microvolts that was sure handy to keep a Freq Meter connected to. The 25 covered 10 KHz to 50 MHz in eight ranges, whereas the 606A covers 50 KHz to 65 MHz in six ranges. The 25 is smaller, lighter, and takes up much less bench space but that is where it ends. The 606A has much better accuracy of 1 % plus 100 Khz & 1 MHz internal Calibrator. The 606B was another step up but required the HP 8708A Synchronizer that provided PLL plus some more amenities. Of course, you can use it without the synchronizer and essentially you still have a 606A. The 606A sold for \$1350 back in 1963. I have used both in the Air Force from 61 but the 25 was replaced by the 606A somewhere along the line. We also had a HP-608 Series which covered 10 MHz up to 400 + Mhz depending on the model. This was also a very nice generator for its time and its' earlier military counterpart from the AN/URM-26 series. In any event, either generator is very capable of aligning radios receivers from the bygone era. You're sure to fall in love with the 606A on your journey to upgrade. I now use the 8640B which is the "cats meow". There are a lot of other signal generators that fill the bill as well. 73, Glen Galati, KA7BOJ Tacoma, WA eldim@att.net

From hankarn at pacbell.net Tue Jan 18 05:22:13 2005

Subject: [R-390] HP-606\* vs URM-25\*?

Glen, I have all of them plus the 8660C which is the Tiger of the bunch, for sure. Hank KN6DI

From bill.riches at verizon.net Tue Jan 18 08:00:58 2005

Subject: [R-390] HP-606\* vs URM-25\*?

I uses both when I was in the Air Force in 1960 - Both good units but wait until you use the 606 - great generator. Congrats!!!! 73, ill Riches, WA2DVU Cape May, NJ

From chacuff at cableone.net Tue Jan 18 08:27:35 2005

Subject: [R-390] HP-606\* vs URM-25\*?

I've had both and liked the 606 much better...so much so that I gave my URM-25 away. The 608 is a great machine as well especially the "E" model. I now use an 8640B but still keep the 606 on the bench as well and use it often.

From barry at hausernet.com Tue Jan 18 10:40:33 2005

Subject: [R-390] Healing the Hurt

BW wrote: > I think the negotiations ran afoul when the types of beverages were being > haggled out. Some insisted on beer, others argued over the brands of hard > stuff, and just about everyone bitched over imported beer. > > Barry non Hauser

I must take exception to your repeatedly misrepresenting yourself and showing disrespect to the name "non Hauser". Perhaps you wouldn't do so if you were aware of the following piece of lost history:

Sometime back in the 1800's, in a remote area of the Austrian Alps, there was a happy clan -- the Hausers. One day, there was a dispute when a beer stein sold by Wolfgang Hauser to his cousin Siegfried allegedly cracked spontaneously and began to leak. Wolfgang insisted that Siegfried must have pounded his stein on the table too hard -- which was the custom when requesting a refill. He could not accept that one of his fine steins would be faulty.

The dispute grew out of control, and a bloody feud ensued. One side started calling themselves "Nicht-Hauser" (Non-Hauser, in English). They nearly wiped each other out and so finally Wolfgang and his cousin called a truce. Of course, they decided to drink to it.

Just before they could "tap tankards", Wolfgang's stein split open and spewed brew all over Siegfried. They grabbed each other by their throats, but then Siegfried cried out "Auch du lieber! Wolfgang! -- Das Bier ist zehr warm .. heiss!" They looked at each other dumbfounded.

You see, it was their custom to drink their beer very cold -- they put the casks in the snow or a cold stream and chilled the steins as well. It became instantly obvious to both of them that some Dumkopf Kellner had poured warm beer into a frosty stein -- ages ago and now again. Rather than continue the bloodshed, they simply banished the Kellners (waiters/beer servers in English) and their families off to England where they could do no further harm. BTW, the elder Kellner was named Wilhelm and that part of the family changed and anglicized - or anglicised -- their family name to "Williams" when they got to London. (No offense, probably just a coincidence.)

Silly story? Well don't you dare laugh. There was some collateral damage, so to speak. Read on:

In the midst of the feud, some travelling Serbs passed through and got caught up in the crossfire. Some were killed, but most managed to escape. In the retelling of the tale back in Serbia, it changed and became generalized -- and highly anti-Austrian. This culminated in 1914, when their descendants assassinated that Archduke, and the rest, as they say, is history.

And all because of a few leaks 'n cracks -- and warm beer. (no offense to listmembers of the British persuasion)

Barry (actual) Hauser P.S. You can now safely remove tongues from cheeks. Oh, yeah -- Sorry this is OT, but then, again, is it?

From DJED1 at aol.com Tue Jan 18 10:57:43 2005  
Subject: [R-390] R-390 sideband adapter

I certainly agree. In the 70s I bought several CV-591s (\$35 each from DOD-wish I had kept them as an investment), which helped, but they didn't have a convenient speaker output, and took up a lot of space on the desk. I tried my own version of Dallas' AVC mod, and the audio driven version. However, none were really satisfactory without a product detector, and so I built the solid-state product detector and external fast attack AVC. The AVC voltage is derived from the IF output, and only requires a couple of transistors and diodes. The AVC characteristic is not as flat as my R4C, but the R390 was never specified to have a real flat AVC characteristic. I can listen to widely different signal strengths now without any distortion.

I've been pretty happy with it, although my BFO is not as stable as the internal BFO. I picked up a couple of BFO crystals which I will add to the unit one of these days. Ed

From Llgpt at aol.com Tue Jan 18 11:13:49 2005  
Subject: [R-390] First they chased off Nolan...

Yes, I have changes more than caps on several R-390's and R-390A's. I have even added some solid state devices and, used various devices in place of the 3TF7. I have been accused of being a witch etc. I have had 39 R-390A's pass through my hands and 2 R-390's. I have seen bad caps, split caps, brown ones, black ones and yellow ones. Bad resistors, broken gear clamps, leaking filter electrolytic capacitors (mainly General Instruments), some were "depot dawgs", some blue stripers and some looked as new. "Ya pays yer money and ya takes yer chances" as someone once said. I've used grease. then synthetic oils, "Slick 50", Mobil gear lube and various other concoctions, none of my finger have fallen off yet and I still have all my hair and teeth. One thing I haven't done yet is lick the radium dials faces of the meters, mainly because Roy Morgan cautions against it. My god, I've even used diodes in place of 26Z5W's and the B+ didn't smoke anything else.....I guess I'm lucky huh?

My advice, don't take any of this crap too seriously and nobody here is the expert on everything related on the 390 series.

I used to love jumping into the fray and antagonizing others with my wit and wisdom, but now I just chuckle and mutter "imagine that"..... Mainly, because nothing "new" has been discovered about these receivers in years, most of us have the "T Shirt" and have been there and done that.

People come and go from this and other lists all the time, I have unsubscribed from this and other lists too many times to count, and have more hours in the penalty box than some hockey players.

Be tolerant of others, but remember too, that everyone has an opinion and we all know that old saw about opinions and rear ends.

Just my first 2 cents worth in 2005. Les Locklear "42.7% of all statistics are made up on the spot."  
Steven Wright

From Llgpt at aol.com Tue Jan 18 11:18:00 2005  
Subject: [R-390] Healing the Hurt



Just what does this have to do with a 3TF7 substitute? Tor Johnson

Nothing in regards to ballastsubstitutionalism nor anti-ballastubestubstitutionalism, however I have just been notified by an anonymous informant of some more to the story. An "epilogue", if you will:

In 1926, a young Austrian immigrant named Wolfgang von Hauser-Steinmacher arrived at Ellis Island. It being Prohibition, he could not find work making expensive beer steins. He drifted around, then the depression. Along the way he also learned a lot about a new area -- bakelite, plastics, etc. Sometime in the late 40's or early 50's, he took a job -- with Sprague. Years later, some problems arose with his work -- apparently the legacy followed him. The old man hopped a flight and disappeared into the Austrian Alps -- or it may have been the Australian outback as some say he boarded the wrong flight, having been upset and confused at the time, muttering something like "Naturlich -- iffen you gonna uberheaten und gefreezen 'em, der gonna geschplitin und geleaken haben." (Having been in the States for so long, his German wasn't so good any more.)

Might have some bearing - on something. Barry

Is that the same Steven Wright who said: "Someone broke into my apartment and replaced everthing with an exact duplicate." If so, 42.7% is out of date. More like 53.8% nowadays .. .oops, sorry 53.81%, uh-oh, 53.82% ....

From roy.morgan at nist.gov Tue Jan 18 12:13:46 2005

Subject: [R-390] HP-606\* vs URM-25\*?

>Hello Tom & Crew, >The HP-606A is definitely a step up from the vintage AN/URM-25(\*) series >Signal Generators.

I agree, but:

>... The >606B was another step up (from the 606A) but required the HP 8708A >Synchronizer that provided PLL plus some more amenities.

The synchronizer was not required. The B version of the generator had very few differences compared to the A. The ones that I can think of are: - facilities to use the synchronizer: DC voltage output proportional to the dial setting, a variable capacitance in the oscillator L/C circuit, and input/output connectors for the needed signals. - possibly a changed RF output stage to avoid the danger of short tube life if you run it at the max output level. - possibly some solid state parts in the power supply

By the way, the later versions of the HP-608 also could use the synchronizer. With both the 606B and the later 608's the synchronizer gave you essentially crystal control frequency stability, FM capability and other esoteric features.

> Of course, you can use it without the >synchronizer and essentially you still have a 606A.

Exactly.

>... I now use the 8640B which is the "cats meow".

I don't have one yet, but I understand that the prices are coming down steadily on this one. The 8640 will do about all you ever need a signal generator for. Except be repairable if you blow out the output

solid state hybrid module by transmitting into it with a transceiver.

> There are a lot of other signal generators that fill the bill >as well.

My very favorite is the General Radio 1001A Standard Signal Generator. Old, heavy, pretty simple, has odd output impedances, but oh, so nice to run. Like the door on a Rolls, it goes Klunkkkk when you change bands. Roy

From N4BUQ at aol.com Tue Jan 18 12:35:37 2005  
Subject: [R-390] HP-606\* vs URM-25\*?

...and it has that "high-voltage" output to drive the frequency counter! Barry(III) - N4BUQ

From r390a at bellsouth.net Tue Jan 18 12:39:21 2005  
Subject: [R-390] R-390 non-A xtal needed

Need a 12.6 MC crystal for my R-390, mine went belly up and have lost 3-4 MC. Pulled the deck, tested the crystal, the 6.2 MHz crystal (Y-408) is good. Just need a replacement for Y-404.

Figured I'd ask here before asking Fair. Thanks for any help.

**There is still a place called Ocean State Electronics: <http://www.oselectronics.com/>**

OCEAN STATE ELECTRONICS  
P.O. Box 1458  
6 Industrial Drive  
Westerly, RI 02891  
(401)596-3080  
FAX: (401)596-3590  
Order Line: (800)866-6626

They seem to have lots of neat stuff like genuine 2.5 mH plate chokes, ceramic coil forms, plug-in phenolic ones, and other goodies. I have no experience with them. Roy

From mmdues at hal-pc.org Tue Jan 18 13:10:03 2005  
Subject: [R-390] HP-606\* vs URM-25\*?

wrote: wrote: The HP-606A is definitely a step up from the vintage AN/URM-25(\*) series Signal Generators. I agree, but: .... The B version of the generator had very few differences compared to the A. The ones that I can think of are: - possibly some solid state parts in the power supply

The HP-606B has an all solid state +300 volt, -200 volt, and +25.6 volt regulated power supply. It also has an all solid state calibrator A2 assembly. The rest is TOOBS. I used one in the avionics business for years, and have one in my hamshack now. Regards, Marshall Dues, WB5MYO Katy, Texas

From r390a at bellsouth.net Tue Jan 18 13:56:10 2005  
Subject: [R-390] Healing the Hurt

>Just what does this have to do with a 3TF7 substitute? >Tor Johnson

T

[obligatory non sequitur] Even better, what does it have to do with the cost of sheep in New Zealand?

From sdman at cableone.net Tue Jan 18 16:55:43 2005  
Subject: [R-390] New Advance in Modern Technology

Bob,

You are not alone. A lot of us have the the same affliction and I don't see any cure for it in the future. Maybe that "Look" we get from our wives helps quench the urge when we mention a new toy. Remember the permeability tuned car radios of the 40s and 50s? Keep up the spirit, Sam Doughty

From bhagen at msn.com Tue Jan 18 20:18:53 2005  
Subject: [R-390] Boy has THIS list gone downhill

Hey,

It's sort of like family things. There are good things and bad things but the good things win over the bad things - usually. Bruce

From David\_Wise at Phoenix.com Tue Jan 18 17:19:59 2005  
Subject: [R-390] RE: New R390A owner with some questions.

> From: > Radio works on all bands that I have tested so far > except 1000kc to 2000kc. Seems stone dead on that

Welcome! And enjoy your radios, they're joys, both to work on and to use.

I agree with Walter that your prime suspect is the RF tuned circuits. There are separate sets for:

0.5-1

1-2

2-4

4-8

8-16

16-32

Contrariwise, most if not all of the crystals are used on two or more bands each, so a bad crystal will knock out several bands with no obvious numerical relationship.

> Also, engaging the sharp position with the audio > response switch seems to kill the audio no matter > what mode it is in.

"Sharp" = extremely sharp, as in "CW only". It's only a couple hundred Hertz wide. Unless you're listening to code, you'll never use it.

> I am in the process of downloading/printing the > maintenance and operators manuals today. Any other > documentation I should be thinking about acquiring?

If you're referring to TM11-856 or the other military equivalents, they are interesting historical references, but the one you really want is Al Tirevold's rework, known as the "Y2KR2", available along with other fascinating material at [www.r-390a.net](http://www.r-390a.net). I particularly recommend the "Final Engineering Report", which covers the design choices that led to the R-390, and the "Cost Reduction Report", a similar work for the R-390A. But then again, I'm a designer by trade, and this is my favorite kind of technical reading. My response above about the sharp audio filter was gleaned from MIL-R-13947B, the original product specification, available at the above site.

If you listen to AFRTS or other music on SSB, your VFO's frequency stability is critical. Unless embellished with a time-delay relay to cut it out after power-on, an inrush limiter may hurt this a bit, because as the first crystal oscillator oven\* cycles on and off, the mains voltage at the power transformer bobs up and down several volts. Not trying to scare you off it, just letting you know. It's what started me on a solid-state ballast, which I'm sure this group has heard far too much of :)

\* This oven is enabled all the time, unlike the VFO and 2nd oscillator ovens, which are controlled by a screwdriver-operated switch on the rear panel. Never turn them on, unless you're in a tent in Antarctica. It's hard on the VFO. This too is mentioned in the above literature. 73,

From mjmurphy45 at comcast.net Mon Jan 17 20:32:24 2005  
Subject: [R-390] HP-606\* vs URM-25\*?

Cecil,

I have a 608F which I got from work-FREEBIE. What a glorious monster.

I also have a late model 606B (1972 Vintage) that I just got this spring at the local junk store. It had busted meter glass and I offered him \$35 for it. Short story, I dragged it home and it fired up! It is in the modern HP white ivory color (not the grey or tan) and let me tell you it is one fine piece. I replaced the glass using an old fashioned glass cutter on an old pane.

Never having had this kind of gear in the shack before, I now feel spoiled! This truly is the golden age of test vintage equipment. Mike Murphy WB2UID

From ham at cq.nu Tue Jan 18 20:40:10 2005  
Subject: [R-390] New Advance in Modern Technology

Hi

For any kind of fast band switching this has to be a poor solution. I suspect they have some way to bypass the preselector in that case. Sort of like a Harris RF-551 / RF-590 combo with the ability to bypass the 551. I bet they have a ROM and a position sensor on the slug position shaft. Totally novel and inventive - unless you have seen an R-391 or an ART-13 First tuning is good, then tuning is bad, now tuning is good again. Gotta go find that bottle of Tequila and get my head straight ... Enjoy! Bob Camp KB8TQ

From sdman at cableone.net Tue Jan 18 20:51:01 2005  
Subject: [R-390] New Advance in Modern Technology

Bob,

Now, if one of the manufactures would just produce a "Poor-Mans" permeably tuned Communication receiver it would be like double icing on the cake and we could stay up later at night too. But that's probably wishful thinking. Sam

From ham at cq.nu Tue Jan 18 21:10:41 2005  
Subject: [R-390] New Advance in Modern Technology

Hi

Well it doesn't take long looking at new radios costing over \$5,000 to make one believe that the R-390 \*is\* the poor man's permeably tuned communications receiver. Take Care! Bob Camp

From ba.williams at charter.net Tue Jan 18 21:41:35 2005  
Subject: [R-390] First they chased off Nolan...

> Only on Variacs, I'm getting ready to "taste" a line level > meter..... Joe Foley

I think Roy sold me my variac. Are you freezing your nuts off up there near Portsville?

From N4BUQ at aol.com Tue Jan 18 21:44:16 2005  
Subject: [R-390] Healing the Hurt

Martinius!

Hey there. I was wondering where you have been. Some guy calling himself "Les" has been using your email address to post to this group. Good to hear from you again! Barry(III) - N4BUQ

Hi Tom non McClung,

No, it isn't about the radios but about how to ID the ones we are talking about. I guess the non A moniker goes way back many years. Somebody brought up the desire to stop calling the R-390 a non A, and the inevitable 'discussion' ensued. We haven't really flogged any good horses to death over this topic yet.

From chacuff at cableone.net Tue Jan 18 23:14:16 2005  
Subject: [R-390] Re: Healing the Hurt and building Aussenhausen

Nah....it's Barry/URR and Barry Hauser/URR Not sure either still has their Ballast tubes....

From Lester.veenstra at intelsat.com Mon Jan 17 10:45:06 2005  
Subject: [R-390] R-390 sensitivity measurements

One unexplored problem with all the signal generator based sensitivity measurements is that they are dependent on a flat bandpass response for the results to be meaningful. For example. take a 4 kHz filter with 2 dB od pass band ripple. In terms of uV, a two dB difference in measured performance, what would appear to be a significant difference, as possible on the same receiver, as a function of where in the pass band the signal generator is placed.

The solution, although not the most practical in most shops, is to go to a noise generator based system, which will be independent of both IF bandwidth in which the measurement is made and independent of any pass band ripple. Les Veenstra K1YCM/3 NNN0HWW

From wak9 at cornell.edu Wed Jan 19 12:30:58 2005  
Subject: [R-390] First they chased off Nolan...

As I've always (sometimes) said, "There's three kinds of people in this world; those who can count and those who can't." Now, statistically speaking, what do you suppose my chances are that I fall into one of those groups?

ps: Very appreciative of the wealth of knowledge and experience out there. Sad to see some of the folks at odds. Thouroughly enjoy the occasional off topic (or is it) humor. Thanks Barry(actual) and everyone else. The incredible Sandbaggin' Bill

From N4BUQ at aol.com Wed Jan 19 12:48:33 2005  
Subject: [R-390] First they chased off Nolan...

Actually, there are 10 kinds of people in this world; those who understand binary and those who don't.  
Barry(III) - N4BUQ

From David\_Wise at Phoenix.com Wed Jan 19 15:47:10 2005  
Subject: [R-390] HP-606\* vs URM-25\*?

Snip > I don't have one [8640] yet, but I understand that the prices are > coming down > steadily on this one. The 8640 will do about all you ever > need a signal > generator for. Except be repairable if you blow out the > output solid state > hybrid module by transmitting into it with a transceiver.

I got mine at eBay for around \$250 less shipping. It was partly operational and missing a couple of knobs. I was able to replace them with generic ones from RS with some judicious drilling and gluing. (Thank goodness the original skirt was still there!) I felt that the Band and FM Deviation had too much detent. It's easy to soften it; they use multiple leaf springs, just take a couple out.

I don't know if it's endemic, but it had several cracked nylon gears and plastic switchplates. I was able to repair them, but those little contact fingers are hard to keep track of when they fall out. I glued them back on with epoxy.

Option 001 is a variable-frequency modulation source, very handy. You may be spot it in a photo, look for a viewing window in the second knob from the left.

Option 002 extends the frequency to 1024MHz.

Option 003 is reverse power protection to 50W. These have a stick-on label above the RF Out connector.

Option 004 is an extra-precise step attenuator and modulation cal. The single big rotary dial at the right is replaced by two smaller ones sort of side by side. Dave Wise

From ham at cq.nu Wed Jan 19 20:19:08 2005  
Subject: [R-390] R-390 sensitivity measurements

Hi

I have run into this problem when measuring commercial gear. Some of the FM IF filters have a "dip" in the middle of their pass band. Since you measure with a carrier at channel center that's the \*worst\* sensitivity number you can get.

The thing that always has bothered me is that the sensitivity measure assumes a 50 or 125 ohm system. In general both the receiver input and the antenna output will be significantly different than the assumed characteristic impedance. To many numbers ..... Take Care! Bob Camp KB8TQ

From dsmaples at comcast.net Wed Jan 19 20:23:35 2005  
Subject: [R-390] R-390 sensitivity measurements

All: While we are talking about sensitivity, I have wondered for a bit if doing a SINAD measurement on an R-390A in the 16 kHz or so setting would be of value in setting the sensitivity pot. The idea here is that we would be looking at a known modulation (1000 Hz) against composite noise.

Any thoughts before I drag the service monitor home to take a look? Thanks, Dave WB4FUR

I knew I should have waited a bit longer before posting that one. I must be high... (Subtle binary humor purely intentional)

I like to go through the postings and save the ones with good technical advice and info. Someday I'm probably gonna have to put it to use. I might even try to do the pto alignment. But for now, my old motorola keeps chugging along, in spite of having solid state rectifiers, resistors instead of a ballast tube and some old meter that I cut the shunt resistor out of for carrier strength (I can hear the shrieks out there now). Not to mention a mixture of black and silver tube shields. For anyone new out there with one of these, in my humble opinion it does not take much more than a good alignment as long as everything else is in good working order. I used to fiddle with it every so often, but it seems to hold alignment for a VERY long time, so I haven't messed with it for a while. I've never had too much money to sink into this thing so I've always had to make do with what was handy. But I am in no means of a mind to hack it up with too many mods. I've just done what I needed to do to be able to keep enjoying this fine, fine radio. It seems to have very good sensitivity and stability. I most definitely respect all you guys out there, don't get me wrong. But this has been my experience with the receiver. Maybe my needs are not too demanding. I consider myself lucky to have one. It even has all motorola sub assy's. Still Bill You, too, can help take a byte outta crime

From David\_Wise at Phoenix.com Thu Jan 20 13:21:21 2005

Subject: [R-390] R-390 sensitivity measurements

**It's well-known that the strong points of the manual's procedure for setting IF gain are ease and uniformity, not optimal S/N. The preferred gain is somewhat lower, and several people have discussed this. I think there's a technical report on Chuck Rippel's web page, for example, but there's no standard that I know of. The goal is weak-signal copy, but I don't know what kind of test signal serves that best. 73, Dave Wise**

Hi, if anyone has a use for this, let me know. I have no way to test it and therefore sell it as is. It has the optional battery and charge circuit. Mechanically it looks fine. How does \$20.00 plus shipping sound to you. It is the latest 'E' version that HP made. NO manual but Bama may have it  
A good write-up is on <http://www.pacificsites.com/~brooke/HP415E.shtml>

\*\*\*\*\*  
\* The problem with history is that there is always more of it \*  
\*\*\*\*\*

From David\_Wise at Phoenix.com Thu Jan 20 19:19:45 2005  
**Subject: [R-390] Ending The Moment Of Silence**

**I did it!**

**I have perfected a mod that eliminates the carrier level disturbance when switching the R-390/391/390A AGC rate. Only the front panel wiring changes. It is 100% compatible with standard IF decks and those with the Lankford AGC mod. This is how Collins should have done it, it would have cost them next to nothing. Like the carrier level pot, the engineer just didn't think it through.**

**The mod I posted earlier had side effects that ultimately caused me to reject it, although it was very compact and easy to do. This mod borrows an idea, but otherwise it's totally new. I have tested it extensively, and the ergonomic improvement is just fantastic. You'll never realize how obnoxious and fatiguing the stock AGC switch is until you try this.**

**Pros:**

- No more "Moment Of Silence" (SLOW to MED)**
- No more blasting (MED to SLOW)**
- Same time constants as before, or season to taste**
- Compatible with existing modules**
- Reversible (no holes)**
- No "box on the side", it's all internal**
- Works with decks that have a bad C551**

**Cons:**

- Needs a new AGC switch (2-pole vs 1-pole)**
- Needs a piece of sheet metal (if you want it to be neat)**

**Performance:**

**OLD**

**FAST-MED: Dip, Nothing, or Surge, depending on signal levels**



**MED-SLOW: Severe Overload for 1-2 seconds**

**SLOW-MED: No Signal for 1-2 seconds**

**MED-FAST: Nothing**

**NEW**

**FAST-MED: Nothing!**

**MED-SLOW: Nothing!**

**SLOW-MED: Nothing!**

**MED-FAST: Nothing**

**(Lest someone accuse me of advertising hype, I will qualify the above claims to the extent that at very high signal levels (over 80dB), you may detect a slight surge on MED-SLOW and SLOW-MED, but it's barely perceptible except under artificial laboratory conditions, where it becomes merely "perceptible".)**

**Cost: About \$15 and a couple of hours. Well? Dave Wise**

From ham at cq.nu Thu Jan 20 20:13:00 2005

Subject: [R-390] Ending The Moment Of Silence

Hi

Only the obvious question - Is it easily reversible ? Take Care Bob Camp KB8TQ

From chacuff at cableone.net Thu Jan 20 22:21:00 2005

Subject: [R-390] Ending The Moment Of Silence

You have found a way to eliminate the only internal self test besides the Xtal Calibrator the R-390A possesses? I'll have to think about that one....

From goode at tribeam.com Fri Jan 21 09:55:03 2005

Subject: [R-390] Ending The Moment Of Silence

I must have missed something. Where do we find the mod details? K9NG

Sorry all, I have an emergency at work today and won't have time to write much. I did think of a couple of "Pro"s I forgot yesterday:

No semiconductors

No active components

No hard-to-find or exotic components

> From: Bob Camp [mailto:ham@cq.nu] > Is it easily reversible ?

**Depends on what you mean by "easily". It's not a plug-in like my 3DW7. You'd have to drop the front panel, unsolder three wires, remove an assembly and the new S107, remount the old S107, and solder three wires.**

Geez, tough crowd. If you're serious, Cecil, nobody's forcing you. I never thought of it as a diagnostic, tell me more. Nah, you've gotta be kidding... Back to the emergency, believe me I'd rather stay here.  
Dave Wise

From roy.morgan at nist.gov Fri Jan 21 15:13:48 2005  
Subject: [R-390] 6082 another question

wrote: >I guess I'll float another question on the 6082 thread. Would it be so >simple as to use another transformer to give either 12v series or 6V >parallel filament voltage to use the plentiful 6080 6V tubes?

Dave,

I did that by running a couple thick wires out the side of the frame to a loose transformer while testing an R-390?URR. The tubes melted the insulation on the wires.

Now I use a fan with the original 6082's (and I can touch the tubes with my fingers without getting burned.) Roy

From cjs004 at comcast.net Fri Jan 21 17:51:06 2005  
Subject: [R-390] Ending The Moment Of Silence

Piece of sheet metal Got any pictures? John

From David\_Wise at Phoenix.com Fri Jan 21 18:50:09 2005  
Subject: [R-390] Ending The Moment Of Silence

**It's nothing scary, just a flat bracket to base a terminal strip on, to avoid gluing or drilling a hole on the front panel. I didn't see any real mount points where there was also enough room for the strip + components.**

I'm going to try to put it all into an HSN article. 73, Dave

From DCrespy at aol.com Sat Jan 22 09:14:35 2005  
Subject: [R-390] Ending The Moment Of Silence

Dave, and all. I should still be a subscriber and have not seen a copy of HSN in at least 2 years. I think it has died a quiet death? Please consider some other way to make the info available? Harry KG5LO  
Saline MI:

From David\_Wise at Phoenix.com Sat Jan 22 11:00:56 2005  
Subject: [R-390] Ending The Moment Of Silence

>From:, and all. I should still be a subscriber and have not seen a copy of >HSN in at least 2 years. I think it has died a quiet death? Please >consider some other way to make the info available?

I've talked to Barry Hauser. It's been in suspended animation, but this is a good candidate to jump-start it. If that doesn't happen, be assured that the details will surface here. My announcement was to gauge your interest, as previous offerings didn't generate much enthusiasm. Controversy, yes :)

In the mean time, if there's an R-390/391 nearby, or someone has some high-resolution or close-in photos that show the top rear area of the front panel and its relation to the rest of the set, I could predict whether there's room to fit the mod there. It can go anywhere, but front panel top-center is the "sweet spot". I hate trailing wires. 73, Dave (SWL in Portland OR)

From kgordon at moscow.com Sat Jan 22 11:03:31 2005  
Subject: [R-390] Ending The Moment Of Silence

wrote: > Dave, and all. I should still be a subscriber and have not seen a copy of HSN > in at least 2 years. I think it has died a quiet death? Please consider some > other way to make the info available?

Try Electric Radio. They are really good people and gladly would take such an article. Go to <http://www.ermag.com/> and get hold of the editor. Ken W7EKB

From R390revr at aol.com Sat Jan 22 11:34:55 2005  
Subject: [R-390] Motorboating on R-390A

Good day all:

Nice weather here in Michigan, about 12" of snow, and soon to be 30 mph winds!

I just put a Motorola R-390A up on my bench for the first time. The first symptom that popped up was motorboating on all bands. It occurs every 70-75 KC, like clockwork. In some cases, it is louder with the BFO on. It disappears with the antenna disconnected. The motorboating is 5-7KC wide, with a slight peak in strength centrally. I have subbed every tube except the rectifiers, 3TF7 and OA2 without any effect. If there is a very strong signal, it isn't very noticeable, but in quieter areas of the band, it is quite loud. I haven't found any switch settings that effect it at all, except, not present in Calibrate setting.

I would appreciate any thoughts you might have. Thanks. I will be out shoveling for a while! Randy Stout

From JMILLER1706 at cfl.rr.com Sat Jan 22 11:48:43 2005  
**Subject: [R-390] Motorboating on R-390A**

Seems like I saw something like this in mine once, it appeared to be related to AVC level. A number of the tubes in the RF-IF chain are powered from a 180V (?) line which is unregulated. As AVC action causes these tubes to draw less or more plate current, there is a changing load placed on that B+ line. The same B+ line also powers the mixers and maybe even the Xtal oscillator (I'm working from memory here). As that line fluctuates, the oscillators could also. However, in my case it turned out to be a bad mixer tube loading down the oscillator that drives it... I think the 2nd mixer is controlled by AVC also. As it's operating point changed with AVC, it would load down the output of the oscillator that was driving it causing the oscillator to shift. Replaced the mixer tube and it got better, JM

From r390a at bellsouth.net Sat Jan 22 12:42:20 2005

Subject: [R-390] Raytheon PTO?

I recently came across a Raytheon PTO for the 390A. Anything special about it? I will assume this is a rework by Raytheon. Date is 1977.

Pix here --

<http://www.hezbollah.org/390A/ray1.jpg>

<http://www.hezbollah.org/390A/ray2.jpg>73 Tom

(web site above is in no way affiliated with the terrorist organization. Notice the 3 L's in the name. I was running out of domain name choices.)

From Llgpt at aol.com Sat Jan 22 12:56:32 2005

Subject: [R-390] Raytheon PTO?

Raytheon "NEVER" manufactured PTO's, it was a rebuild contract. The Manufacturers of pto's are:

1. Collins
2. Motorola
3. Dubrow
4. Progressitron
5. Cosmos      Les Locklear

From barry at hausernet.com Sat Jan 22 13:46:50 2005

Subject: [R-390] HSN Status -- and a poll

Hi Harry & List:

I'm still the editor of HSN. Of course, that and \$2 bucks will get me a ride on the subway. ;-)

Not all that surprising, but I have encountered the same problem as the previous editor -- a combination of the lack of willing contributors and suitable material in view of the ever increasing role of the Internet. Very short items are more suited for places like the reflectors with periodic accumulation into the "Pearls of Wisdom". Lengthier subjects and construction articles call for more space and detailed graphics. The hardcopy newsletter format is limited in terms of graphics and, almost always, a better presentation can be made on web pages and/or pdf files.

I have tried to come up with material that would be suitable, but each idea vaporized into cyberspace. I have a problem publishing something that's already out there or pops up before the ink could dry -- doesn't make much sense.

It may well be, as the previous editor (Reid Wheeler) concluded when he handed it off, that the time for a snailmail newsletter has passed us by. I thought I'd give it a shot to keep it alive and did manage to get three issues out. There are two that have been "almost "in the can", but remain unfinished for a year or two now. For a time, in the early days, a previous editor (Dallas) generated most of the material himself and continued to contribute original material. I'm not in a position to do the same -- unless the readership would be happy with pure fiction, some rants and an occasional screed. ;-).

At some point, HSN included a number of very brief articles -- of a few lines. Most of this kind of

material is much better handled on the nets and it is, so I took the position of doing full issue articles. It also used to carry some ads, but the lead/lag time makes it unsuitable.

At one point, I had discussed this with Ralph Sanserino, the publisher, whether HSN was obsolete and it should fade into the past, or be adapted to an online version, whether by subscription or free. It would be much easier to publish online in both terms of logistics and format and result in a better product with sharp color photos, etc. Ralph pointed out that there are a number of old timers who are not wired to the Internet -- but I'm not sure that's a significant enough factor.

Dave Wise's recent work brings up the same issues again, with an additional consideration. If he had ready copy right now and photos or line drawings, and I jumped on it, it would still be a month or two before you'd see it -- at best. I would still need to fill out another 4 pages or so before the issue were ready. At the moment, this becomes "Plan B".

As far as money is concerned, it's not really a factor. The subscription price for HSN is something like \$5 or \$6 for 3 issues, and set to barely cover the cost of printing and mailing, thus even a free website would be more cost-effective. (While some of you are owed issues -- and Ralph has the records -- I doubt that it adds up to very much, if so can be refunded or whatever.)

What I'm doing here is trial-ballooning -- running it up the flagpole to see if it gets any salutes (or generates "incoming"). Methinks it's time to go Web-oidal with HSN, if it is to have a future at all. If you wish, you can certainly print it, three-hole punch and bind 'em. It would also be practical to amend and update articles and provide a revision numbering scheme so you would know if you had the latest and greatest - for refinements such as "Well gents, I subsequently found that a 220 ohm resistor works much better .." I would scan and put up all the old ones I can find.

My thinking is to have it free and probably open access - no subscriptions, however might take paid advertising -- of the type that would be of intrinsic interest.. I'd rather not get involved in classified listings, as there are better, established venues for that and it creates a maintenance obligation. ("It's sold, please take my ad down." "Please change to \$XXX or best offer.", etc.)

Of course, this does not solve the lack of inflow of publishable material problem immediately, though it makes more types of articles and notes "fit to print" -- even if some are redundant with other sources or reflector archives, etc. Increased exposure might motivate more people to contribute. The pieces don't have to be any particular size.

As for the few who do not have Internet access, that could be on the buddy system -- friends can print and mail to them as a favor or in trade for a toob or two.

So, what do you folks think? I have a website available, and/or could get another going rather quickly.  
Barry

From ham at cq.nu Sat Jan 22 13:57:14 2005  
Subject: [R-390] Raytheon PTO?

Hi

The main problem with "Raytheon" PTO's is that you next have to find out who *\*really\** made the poor thing.

The military went through a \*lot\* of PTO's. They set up Raytheon to rebuild a bunch of them to keep the radios in service. Take Care! Bob Camp KB8TQ

From ham at cq.nu Sat Jan 22 14:03:34 2005  
Subject: [R-390] HSN Status -- and a poll

Hi

We could probably fill up a dozen issues with articles about the virtues (or lack there of) of capacitor replacement. Maybe alternating "for" and "against" issues.

I think a subscription web site sounds like a fine idea. I also thing that a subscription archive of all the back issues is an \*excellent\* idea. Take payment online and away you go. Take Care! Bob Camp KB8TQ

From hankarn at pacbell.net Sat Jan 22 14:53:03 2005  
Subject: [R-390] HSN Status -- and a poll

Barry,

First you have done a commendable job in keeping HSN going along with Ralph. I also agree with your line of thinking. A web site with archives would be great. I have originals of all issues in a big 3 hole binder.

I do not see you being able to wring any money out of enough to support a site. An example is QTH.net sites out of many thousands of users it is supported by way under 1% of users. QTH would provide a free site but Al is hurting for donations now.

There are too many frugal cheap hams out in cyberspace looking for a free lunch. If all of the freeloaders out there would send Al \$5.00 it would be a massive benefit to a lot of people worldwide.

If Al turned off the Switch tomorrow their would bo so many tears of crying it would make Niagara falls look like an arid creek bed. My .02 worth. Hank KN6DI

From hankarn at pacbell.net Sat Jan 22 14:56:31 2005  
Subject: [R-390] HSN Status -- and a poll

Bob, I agree with you. make it pay as you go. Weeds out the cheapos. Hank KN6DI

From r390a at bellsouth.net Sat Jan 22 15:50:11 2005  
Subject: [R-390] Raytheon Rebuild Riddle Resolved

The Raytheon rebuilt PTO is a Cosmos. The cal label was over the linearity adjustment cover screw. Tom NU4G

From r390auser at cox.net Sat Jan 22 17:11:07 2005  
Subject: [R-390] HSN Status -- and a poll

Barry,

I would like to see the HSN continue. Web based would be fine and I'm willing to pay a subscription fee to have access to it. The concept is no different than subscribing to it in paper form. I have a complete set and still refer to them for time to time. Anyone who works on their own 390/390A needs this information. Good Luck, Kurt Holbrook

From bhagen at msn.com Sat Jan 22 22:09:31 2005  
Subject: [R-390] HSN Status -- and a poll

I also would endorse that idea. I've had my 390 for probably twenty years and still need to know more about the beast. Bruce

From Llgpt at aol.com Sat Jan 22 19:40:46 2005  
Subject: [R-390] Raytheon Rebuild Riddle Resolved

The majority that I have seen are Cosmos, of course, the Cosmos PTO's are much more abundant than the others. I have seen a couple of Dubrows and one Progressitron. Les Locklear

From stevehobensack at hotmail.com Sat Jan 22 19:57:49 2005  
Subject: [R-390] Re..Motorboating on R-390A

Randy, Since the noise is not present when the calibrate signal is on, it sounds like it is interference external to the receiver. The calibrate position just opens the antenna connection and then injects its signal. Switching power supplies are notorious for that type of repeating interference. Look for something in your home such as wallwarts, tv, vtr, programable thermostats, etc. I have problems of that type due to a tv cable power supply box 300 ft away, but its fairly weak. I once had oscillations generated within my R-390a. The bfo was not neutralized. I had all kinds of trash around 3500 kc, with and without an aerial. 73...Steve...N8YE

From ham at cq.nu Sat Jan 22 20:19:50 2005  
Subject: [R-390] Motorboating on R-390A

Hi

Does the calibrator work correctly when it is switched on? Does the problem go away when you pull out the first RF amplifier tube? If the calibrator is working properly then this isn't the multi-vibrator in the calibrator circuit getting goofed up. If the is still there with the RF tube gone then it is coming from inside the radio. Otherwise this sounds a lot like a problem external to the radio. Take Care! Bob Camp KB8TQ

From dwade at pacbell.net Sat Jan 22 23:22:51 2005  
Subject: [R-390] HSN Status -- and a poll

Barry,

It would be worth a reasonable subscription amount to me to access the back issues and have the current

content available with less lead time. Dennis

From joer at reda.com Sun Jan 23 00:13:31 2005  
Subject: [R-390] HSN Status -- and a poll

Same here. I'd be up for an online HSN. Joe W9TXU

From k7ais at msn.com Sun Jan 23 01:30:35 2005  
Subject: [R-390] HSN Status -- and a poll

Count me in..... Brian, K7AIS

From chacuff at cableone.net Sun Jan 23 08:58:02 2005  
Subject: [R-390] HSN Status -- and a poll

There has been a lot of mention of back issues...

Since those are not in electronic format today are those really part of the project as proposed? I think the hope is that if HSN is offered in a more convenient and accessible format that contributions of new material might be stimulated. I think Barry was more looking forward than back. I believe back issues have always been available to the extent that Barry has them to send...

Of course having the back issues scanned and available would be icing on the cake....can we make this viable for the future! Just my thoughts...

From lester.veenstra at intelsatgeneral.com Sat Jan 22 14:17:01 2005  
Date: Sun Jan 23 10:24:01 2005

I for one, never having been a HSN subscriber, would be glad to pay a subscription for access to the back issue line. Les K1YCM/3

From anchor at ec.rr.com Sun Jan 23 10:24:22 2005  
Message-ID: <003301c5015f\$9dcce920\$5901a8c0@w8ut>

Hi Barry,

I'll chime in on the on-line possibility, and a subscription fee. Don't know how you'd implement that, but I'm not up on the clandestine workings of the electronic media and billing, etc.

Seems like it would be more inducive of literary contributions as well, much more like the more technically meaty stuff we see occasionally on reflectors, usually from the same few writers. 73, Al, W8UT New Bern, NC

From bipi at comcast.net Sun Jan 23 10:55:46 2005  
Subject: [R-390] HSN Status -- and a poll



I guess I'll weigh in on this one too. I purchased all of the back issues of the HSN several years back and subscribed to the next 2 years. Received a couple more issues, then nothing. I assumed it was closed down. The collection of old HSN has some of the greatest of articles on the 390-series, 51J4, HQ-series, etc. But, I guess the articles quit coming in and so it goes. Think to a large degree, the internet kinda replaced it with Web pages, FAQ pages, etc. Reminds me that I need to pull them back out and look through them again. 73 de Mike K7PI

From tetrode at comcast.net Sun Jan 23 11:11:23 2005  
Subject: [R-390] HSN Status -- and a poll

Online sounds good to me too Barry, especially if it had hq scans of the established "classic" material.

PDF would be the format of choice IMO, and from there you could get an idea of the bandwidth requirements and costs. If there was a cost, free subscriptions could be offered as an incentive for submitting articles.

Or you could have a combination to keep bandwidth requirements down such as keeping the archives on CD and the new stuff on line. Just some ideas John

From r390a at bellsouth.net Sun Jan 23 11:06:54 2005  
Subject: **[R-390] Good source for Twinax connectors**

**Just got a handful of Twinax connectors this week so as to have some on hand. Amphenol p/n 82-5589-RFX are only \$3.95, discount for quantity. That's nearly half the price of Mouser.**

**Where?**

**Randolph and Rice Electronics in Nashville, TN. <http://www.randolphandrice.com> Click on "Email Us here" to contact a salesman. (Best salesmen - Scott or Mike) Phone 615 255-5601 (no 800 number) They cheerfully do mail orders to anywhere.**

**They have decent prices on Cannon MS connectors as well, less that Allied or Newark.  
73 Tom NU4G**

From jamminpower at earthlink.net Sun Jan 23 12:25:28 2005  
Subject: [R-390] HSN Status -- and a poll

I'll volunteer to scan the originals of the back issues - if I can unbind them so they will go through my document feeder. James A. (Andy) Moorer [www.jamminpower.com](http://www.jamminpower.com)

From ham at cq.nu Sun Jan 23 13:48:18 2005  
Subject: [R-390] HSN Status -- and a poll

Hi

I'm the one that started the whole back issue thing. It was not part of Barry's initial post. I threw it in

because it would be of significant value to me. I do not have a collection of the back issues. I don't know what digital format the old issues exist in (if any). If it's something like Quark or Pagemaker then turning them directly into pdf's should be possible. If they are a "only exist in paper form" thing then scanning them would be a bit of a pain. I more or less assumed they still exist in digital form ....

I didn't elaborate on the idea but I was thinking that selling the back issue images at something like 50 cents or a dollar a copy would make sense. Keep the price low enough that it's way below the threshold of pain but high enough to pay for the effort. You can't mail a print copy for that kind of money so electronic distribution makes sense. Take Care! Bob Camp KB8TQ

From mahlonhaunschild at cox.net Sun Jan 23 14:12:18 2005  
Subject: [R-390] HSN Status -- and a poll

Mee tooo, Barry. Only please make them available in Acrobat form on CD-ROM, like the ARRL does. Online access requires you to be, well, on-line.

I can't stand the lack of electronic back issues for valuable publications like these. Forces you to go scrabbling for back issues, which in most cases are only available printed on unobtainium, & then you have to index them. This is my biggest (and likely only) gripe about ER (the guy must have PILES of back issues on paper).

If labor associated with .pdf conversion is the problem I can assist there. Have scanner. Have full-up copy of Acrobat. Have some time.

From wa6knw at sbcglobal.net Sun Jan 23 14:17:34 2005  
Subject: [R-390] Re: HSN Status -- and a poll

I agree 100%. Besides I think I had just renewed for 2 years when things slowed down. I for one would like to see HSN continue into cyber space and would be willing to subscribe for it to have a server slot somewhere. Where's Foster? I haven't seen him in here with any comments yet. RICH WA6KNW

From N4BUQ at aol.com Sun Jan 23 15:15:18 2005  
**Subject: [R-390] Need help with an escutcheon**

I have an escutcheon that is missing the machined "rivets" that hold the clamps that hold the glass in place. If I had a lathe, I could machine some replacements myself, but I don't have access to one. Even if I did have these, making the little spring-like holders would be a challenge.

If I could get some replacement "rivets", I could fashion something to hold the glass in place. Alternatively, I was thinking that if I could get some small screws (#6-32?) and have them machined to match the conical shape and rounded head, then I could use them to hold a "backing" frame as well. Using flat-head machine screws just looks wrong.

Anyone know how I might solve this? I kind of hate to get an entire replacement escutcheon (although that would be nice), because if I can fix this one suitably, it will keep me from having another useless spare part. Thanks in advance! Barry(III) - N4BUQ (BTW, Hank, I got the Tinnerman clamps and they are exact replacements. Thanks!)

From kgordon at moscow.com Sun Jan 23 16:12:08 2005  
Subject: [R-390] HSN Status -- and a poll - PDF995

**Count me in. I can scan, OCR, and PDF documents too, if need be. I also bought every back-issue of HSN a while ago.**

**BTW, I use PDF995, a "free" PDF maker. It works extremely well. I use it to make PDFs of files I put on the Glowbugs web site.**

**If you are interested in getting this, google "PDF995". I have had zero problems with it.**

Ken W7EKB

From tetrode at comcast.net Sun Jan 23 16:23:40 2005  
Subject: [R-390] Need help with an escutcheon

Barry ,

I've seen regular machine screws used in the dial bezel before; once painted they don't look bad. But if you must have the stock look, here are some suggestions:

-poor mans lathe - use a drill press and hand held mill file to round down a cap head or other screw. Can even use a hand drill if you can clamp it to the bench.

-take an ordinary round head machine screw and fill in the slot with autobody filler; sand, and it's ready for paint.

Once you have a set of screws than it's easy to make a fastener from a hunk of sheet metal or plastic. Or you could take the easy way out and use a few spots of hot glue or epoxy to secure the window. John

From mahlonhaunschild at cox.net Sun Jan 23 18:10:24 2005  
**Subject: [R-390] Knob powder coating**

Hello, list(s).

I seem to recall a list subscriber mentioning recently that he had had his R-390A knobs powder coated by another list member. Would that person please contact me off-list with the details. I need to have the same thing done twice (maybe thrice) over. Thanks. regards, Mahlon - K4OQ

From odyslim at comcast.net Sun Jan 23 20:36:20 2005  
**Subject: [R-390] oldham couplers needed**

Isen't there somebody here on this list that sells oldham couplers? I need one. Scott W3CV

From barry at hausernet.com Sun Jan 23 23:07:10 2005  
Subject: [R-390] HSN Status -- and a poll

Hi Bob & List

Most of the old issues are hard-copy. Many of the really old ones were typewritten, not even word processed, so never existed in digital form. The easiest and most authentic looking result would be had through bit imaged scans pulled into pdf or deja-vu files. However, this limits the compression that those file formats allow. For maximum compactness and highest resolution, the old issues would have to be OCR'ed. That might be necessary to keep bandwidth under control, not sure. Barry

From gkaufman at the-planet.org Sun Jan 23 23:31:42 2005  
Subject: [R-390] HSN Status -- and a poll

If any of the issues are loose pages I have a scanner with a document feeder. I can scan about 15 pgs/minute to .pdf files and would be happy to help. - Gary

From w9ya at arrl.net Sun Jan 23 23:48:14 2005  
Subject: [R-390] HSN Status -- and a poll

Hey gang;

I just got off of the phone with Ralph Sanserino.

He is emailing me about what, how, etc. of getting back issues. He mentioned that he only gets about 6 request a year or so for such things. Further he mentioned that he *\*WAS\** interested in putting them into electronic format for something like a CD.

Anyways, he asked for an email, which I sent, and I hope to hear back from him soon about some or all of this.

Oh yeah, he said the previous editor had "compiled" the first 30 issues to remove the *\*unnecessary\** stuff. <- For what it is worth, if the original issues are extent, I would rather a CD contain those.

Vy 73 ya-all, and I will let you know what Ralph writes back. Bob w9ya

From kgordon at moscow.com Mon Jan 24 00:58:58 2005  
Subject: [R-390] HSN Status -- and a poll

wrote: >> Most of the old issues are hard-copy. Many of the really old ones were > typewritten, not even word processed, so never existed in digital form. The > easiest and most authentic looking result would be had through bit imaged scans > pulled into pdf or deja-vu files. However, this limits the compression that > those file formats allow. For maximum compactness and highest resolution, the > old issues would have to be OCR'ed. That might be necessary to keep bandwidth > under control, not sure.

This process is exactly what I have been using for the articles and projects I am putting on the GB website.

It takes me about an hour to do a 4 to 5 page article with photos/diagrams. The file size averages about 100 KB per page, although some, with few or no photos, are only about 50 KB as a .PDF.

I would imagine that there are other methods that can make them a bit smaller. Ken Gordon W7EKB

From N4BUQ at aol.com Mon Jan 24 10:47:54 2005  
Subject: [R-390] Need Drawing Location

Does anyone have an index to the various drawings that are on the R390A CD (Ver. 2.00)? I'd like to locate the escutcheon drawings but with over 800 images, it's pretty time-consuming if you don't know the filename (or at least a general location).

I think there is an index of sorts in the first set of files, but that, too, is pretty much hunt-n-peck. If someone knows the filenames, I'd appreciate it.

By the way, this is the 17310\IMAGES\00\\* set of folders on the CD. Thanks, Barry(III) - N4BUQ

From N4BUQ at aol.com Mon Jan 24 11:26:43 2005  
Subject: [R-390] Need Drawing Location

Never mind. I found the drawing I was looking for.

**Trick: Open 20 or so files, and close them with Ctrl-F5 while looking for what you want. Kludgey, but it worked.** Thanks,

From hro5-2 at cox.net Mon Jan 24 12:09:45 2005  
Subject: [R-390] HSN Status -- and a poll

I can't find the original post, so I'll add my 2 cents here.

Back Issues: Put this info on CD(s), and sell the CD. This approach has been used before, for example schematics for command transmitters and back posts from the Crystal Set Radio Club (a Yahoo group).

New Information: Publish new articles in the Electric Radio magazine. I'm sure a few more submissions would be welcome, and it's the only boatanchor magazine.

Regarding back issues, I have a complete set, or at least think I do. The early issues are easy, after subscribing I bought back issues from Ralph Sanserino, but I'm not so sure about the last issues when they were published sporadically. I'd like to compare notes with somebody else who has a complete set, or at least thinks he has. 73's Jim

From ghayward at uoguelph.ca Mon Jan 24 13:53:38 2005  
Subject: [R-390] Re: HSN Poll

Sell the CD .. I want one. BTW I'm too much of a Luddite to pay online - I'll use a money order. (An engineer and a Luddite - what's next, a flat earther.) Cheers, Gord.

From mikea at mikea.ath.cx Mon Jan 24 15:05:32 2005  
Subject: [R-390] Ending The Moment Of Silence

wrote: In the mean time, if there's an R-390/391 nearby, or someone has some high-resolution or close-in photos that show the top rear area of the front panel and its relation to the rest of the set, I could predict whether there's room to fit the mod there. It can go anywhere, but front panel top-center is the "sweet spot". I hate trailing wires.

**<http://mikea.ath.cx/R-390/index.html>**

Mike Andrews, KE5DMQ [mikea@mikea.ath.cx](mailto:mikea@mikea.ath.cx)

From crips01 at msn.com Tue Jan 25 00:54:56 2005

**Subject: [R-390] Knob powder coating**

go here(

<http://www.harborfreight.com/cpi/ctaf/Displayitem.taf?itemnumber=42802><<http://www.harborfreight.com/cpi/ctaf/Displayitem.taf?itemnumber=42802>> )for powder coating goodies, all you would need with this set up is a cheap used electric stove so you could use the oven for the baking. Note how cheap the price is. For small jobs this is a great setup. Ken

From hankarn at pacbell.net Tue Jan 25 01:18:13 2005

**Subject: [R-390] Knob powder coating**

You still have to strip them, smooth out the rough spots, remove the set screw, plug them, mount them properly, remove the plus and replace set screws then fill in the white line. I get \$85.00 exchange for the 15 small knobs plus shipping. Hank KN6DI I sell new CNC machined large knobs for \$30.00 each or \$55.00 per pair.

From crips01 at msn.com Tue Jan 25 01:21:48 2005

**Subject: [R-390] Knob powder coating**

I see the link isn't working quite right. just put "powder coat" in the search engine. Note this rig needs a air compressor, Harbor freight also has those for a real good price.

From tetrode at comcast.net Tue Jan 25 09:29:32 2005

**Subject: [R-390] Knob powder coating**

Link fixed... <http://www.harborfreight.com/cpi/ctaf/Displayitem.taf?itemnumber=42802>

From roy.morgan at nist.gov Tue Jan 25 16:00:04 2005

Subject: [R-390] Knob powder coating

wrote: Anchorites, Let me see if I understand powder coating, in simple terms:

(After you do what Hank says, above) ... the powder gets glommed onto the piece by electrostatic charge, and you bake it to make it hard. Issat right? This reminds me of the recipe for elephant soup: First get some elephant. Then you put it in a pot, add vegetables, season to taste, and simmer till done.

Now, that \*sounds\* simple enough... Roy

From huffb at avalon.net Tue Jan 25 21:05:01 2005

**Subject: [R-390] soldering equipment**

Hello,

I'm new to the list although I've been an electronics hobbyist for many years. I'm looking to upgrade my soldering equipment from a common variety pencil iron to something more state of the art. What would you folks recommend that I purchase to work on the R390A modules? Most of my hobby activities deal with tube equipment and antique radios.-Brad KB0WHL.

From chacuff at cableone.net Tue Jan 25 23:08:52 2005

**Subject: [R-390] soldering equipment**

Brad,

**I recently upgraded my soldering hardware to all Hakko.** I picked up a nice used dual station that has a small tipped pencil iron and a large chisel tip iron. It's handy to have both available as some joints only need a little heat to work and others need quite a lot. Both are temperature controlled and they are fast heaters...they can come up to set temp from room temp in about 30 seconds or less. I also picked up a nice Hakko desoldering station that makes quick work of unsoldering junctions buried deep in a chassis. It has a long tip on it like the irons. Makes working on the tube gear nice. All of it was picked up used on the auction site. Most of it comes out of production shops but is still in nice shape and parts are available quite readily.

I have used just about everything over the years....Weller, Ungar, Wahl, Pace....guns, pencils. I like what I have now about as well as anything I have ever used. **My second choice would be a temp. controlled Weller station.** Pace is nice but most of their irons are little short stubby things and you can't reach down into the chassis with them. They are specialized for PC board work. I wouldn't hesitate to pick up a nice used outfit....probably won't spend any more for a used high end station than you would pay for a new low end station. Anyway....that's my experience.... Good luck! Cecil.....

From N4BUQ at aol.com Tue Jan 25 23:47:02 2005

**Subject: [R-390] Need help with an escutcheon**

**Looks like I may have found a solution for this. Home Depot sells stainless steel button-head cap screws. A #6-32 seems to fit just great and since it is a cap screw, the tiny hex-socket is hardly noticeable - much less noticeable than a flat-head phillips-head screw. I plan to have the heads powder-coated the same color as the escutcheon and it should blend in quite nicely. A conical washer to match the countersink in the escutcheon would be nice, but I don't think it is entirely necessary.**

A simple backing plate to clamp the glass in place and I'm in business.

From bipi at comcast.net Wed Jan 26 00:05:00 2005

**Subject: [R-390] soldering equipment**

**I picked up a new Hakko desolder gun for a "tune" at Fry Electronics** and I don't know how the hell I have live without it so long. Makes replacing those caps in the R390A that you don't need to replace a piece of cake! I just do it for fun now :-)  
73 de Mike K7PI Mercer Island, WA

From eldim at att.net Wed Jan 26 06:01:41 2005  
Subject: [R-390] soldering equipment

Hello Brad & Crew,

**My first choice for soldering is the rugged WELLER WTCP STATION because of the wide variety of TIP choices.** This System has a120VAC Primary to 24 VAC SECONDARY @ 2 AMPS Capacity . The pencil iron is rated at 24 Volt/48 Watt and tip temperature is determined by the tip temp that you select. This is marked on the bottom of the tip. i.s. 6, 7, or 8. There are three Temps 600, 700, 800 Degrees F, at least that is all I have ever seen. I think that you can still find a picture at www.eldim.com I also use my station for desoldering using the old "convection" method along with braid wire and some flux to enhance the solder melt. If you have some excess or old coax, you can strip the braid out, flatten it-and it works great for pulling solder off the ole boat anchor terminals, etc. You also need to keep a pair of cutters handy to cut and discard the used braid that has solder. Of course you can use a solder bulb or soldr-xtractor, pul-it or what ever method you desire. I use my PACE Stations mainly for small ckt board work. Good Luck. 73, Glen Galati, KA7BOJ Tacoma, WA eldim@att.net

From ka4prf at peoplepc.com Wed Jan 26 06:11:32 2005  
Subject: [R-390] soldering equipment

Hi all,

Boy have I ruined so many circuit boards trying to decoder! I finally stumbled onto a desoldering tool that seems to work better than anything I've used in the past. **It's the Radio Shack desoldering iron.** Don't know the stock number, but it has a rubber pumping part on it which makes it easy to suck the hot solder off of the component. Anyway, it has help me a lot. Since I don't have three hands, it is easier to control.

I have always wanted a cheap soldering stand that will hold my iron when it's hot while not being used. All the ones I have found were too light weight to stay on the table without toppling over. I finally figured out a good stand for my soldering iron. I use a coffee cup. I started out using a regular coffee cup, but found that didn't do the trick. Now I use one of those wide bottom cups that are made to stand while we are driving our autos. This type of cup holds me soldering iron without falling out and burning me. I am still working on a way to get another "hand" to use when soldering. Chuck

So I bought the RatShack "third hand", which has two alligator clips on universal joints attached to an adjustable bar, a magnifying glass[1], \*and\* a good soldering iron holder. This is about the second-best thing since girls, and not at all far in the ratings from sliced bread.

[1] I don't need a magnifying glass! I'm only 58, and my eyes work Just Fine, Thank YOU! Ohhh ... I can see what I'm working on. \*Cool\*!

--

From bhagen at msn.com Wed Jan 26 13:37:15 2005  
Subject: [R-390] Need help with an escutcheon



Barry:

**For the glass holders take a look in a shop that does commercial picture frames. You'll find that they have some spring metal clips about 3" long so that you can cut to size. You'd only need one and still have enough left for future use. Bruce**

From pomerol at mocha.ocn.ne.jp Wed Jan 26 20:41:07 2005

**Subject: [R-390] OT:DC Power Supply for R-392**

Hello All,

Sorry for the off topic.

I recently bought a fair R-392 (it will be on the ship on somewhere in Pacific Ocean yet). But I don't have any 28VDC power supply. I know it draws around 3 amps at 25 to 30VDC but it's really hard to find a good used 28VDC PS in Japan.

However, there are considerable number of 24VDC PS's with over 4 or 5 max amps available on used market. So, I'd like you guys to give your advice on whether it can be run at 24VDC. Thanks in advance, Osamu Hazawa

From dsmaples at comcast.net Wed Jan 26 20:58:37 2005

**Subject: [R-390] OT:DC Power Supply for R-392**

Osamu: I don't think it would be any issue at all. As I recall, the R-392 that I had worked just fine at 24 VDC. That's been several years ago, though. If you are really concerned, you could always use two 14 VDC power supplies in series. I suspect the outputs are floating relative to ground, so I think you'd be OK there; however, I really don't think you will need to go to the trouble. Hope this helps.

Dave WB4FUR

From jamminpower at earthlink.net Wed Jan 26 22:24:12 2005

**Subject: [R-390] OT:DC Power Supply for R-392**

> I recently bought a fair R-392 (it will be on the ship on somewhere in > Pacific Ocean yet). > But I don't have any 28VDC power supply. > I know it draws around 3 amps at 25 to 30VDC but it's really hard to find > a good > used 28VDC PS in Japan.

**It does run fine at 24 volts. In fact, the 28-volts is too high for the filaments in this receiver. They were designed for 26 volts, not 28. They work fine at 24 volts.**

**On the power connector, there is a separate pin for the filament supply and for the plate supply. The plate supply actually works better at around 30 volts. At 32 volts, it starts sounding distorted. What you might do is to put 24 volts into the filament pin, then add a small 6-volt supply to that to get the 30-volt plate. The plate circuit only draws a few hundred milliamps, so the 6-volt supply doesn't have to be very powerful.**

**Note that you should avoid switching power supplies - they make so much RFI that they will**

**swamp the signals you are trying to receive.** Best of luck! James A. (Andy) Moorer  
www.jamminpower.com

From djmerz at 3-cities.com Fri Jan 28 02:14:33 2005

**Subject: [R-390] Connectors for R-392**

Hi, when I bought the power connector, I got it from Fair Radio, but about 10 years ago. They may still have some. The audio connector was on the appropriate speaker. I think these are more available than the power connectors. I got one speaker from Fair and another at a swapmeet. I've seen the speakers/connector on the eplace occasionally and they show up in the Fair listing about a year ago for \$18. Dan

The best substitute for a real R-392 connector is a set of Molex socket pins that slip over the pins of the power connector. Cover with heat shrink and they look nice. I believe that the audio is in there too, but not a ground. Here I used one of the screws near by. No blacksmithing here - easily reversible.  
Cheers de Gord.

**For R-392 Connectors try the William Perry Co.**

702 (Rear) Beechwood Road  
Louisville, KY 40207  
(502) 893-8724

Mr. Perry specializes in hard-to-find military connectors. I bought 2 R-392 connectors from him and his prices are very reasonable. 73 Todd Roberts WD4NGG

From jonandvalerieoldenburg at att.net Fri Jan 28 10:16:47 2005

**Subject: [R-390] Connectors for R-392**

Try William Perry Co (502)893-8724. He had them for about \$18.00. He's a real class act. If he has what you need he'll ship it imediatly with a billing invoice inclosed even if has never dealt with you before.

--

Jon Oldenburg AB9AH

"Give a man a fish and he will eat for a day. Teach him how to fish, and he will sit in a boat and drink beer all day."

From jhhaynes at earthlink.net Fri Jan 28 14:33:55 2005

**Subject: [R-390] That power switch**

What is the wisdom of the group on the snap switch that controls power on the R-390A? Seems like I've seen some instructions for rebuilding it when it breaks. Is there any scheme to prevent it from breaking repeatedly? Like a spark suppressor network? Or use the switch to control a Triac? jhhaynes at earthlink dot net

From DJED1 at aol.com Fri Jan 28 14:46:52 2005

**Subject: [R-390] That power switch**

A permanent fix would be nice, but I got 40 years out of the first microswitch before it failed, and I

found I could buy a new (NOS?) switch from Fair radio. I figure the new switch is good for another 40 years and I am not, so i stopped worrying about it. I also bought a spare for the kids to put in someday. I didn't undertake to try and disassemble the switch- it looks like it's not repairable. Ed

From rtmay at htn.net Fri Jan 28 15:00:09 2005

**Subject: [R-390] Wiring harness**

Problem. I have a one fuse wiring harness I want to put into a receiver that was designed for a three fuse wiring harness. Has anybody ever tried this? Other than two empty holes I think it should work without any problems but would like any input you folks can furnish. Thanks, Richard, W8FCW

From Radiograveyard at aol.com Fri Jan 28 22:59:17 2005

**Subject: [R-390] Blue Stripe Box**

Hi All; Having owned 134 of these "blue stripes" I can tell you the "box" on the rear is the Navy adaptation for the sets. The connectors are standard Navt for all receiver connectins on boats. I just pulled a demilled 390A off a scrap ship 6 months ago and the configuration was identical. Many of the blue or yellow or white stripers were depot overhauls most with solid stated power supplilies. The recent one from the scrap boat was a Tobyhanna depot overhaul. Additionally most of the Navy units had the diode outlet pin on the front next to the phone jack.Pete

From Llgpt at aol.com Sat Jan 29 00:34:41 2005

**Subject: [R-390] One more foolishly overpriced item**

Probably Crosley, they made a run of them.

**Interesting, as you can buy newly manufactured ones from Rick Mish for \$275.00 plus shipping. I don't have his website handy as I'm at work, but they are on his site.** Les Locklear

From k4kwm at hotmail.com Sat Jan 29 07:11:34 2005

**Subject: [R-390] One more foolishly overpriced item**

The same guy that has the speaker also has an "Collins R-390A" . It even says so on the counterfiet name tag that ilooks like the ones that Fair radio sells. There is one on the R-390A that I got from them 4 years ago and it is identical to his. John

**Funny without even having to look you could tell that this listing was from good old Martyn at Radio Mart. Truth means nothing there! Larry**

From R390rcvr at aol.com Sat Jan 29 07:57:26 2005

**Subject: [R-390] Radio Mart**

**Ah yes, that bastion of accurate descriptions! Les**

From cjs004 at comcast.net Sat Jan 29 09:26:54 2005

**Subject: [R-390] One more foolishly overpriced item**

Let us know if you get a picture from him. Last time I asked Radio-Mart for pictures and more info the reply was I don't have time. My opinion, he way over sensationalizes his auctions. John

From r390a at bellsouth.net Sat Jan 29 10:42:57 2005

**Subject: [R-390] RadioMart Speaker photo evidence**

Looks like Martyn's Ebay speaker is a TRW. He sent me a photo of the tag. Sure isn't a Collins unit -- <http://www.fernblatt.net/ebay/LS206.jpg> Did Collins actually build any LS-206's or were they all made by other contractors?

I think his radio tag is genuine and not a copy. Here is the pic of the tag from an all Collins, down to the IF cans and pto's R390A that I used to have. This radio came from a local SK estate -- <http://www.fernblatt.net/ebay/mycollins.jpg>

Compare that to Radiomart's tag -- <http://www.fernblatt.net/ebay/radiomart390.jpg>

My opinion is that the R390A is the real McCoy. The speaker, on the other hand..... Tom NU4G

From Radiograveyard at aol.com Sat Jan 29 11:41:12 2005

**Subject: [R-390] LS206 debate**

I have had quite a few of these, never one supplied by the same contractor,so there were many suppliers. I have never seen a Collins tagged speaker. Thats not to say ther wasn't one lets see what others have had. Pete

I exchanged emails with a guy that bought a 516f2 power supply from him and had trouble. He wouldn't add his story to the above because he had pending mending that he was negotiating. It is a recent sale on Martyn's list. Said he would if it doesn't work out. Martyn is trying to have him thrown off of Ebay. Did we mention "threats" also?

Too bad more people don't add their "factual" story's so that more can see what this guy does. Bob AB3L

From DJED1 at aol.com Sat Jan 29 16:43:08 2005

**Subject: [R-390] Radio Mart**

Bought two "perfect R-390A PTOs" from him. Tried one and found the endpoint was 40 KHz off- the other I couldn't try out because the power plug didn't fit into my radio (maybe a R-390 unit?). He did refund my money gracefully after I complained. Ed

From kembring at epix.net Sat Jan 29 22:46:39 2005

Subject: [R-390]

Hello All,

This may seem OT but I don't believe it is. I have a Nelms Clarke SDU - 300-6 military spectrum

display unit that I'm trying to get some information and learn something about. I hope it will connect to the IF of the R-390 or other 455 Khz IF receiver to possibly provide a spectral display of the monitored frequency. I have researched it on GOOGLE and found a brief listing that tells me that it is designed for the 1307B receiver which I can't seem to find anything about either. I have powered it up and it works and I fed some 455 Khz IF into it and it shows a spectral display. I'd like to incorporate this into my station behind one of my R-390A's if possible. I'd appreciate any information on this piece and any leads on where I might be able to obtain manuals, or copies, schematics, etc Thanks for the band width...

73, Chuck Kembring WB3LGG Cochranville, Pa.

From k0jd-l at seboldt.net Sat Jan 29 23:37:55 2005

**Subject: [R-390] Re: connectors for R-392**

wrote: > The best substitute for a real R-392 connector is a set of Molex> socket pins that slip over the pins of the power connector. Cover

I started with this... and then I saw a little round circle of thick clear acrylic on my desk (had been cut out with a hole saw), and a light went on... a few holes drilled in that, stick the pins on through the holes, solder on some #14 wire, a little epoxy dab, tape it up until it sets, and there it is, a removable connector! I run clip leads to it now, but a little more soldering and it would probably be a good permanent one.

It's on my rig's picture at <http://www.seboldt.net/k0jd/station.html> (scroll down for the R392 pic)

John K0JD Milwaukee, WI

From crips01 at msn.com Sun Jan 30 01:39:26 2005

**Subject: [R-390] A useful link**

Here is a link I think you will find useful. this outfit make slides for rack mounted equipment. Having smashed my hands to many times extracting Boatanchors from my racks I am going to install some nice slide rails. Here is the link I hope it works. If it doesn't work the name of the company is: Johnson Brother's, Metal forming. IBM uses their products for their server racks.

<http://www.thomasregister.com/olc/34352005/home.htm><<http://www.thomasregister.com/olc/34352005/home.htm>> Ken

From millsend at alltel.net Mon Jan 31 10:59:35 2005

**Subject: [R-390] LS-206A Loudspeaker Assembly**

**The Radiomart LS-206 loudspeaker assembly listed on E-bay is not a stock LS-206.** The original LS-206 and LS-206A loudspeaker assemblies did not have the carry handles. I was a U.S. Army Signal Corps Platoon Leader (2nd Lieutenant) of a HF Radio Platoon (Company C, 304th Signal Battalion) in Korea in 1962-63. My platoon had 12 each AN/GRC-26D radio trucks as well as the AN/MRC-2 HF radio system (HF receiver truck with racks of R-390A receivers and a transmitter truck with T-368 transmitters). Each rack of R-390A receivers had a LS-206 loudspeakers assembly.

I purchased a LS-206A manufactured by Oneida Electronics Serial Number 21 from Fair Radio Sales several years past. The LS-206A was manufactured under a 1963 U.S. Army Signal Corps contract.

**Buyer beware when dealing with Radiomart. Best 73, Bill Mills KC4AA**

From wjneill at lcc.net Mon Jan 31 11:11:40 2005

Subject: [R-390] LS-206A Loudspeaker Assembly and AN/MRR-8 as a side subject

So, LS-206(A)'s notwithstanding, where, pray tell, did the US Army use the AN/MRR-8 (containing four or maybe six AN/FRR-38's) radio receiving central sets? Bill Neill Conroe, Texas

From r390a at bellsouth.net Mon Jan 31 13:56:02 2005

Subject: [R-390] Yosemite list back up, instructions to follow

The "Yosemite Sam" list to be back up soon for all off topic email traffic. Specifics later today.... My ISP changed server farmers, so the old mailing list was lost. The new list is mo' betta' Tom NU4G

From R390rcvr at aol.com Mon Jan 31 16:01:25 2005

Subject: [R-390] R-390 ID

AI:

Some modules are pretty easy. The power supply has a small metal tag riveted to it, which will have the name on it. The others aren't as clear cut. I have three apart on the bench right now, and so far most of the modules don't have a manufacturer listed. I suspect they are Collins units, and that probably the Motorola units will have the Mfg. on them.

The three rigs I have all have Collins front tags, but as we know they can be switched around. According to Tom Marcotte, N50FF, there were 17011 R-390s made, based on high serial numbers. 6364 were made by Collins, 8401 were made by Motorola for Collins, and 2246 were pure Motorola.

I believe all of them used Collins PTOs, but I could be wrong.

The module swapping doesn't seem to be quite as rampant in the 390 compared with the 390A.

If you have more questions, lets hear them. Randy Stout

From R390rcvr at aol.com Mon Jan 31 16:14:31 2005

**Subject: [R-390] Any non Collins PTOs on R-390?**

Gentlemen:

The ongoing discussion makes me curious if anyone has ever seen a non Collins PTO on a R-390? I am excluding the conversion to the A style PTO, which I have seen several of. Seems to work OK, but sure is ugly. Thanks in advance! Randy Stout

From jetemp at insightbb.com Mon Jan 31 17:06:31 2005

**Subject: [R-390] Any non Collins PTOs on R-390?**

Hello to the group,

I have a Collins manufactured R-390 that has a Cosmos PTO, Type 136\283, S/N 10766. This PTO doesn't appear to be modified from a R-390A PTO and all the hardware and connectors appear original. I am curious about this issue, because the type numbers do not match any R-390A PTO's that I have.  
Sincerely, Jim Temple

From r390a at bellsouth.net Mon Jan 31 17:26:50 2005  
Subject: [R-390] \*new\* Yosemite List Subscription Instructions

**Subject: Welcome to the NEW IMPROVED "Yosemite" mailing list**  
From: Yosemite-request@fernblatt.net

Welcome to the Yosemite@fernblatt.net mailing list! This list is specifically for subjects that are off-topic elsewhere. This is an unmoderated list with no limit as to the topic. The only rule is no fighting.

This list replaces an earlier list that was formed for the discussion of the mystery "yosemite sam" HF signals.

To post to this list, send your email to: Yosemite@fernblatt.net

General information including how to subscribe to the mailing list:  
[http://fernblatt.net/mailman/listinfo/yosemite\\_fernblatt.net](http://fernblatt.net/mailman/listinfo/yosemite_fernblatt.net)

You can get command information via email by sending a message to:

Yosemite-request@fernblatt.net with the word 'help' in the subject or body (don't include the quotes), and you will get back a message with instructions.

You must know your password to change your options (including changing the password, itself) or to unsubscribe.

Normally, Mailman will remind you of your fernblatt.net mailing list passwords once every month, although you can disable this if you prefer. This reminder will also include instructions on how to unsubscribe or change your account options. There is also a button on your options page that will email your current password to you.

From andywilliams at pobox.com Mon Jan 31 19:58:11 2005  
**Subject: [R-390] R-390(/URR) ID**

The modules in my Collins tagged R-390 are all labeled Collins, except for the Motorola IF unit. Most modules have to be removed to see manufacturer, but the one on the IF is on the side, directly below the multi-pin connector.

BTW, I recently rebuilt the line filter in this receiver and it no longer trips the GFI. I replaced the 4 paper dielectric caps with 4 line rated .01 uF caps. For the record, I replaced the caps because I had to, not because I wanted to.

From vibroplex at mindspring.com Mon Jan 31 21:04:47 2005

Subject: [R-390] Pile of about 10 R-390As

Dear Friends,

It's seldom that I post to this group as I am not very learned about this radio but I learn more everyday by reading.

I have come across someone with a pile (approximately 10) R-390As and I can get the best price if I buy the entire group. The seller would prefer to move these as a group. The purpose of this e-mail is to see how many people would be interested in these radios (and at what price) as I would be buying them solely to re-sell them to you guys. I could only glimpse "stack" of radios but here's what I know:

- \* None have meters
- \* All are supposed to be complete
- \* Some are St. Julien's Creek veterans
- \* Some have a vernier BFO control
- \* The nametags I could read said Motorola

Now...If I were to buy them all and re-sell them, it would be "as-is", "where-is", with no returns, exchanges, etc. Though I am learning from you guys, I don't have the expertise (yet) to troubleshoot radios, especially this beast. I would not have access to parts so if a particular module would be DOA, I'd have to point you to the regular sources for parts. I would take a picture of each radio prior to offering it for sale and would confirm that all the modules were present.

I see that Fair Radio sells "Used Repairable" for \$325.00.

What do you guys think? Is there enough interest in "the stack" that I should investigate this further. I'm not looking to get rich off of this but there is some trouble associated with hauling these out of a basement, dragging them home, and boxing/shipping an 84 lb. radio. If there is enough interest on the list, we can distribute these among ourselves without resorting to eBay. These radios are probably going on eBay if I can't make a deal for the stack.

I have confirmed that there are \*no\* R-390s in the stack.

What do you guys say. What would be a fair price you'd be willing to pay for a radio under these circumstances? Hoping to continue learning from you guys... Derek Cohn

From wa6knw at sbcglobal.net Mon Jan 31 22:26:19 2005

Subject: [R-390] LS-206A Loudspeaker Assembly and AN/MRR-8 as a

The Army utilized the MRR-8 in two place that I have seen and operated them.

1. Special Forces Signal Company Base Operations Platoons.
2. Long Range Reconnaissance and Patrol Company Base Radio Station. RICH WA6KNW

Hi Al,

I have an A that came tagged as a Stewart-Warner. The front and rear panels, and p/s and audio decks



are 1967 EAC. Believe it or not, a member from about 8 years ago had a 67 EAC tag and wanted to swap for the S-W. We were both happy. Barry non something or another

From chacuff at cableone.net Mon Jan 31 23:07:43 2005  
Subject: [R-390] Pile of about 10 R-390As

Group,

Maybe I missed something but there was not enough info provided to determine these radio's as "Parts" radio's and I might add that a parts radio, if that is what these are, should not be expected to power up and make too much noise I wouldn't think. Unless of course we are talking about the "clackity clack" noise one makes while spinning the tuning knob.

The "Used Repairable" radio that Fair sells is bench checked and does receive a signal for the \$325 they get! They also sell them "Checked" where they go somewhat deeper...but the price tag is a little higher.

What else do we have as a reference....

What Derek is proposing is a fairly labor intensive, labor of love and at \$200 or less and shipping as proposed he will be lucky to get out of the deal with his shirt on unless he gets the pile for \$1000! Just my opinion though! Cecil...

From hankarn at pacbell.net Mon Jan 31 23:51:18 2005  
Subject: [R-390] Pile of about 10 R-390As

As described. \$150.00 would be pushing it. Plus shipping, etc., etc.,????? Hank KN6DI