

## R-390 Reflector September '05 Edited

From tshoppa at wmata.com Thu Sep 1 08:56:41 2005  
Subject: [R-390] monitor scope

> The problem with using the IF output is that it has already been> filtered by the mechanical filter and thus the panadapter will> only show signals within the 16/8/4/2 kHz bandwidth. What's> needed is to tap into the IF chain before the filters.

True, but a YO-301 is not a panadapter, it's a monitor scope.

It is true that we're already doing the apples-and-oranges thing by getting asked how to hook a transmitter's monitor scope to a receiver :-). Tim.

From KA4PRF at peoplepc.com Thu Sep 1 08:18:20 2005  
Subject: [R-390] Off topic again.

Hi all,

I am really sorry that I come to this group for answers concerning non-R-390a questions, but you guys are so knowledgeable about almost everything. This time I was wondering about Ebay? How difficult is it to put an item on Ebay? I am one of those isolated individuals who has never used Ebay, so I am completely in the dark about placing something on Ebay. Any help will be appreciated. Thanks Chuck  
Ka4prf@peoplepc.com

From millsend at alltel.net Thu Sep 1 09:33:49 2005  
Subject: [R-390] Wullenweber Antenna

The "Elephant Cage" circular antenna mentioned in previous posts is in fact the Wullenweber direction finding antenna originally designed by the Germans during World War II. The U.S. Armed Forces signal intelligence services improved on the Wullenweber antenna design and installed the antennas with associated HF receivers, computers, at signal intelligence sites world wide i.e. Panama, Korea, Greece, Turkey, Germany, etc. The R-390A along with Hammarlund SP-600 receivers were the principal receivers used at the "field stations". Those receivers were later replaced by the Harris line of HF receivers.

Most, if not all, of the signal intelligence sites have been deactivated. Bill Mills KC4AA LTC, U.S. Army Signal Corps (Retired)

From tangerame at earthlink.net Thu Sep 1 11:52:03 2005  
Subject: [R-390] R-390a Stability Specifications

Group,

>From a cold start how far should an R-390a drift? I have a cool basement shack (60F) so it takes a good hour to warm up to operating temperature, maybe longer. In that time it drifts almost 1 kc. So that's a rise of about 60 degrees or more. After that well I can't notice much change. I seem to remember maintenance in USAF replacing a receiver but it took a while for it to stabilize. But that's

becoming a fuzzy memory. Thanks, Tony WA6LZH

From roy.morgan at nist.gov Thu Sep 1 14:33:14 2005  
Subject: [R-390] Off topic again.

wrote: >... This time I was wondering about Ebay? How difficult is it to >put an item on Ebay? Chuck,

Not very difficult. The Ebay site will tell you how. Go to: <http://pages.ebay.com/education/> and click the "How To Sell Video" link. Roy

From future212 at comcast.net Thu Sep 1 23:03:00 2005  
Subject: [R-390] HI-Z Headphones

Hello,

I noticed that someone is selling "Collins radio" HIgh Impedance headsets on the E Place. They are now up to \$113.00???

A company called Cailfone (put it in Google) sells good quality HI-Z mono headsets with 1/4" plug for \$15.00.

I know that this is off topic, but I thought it is something that some members might be interested in. I have no interest in this company other than I bought a set a while back for use with my Hallicrafters SX-42 receiver. They charge \$3.00 for shipping and handling and use Pay Pal for their payments. 73's DW Holtman WB7SSN

From pwokoun at hotmail.com Fri Sep 2 03:07:20 2005  
Subject: [R-390] RE: Sept 2 special event from the USS Missouri

>Greetings R390 enthusiasts,  
>

>September 2, 2005 marks the 60th anniversary of the signing of the Japanese >surrender papers on board the battleship USS Missouri in Tokyo Bay, >formally ending World War II. The USS Missouri, currently located at Pearl >Harbor, Hawaii, will be holding extensive ceremonies on board September 2, >and the ship's club station KH6BB will be on the air as well.

The BMARC KH6BB started working stations on this special event today (Thursday) from before 0000Z to well after 0530Z continuously when we had to finally break. Many stations were worked and if you were unable to 'get in' you still have a couple of days to try. We plan to start ops tomorrow (Friday) starting at 1600Z, breaking during the 2 hour onboard ceremony and continuing until about 0530Z again or until the band dies. Propagations seemed to be cooperating on our end.

From sacramento.cyclist at gmail.com Fri Sep 2 13:16:08 2005  
Subject: [R-390] AGC Problem Returns

Good Morning,

After finding (I thought) the problem with my AGC in the 390A, it seems now to have returned. To recap the original problem briefly:

Observed low no signal voltage on the line (just about 0, maybe slightly negative) instead of the spec'ed -0.4. Replaces V509 and no signal condition became as spec'ed. Noticeable improvement in audio quality.

Then I proceed to do a full alignment with very good results. Radio burns in on the bench. Problem develops.

Now: No-signal AGC is back near 0, at about -0.08 to -0.10. Noticeable distortion, especially on very strong signals. AGC only develops about -7 volts on the strongest BCB signal (>80 on the carrier meter).

Sounds like something is loading it again. My question is more how to isolate it to a particular stage. If I look at the signal grids of all the controlled tubes (IF and RF decks), will the offending stage be obvious, or will all the grids look the same since they are all on the controlled line. And, is it correct that if I'm looking at a low resistance on the AGC line, that I can isolate it to the RF or IF deck by pulling the IF connector and observing what if any change.

Would the components around V509 be likely suspects?

And probably the most elementary of all: I've been assuming that the resistances given in the voltage/resistance diagrams are with the module in question fully connected to the rest of the radio...right?

Just looking for some hope..I'm hoping I don't end up digging for capacitors in the IF deck. :( Thanks for any advice. Sign me "Trying not to whine in Carmichael."... Dennis

From r390a at bellsouth.net Fri Sep 2 15:09:15 2005  
Subject: [R-390] HI-Z Headphones

wrote: > I noticed that someone is selling "Collins radio" High Impedance

Yea, I've seen those. Today they're up to \$183. I have to wonder about that. I have several sets of that \*very\* headphone that I bought from Fair Radio Sales two years ago for \$15 each still in the box and foil wrapper. They're made by Astrocom BTW.

I have a couple pair of high impedance headphones made by Clevite that I was lucky enough to find on ebay a few years ago, I think they were about \$15 as well. There really isn't any reason to pay any more than that. It's sort of like the folks that pay 10x more for "Collins" branded tubes. Collins never made their own tubes, they probably were made by GE or anyone else.

IMHO This is not off topic, this type of discussion is one of the reasons the list is here. Tom NU4G

From mikea at mikea.ath.cx Fri Sep 2 15:24:03 2005  
Subject: [R-390] HI-Z Headphones

wrote> I noticed that someone is selling "Collins radio" High Impedance headsets on the E Place. They are now up to \$113.00??? > A company called Cailfone (put it in Google) sells good quality HI-Z mono headsets with 1/4" plug for \$15.00.

I have to wonder if you meant to write "Califone", as in "Rheem Califone", which used to (and may still) make AV gear for schools and business. Mike Andrews

From shoppa\_r390a at trailing-edge.com Sun Sep 4 07:44:08 2005  
Subject: [R-390] Brown Beauty voltage rating?

What was the official voltage rating for the 0.033uF and 0.1uF brown beauties that we commonly see?

My 0.1uF from R-390A's are brown-black-yellow-white-(blank)-red. My 0.033uF's from R-390A's are orange-orange-orange-black-(blank)-orange.

My naive guess would be that the last red on the 0.1uF's means 200V and that the last orange on the 0.033uF's mean 300V, but I'm sure that I'm wrong! Tim.

From roy.morgan at nist.gov Sun Sep 4 13:02:19 2005  
Subject: [R-390] Brown Beauty voltage rating?

Quoting > My naive guess would be that the last red on the 0.1uF's means > 200V and that the last orange on the 0.033uF's mean 300V, but > I'm sure that I'm wrong!

Tim,

I think you are right. but I am not sure. There are military cap marking tables on line.

**See: <http://www.pmel.org/HandBook/HBpage26.htm>**

**This site has a LOT of diffent radio-related standards: <http://www.wiktel.com/standards/> caps are at: <http://www.wiktel.com/standards/capa.htm> (but not the tubular cap ones.)**

**Go here for a variety of tips and useful info: <http://www.gbronline.com/radioguy/tips.htm> especially oriented to antique domestic radio restoration.**

**Buy a color code calculator (three bands only) for two bucks at: <http://www.physlink.com/estore/cart/ColorCodeCalculator.cfm?SID=37>**

**This page decodes the MIL cap code such as: "CM 15 B D 332 K N 3" (The R-388 manual may contain such a code for the caps.) <http://xtronics.com/kits/ccode.htm>**

**A calculator for modern dipped tantalum caps is at: <http://www.csgnetwork.com/capcctantcalc.html> along with a long list of other calculators anc converters.**

**Lots of good info is at: [http://www.qsl.net/wa7zcz/area2/t\\_of\\_c.html](http://www.qsl.net/wa7zcz/area2/t_of_c.html) and on page 73 is EIA and MILITARY Color Codes For Resistors and Capacitors: <http://www.qsl.net/wa7zcz/area2/page73.html> This page mentions MILITARY STANDARD MIL-R-11E and if you find that one you mey have the right info from the source. Roy**

From dmetz at ntelos.net Sun Sep 4 19:39:51 2005  
Subject: [R-390] RF Deck clamp source

**After quite a few times in and out of the chassis, I can practically put the RF deck in blindfolded. The cause: 4 broken clamps! Anyway, I found a source for two part stainless clamps via WW Grainger for about \$4-5 each. The nice part about the two piece clamps is the lack of need to disassemble the gear train to replace a couple of them on through shafts. A bit of challenge is to get the old one out but I'll leave that to one's imagination. The 5/16" bore two piece stainless is stock # 1L714 and the 3/8" bore two piece stainless is 1L715. They also sell a cheaper steel one and one piece for lesser amounts. Obviously there is the old standby of Small Parts, but many people might have a Grainger closer and easier. 73's dave**

From N4BUQ at aol.com Sun Sep 4 21:07:26 2005  
Subject: [R-390] RF Deck clamp source

Dave,

Some enterprising guy made 2-piece aluminum clamps for many of the shafts and gears on my latest R390A. While the original design is easier to manage since there's only one screw, I think the 2-piece design is very strong and you certainly don't have to worry about clamps breaking with them. Good find. Barry - N4BUQ

From hankarn at pacbell.net Sun Sep 4 21:05:09 2005  
Subject: [R-390] RF Deck clamp source

I have all sizes of the original clamps in stock Hank KN6DI

From schluensen at freenet.de Sat Sep 3 22:12:35 2005  
Subject: [R-390] Amelco

Hi all,

an old Ham brought me last week an R-390A - Amelco. Serial ??? No Signals on all Bands. Reason was a loose Gaer Clamp. Now Signals on all Bands, but very, very weak! 10mV from Signal Generator produces a Signal.... All Plugs, Tubes, Antenna Relay and Fuses checked. Alignment looks o.k. Some Ideas....? Please excuse my bad, bad English.... - sorry... 73, Frank, DK1LX

From sacramento.cyclist at gmail.com Sun Sep 4 23:43:33 2005  
Subject: [R-390] AGC problems - need help interpreting IF resistance readings

Spent some time today checking resistance values on the AGC line in the IF deck. Definite problem on the AGC bus. Where the AGC bus comes into each of the controlled stages in the IF deck:

V501 grid Pin 1 110K, should be 500 K

V502 grid pin 1 70K should be 500K

V503 grid pin 1 110K should be 500K

Obviously something is leaking badly...I checked C512 (bypassing the agc line in the grid circuit of V502) thinking since that's the stage with the lowest resistance, that would be the problem. But, you guessed it..C512 is fine. I lifted the ground end and the agc line resistance to ground didn't change.

Just for kicks, I put the ohmeter across C502 and C519 (agc line bypasses in V501 and V503 stages), and didn't see anything but the 110K to ground. Was that a useful test, or do I need to actually lift one end of those guys and check for sure.

What else should I be looking at in the IF deck that could be loading down the AGC line?? I running out of ideas..what am I overlooking? Thanks Dennis

From sacramento.cyclist at gmail.com Mon Sep 5 01:35:42 2005  
Subject: [R-390] AGC problems - need help interpreting IF resistance readings

wrote: > Also remember that the mechanical filters are on that line also if they are > leaking you need to find out which one.

Thanks Matt.

I have the IF deck out of the chassis, so I'm pretty confident the leakage is in the deck.

Would a leaky filter otherwise perform normally? In order to isolate a filter, do I need to disconnect one or both ends? Is it possible to disconnect all of them at once by lifting the common ground? (if I can find it). Dennis

From schluensen at freenet.de Sun Sep 4 05:44:56 2005  
Subject: [R-390] Amelco

Hi all,

my Amelco works fine! The Sensitivity Fault was a bad Mini-BNC ....

But I need a great Knob for KC-Change. Somebody mounted a big Steel Spin Tuning Knob..... - with four holes in the Front plate..... Someone here who wants to sell such a Knob? 73, Frank

From sacramento.cyclist at gmail.com Mon Sep 5 17:48:49 2005  
Subject: [R-390] AGC problems - need help interpreting IF resistance readings

Well, I think I've isolated the problem to the output side of the mechanical filter group, so its either a filter, a mica cap (unlikely, since the filter would have to be leaking to ground too), or the switch itself.

I want to go over my reasoning before I start lifting wires off the filters. I'm still a novice at troubleshooting (won't be able to use that one for much longer).

I lifted the filter end of the 22K, R507 from the rotor of the switch. This isolates the grid circuit from the AGC line. I still see about 120K from the rotor, and pin 1 of V502 to ground. The pin 1's of V501 and V503 now show infinite resistance to ground.

There is no DC path from input to output of a mechanical filter, correct? Does what I see and conclude pass the laugh test so far? Thanks all, Dennis

From jlkolb at jlkolb.cts.com Mon Sep 5 21:03:46 2005

Subject: [R-390] AGC problems - need help interpreting IF resistance readings

wrote: >Well, I think I've isolated the problem to the output side of the >mechanical filter group, so its either a filter, a mica cap >(unlikely, since the filter would have to be leaking to ground too), >or the switch itself.

snip >There is no DC path from input to output of a mechanical filter, correct?

Correct, the input coil will measure somewhere around 50-60 ohms, as will the output coil, but infinite between the pair. Also, should be infinite between either coil and filter case (out of circuit) John

From sacramento.cyclist at gmail.com Mon Sep 5 23:21:36 2005

Subject: [R-390] AGC problems - need help interpreting IF resistance readings

wrote: wrote: Well, I think I've isolated the problem to the output side of the > >mechanical filter group> >There is no DC path from input to output of a mechanical filter, correct?

Thank you everyone for your responses. The 8 Kc filter had a high resistance (~120K) short to ground.

When I opened up the filter box, I discovered why the 16 kc filter was out of the circuit.. it has about 5K from ground to either terminal. And, one side was still wired into the common side of the filters! That helped me discover the hard way that I needed to isolate BOTH terminals (duh) since one side is all wired in common in order to find the second suspect filter. I also discovered that the tabs on the trimmers will only flex so many times before breaking. One got flexed one too many times...luckily it was the one for the 8kc filter. So, I put shrink tubing on the exposed wires and hooked up the remaining working ones and fired her up. Sure enough, no more distortion on strong signals, and overall an improvement in audio quality.

Well, if I had to loose 2 filters, I guess those would be the two to loose (for my listening anyway.)

I don't feel a need to replace those filters right away. I happen to have an 8 and 16 kc Clevite ceramic filters, and a 4 kc as well. I'm also wondering as I type this if there may be other filter options which would give me more flexibility. (note that this particular '390A has the "factory" SSB mods done on it). Comments are welcome. Thank you all again for your help. Dennis

From r390a at bellsouth.net Mon Sep 5 23:59:12 2005

Subject: [R-390] OT - The \$225 dollar Collins Headphones - The Seller Responds

Remember the "Collins" headphones that sold for so much over the weekend at auction? ( Item 5803139305 or <http://tinyurl.com/8h3dh> ) I kindly and politely asked the seller what model number was listed on the ID tag. My reason was they looked like H-251A/U but they had a phone plug on the end, and I was wondering what model might they be. That's all I wanted to know, I didn't criticize him on his price, nothing like like that.

Here is his reply.

"collins never made any headset or mic from their shacks, they gave subcontract to other companies. headset was never assign to one single one, any headset close to 600 ohms works with r390a. do you know which one was assigned to r390a by the us army manual? if you do not know, you have to go back to study this radio again!!!! i know the answer:) Ha ha ha." So guys, who \*is\* "findcollinsradio" ? He seems like such a nice guy. 73 Tom NU4G

From w9ya at arrl.net Tue Sep 6 01:14:26 2005

Subject: [R-390] OT - The \$225 dollar Collins Headphones - The Seller Responds

do you> know which one was assigned to r390a by the us army manual? if you do > not know, you have to go back to study this radio again!!!! i know > the answer:) Ha ha ha."

Hey Tom and the gang;

I am sure the ebay folks that are invested with trying to maintain fair auctions would appreciate seeing this info along with some explanation as to what it all means so they can "understand" what a "nice guy" this fellow really is. Vy 73; Bob w9ya

From hankarn at pacbell.net Tue Sep 6 01:44:15 2005

Subject: [R-390] OT - The \$225 dollar Collins Headphones - The Seller Responds

seems more like the South end of a north Jack Ass Hank KN6DI

From jlkolb at jlkolb.cts.com Tue Sep 6 03:08:08 2005

Subject: [R-390] AGC problems - need help interpreting IF resistance readings

Well, of course, more flexible filter options would depend on your interests. A good match for the factory SSB option would be to install USB and LSB filters. For more general SWL listening, a 3 and 6 kHz filters would be nice. For TTY or CW???

The trick is to either find filters with a 100 kohms in and out Z or match to the newer filters which are typically 2 kohms.

It appears that all the F455Y-xx filters Y-31, Y-60, Y-120, etc are 100 kohms centered on 455 kHz. Since the "Y" size case filters are round, but smaller than the "N" case filters, an adapter can be made to hold them and provide good shielding. Mounting the rectangular style filters would be more of a problem. "Y" series filters show up on ebay from time to time.

The rectangular style filters would be harder to mount. The "V" case filters, metal, would provide better shielding than plastic filters such as the "FA" series, and most of the "V" filters have extremely good shape factors.

One could, of course, buy new filters in an "N" sized case from Dave Curry, but a couple of those would set me back more than I paid for my 390 :)



**There are Motorola mechanical filters for sale on my site if you decide on something a little closer to original than the Clevite ceramic filters.** John <http://www.jlkolb.cts.com>

From pwokoun at hotmail.com Tue Sep 6 11:25:22 2005  
Subject: [R-390] USS Missouri special event

To all those who participated in the USS Missouri KH6BB special event with your R-390s a big thanks! We were able to work over 300 stations during the three days even with the lousy propagations out here. Most all were on 20 meters CW. I know there were a lot of stations we were not able to contact. To see what was going on over at our end here I put a bunch of pictures up on my web site at: <http://www.qsl.net/kh6grt/page3/60th/60th.htm> Again, a big Mahalo! 73s, pete, KH6GRT

From muttman at charter.net Tue Sep 6 12:51:41 2005  
Subject: [R-390] OT - The \$225 dollar Collins Headphones - The Seller Responds

Now he's got an old open frame "Collins" headset at: 5806214515.  
[http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5806214515&ssPageName=MERC\\_VIC\\_ReBuy\\_Pr4\\_PcY\\_BID\\_IT](http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5806214515&ssPageName=MERC_VIC_ReBuy_Pr4_PcY_BID_IT) Buzz

From b\_hagen at sbcglobal.net Tue Sep 6 13:03:15 2005  
Subject: [R-390] OT - The \$225 dollar Collins Headphones - The Seller Responds

Now he's got an old open frame "Collins" headset at: 5806214515.  
<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5806214515&ssPageName=MERC>

wrote: >Look to me like WWII headset made by Telephonics or Permoflux. Gee - I own one. Be happy to get \$200. What a deal. Bruce Hagen

From roy.morgan at nist.gov Tue Sep 6 13:58:59 2005  
Subject: [R-390] OT - The \$225 dollar Collins Headphones - The Seller Responds

wrote: >Look to me like WWII headset made by Telephonics or Permoflux.

Said to be an HS-16. I have a pair here. Got it for about \$10 or so some time ago new in the package over one of the lists. It sounds HORRIBLE.. has a very strong peak at some 1400 - 1800 cps. Hurts my ears because of the spring and hard earpiece surface.

Maybe I should list mine, shown as his is in front of the S-line, but be very honest and complete in my description.

Something like:

"NON-Collins made early US Military headset HS-16A with 520 Ohms DC resistance. AC impedance varies all over the range from 100 ohms to 4000 ohms depending on frequency. Excellent Condition, no rust or damage. Original packing envelope included. Readily plugs into any Collins, Hallicrafters, Heathkit, or whatever radio receiver with a normal phone jack. I personally used these with my Collins R390A, but only for a very short time. Does not work perfect. Has severe audio peak at 1200 to 1800 CPS. Is very hard on the ears due to stiff headband spring and hard plastic ear pieces. I could only

listen to HF shortwave radio for a few minutes before becoming tired of them. Please bid on these things and get them out of here before I put them under the rear wheel of my wife's car ! "

That gray phone plug thing shown in his auction is an accessory for military VOM's used in the teletype field to measure loop current. It accepts the earphone cord tips or VOM test lead tips and is a normal PL-55 shape as you can see. It makes for an awkward assembly on the front of your S-line. End of diatribe. Roy

From n4buq at aol.com Tue Sep 6 14:01:28 2005

Subject: [R-390] OT - The \$225 dollar Collins Headphones - TheSellerResponds

I bid \$0.50. Barry - N4BUQ

From rziegenbein at volcanotherapeutics.com Tue Sep 6 15:56:36 2005

Subject: [R-390] R-390 rf gain

I'm new to the R-390A world and have a couple of questions.

My 390A is a Collins first production run and has a mod so it supposedly receives SSB better by a couple of 4148 diodes in the agc ckt (one in parallel with R-547, grid of the AGC time constant, one in parallel with R546, grid and plate of the AGC rectifier ckt, and finally a 47 pf in parallel with C535, which is the coupling cap between the BFO and the Detector. Is this a good mod?

Next, the RF gain control seems to only be effective the last 1/4 turn clockwise (man or agc modes). Is this normal or do you think the pot is bad or some other problem in the rf gain control circuit? Or is it a result of the AGC mods above? 73, Randy, K6RCZ

From djmerz at 3-cities.com Tue Sep 6 17:25:05 2005

Subject: [R-390] R-390 rf gain

Randy, this mod is well known to be an easy "fix" to improve fast attack on ssb signals and does improve the set (so-called "Lankford mod"). The connections you describe are what I have in my set. It doesn't eliminate the need to ride the rf gain control to accommodate weak and strong ssb signals, which is somewhat inherent with the relatively weak bfo injection relative to strong signals. I only conquered this situation by attaching an external product detector with its own agc circuit. There are other fixes, involving on-board product detectors etc. and another somewhat more elaborate mod similar to the one you describe.

I'm not sure what you mean by "effective"... Does it affect the meter response on am signals over the whole range or just for the last 1/4 rotation? I think normal is for the meter indication to drop over the whole range of rf control rotation for a strong am station, such as a strong broadcast station. But on weaker stations, the effect of the first part of the rotation from lowest gain may not be apparent. Dan.

From KA4PRF at peoplepc.com Tue Sep 6 16:30:46 2005

Subject: [R-390] Little Fading

Hi again,

During the day when there's nothing to do, I like to listen to the BBC. If the BBC is fading badly, I end up watching Judge Judy - ugh! spit, spit. Anyway, sometimes I listen with my NRD545 and others with my R-390A. I've noticed that with the same antenna, the R-390A holds the signal better. Since the signal I am listening to is on 17 MHz, it has deep fades on the NRD545, but the R-390A holds the signal almost at a steady level. I guess it's the AGC, but you'd think the NRD545'S AGC would be just as good? Any comments why the difference would be appreciated. Both receivers seem to have equal sensitivity. I mean, I hear the weak ones on both equally. Chuck B ka4prf@peoplepc.com

From mark.richards at massmicro.com Tue Sep 6 17:34:19 2005  
Subject: [R-390] Little Fading

Could also be simply bandwidth or a combination of this and AGC time constant, perhaps?

However, being an R-390 enthusiast, I'd have to suggest that comparing it with anything else is unfair. The R-390 is, in Clint Eastwood speak, "the most powerful radio receiver in the world". /mark richards K1MGY

From jupete at bigpond.net.au Wed Sep 7 05:15:10 2005  
Subject: [R-390] Phones R-390A

May be I missed the ID but manual 31 R1-2 URR says headset Navy Type CW 49507 or equivalent Pete D . Williams METUNG 3904 Australia jupete@bigpond.net.au

From youngbob53 at msn.com Wed Sep 7 15:22:03 2005  
Subject: [R-390] non R390 question

I realize this is a forum for R390's and R390A's which is why I subscribe and I plan on getting one soon. But in the mean time I have a question I hope someone can help me with and off line is fine.

I have a nice Hammarlund HQ-180C and the slug in the bottom of the T5 455khz IF transformer will not peak, it goes all the way in as far as it can go and does increase the signal but doesn't peak. The radio otherwise is fine but it does show some signs of being off of alignment. Thanks, anyone have any ideas? caps? resistors, etc? I do have the manual, thanks, Bob Young

From westerman at cableone.net Wed Sep 7 21:47:16 2005  
Subject: [R-390] Beware - Miltronix Stewart Warner R390A on ebay

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5806913042>

I asked him how he knew it was a Miltronix receiver. Here is his answer: "It looks just like one that was completed on Ebay not long ago. Same cabinet and all. So I assumed it was. How can you tell?" Craig westerman@cableone.net

From llgpt at aol.com Wed Sep 7 21:53:15 2005  
Subject: [R-390] Beware - Miltronix Stewart Warner R390A on ebay

Well, Rick Mish did paint several R-390XX receivers with that color scheme. He did a R-725/URR for me in that color several years ago. It was the basic light gray similar to the R-1051 series with black lettering.

The give away would be if the panel was silk screened, as Rick uses a silk screen. Les Locklear

From courir26 at yahoo.com Thu Sep 8 08:11:31 2005  
Subject: [R-390] Beware - Miltronix Stewart Warner R390A on ebay

Doesn't Rick also mark with paint the valves when tested, and a paint dot on the oven switch? Tom

From llgpt at aol.com Thu Sep 8 18:07:39 2005  
Subject: [R-390] Beware - Miltronix Stewart Warner R390A on ebay

Yeah, he used to, forgot about that touch. Les

From Flowertime01 at wmconnect.com Thu Sep 8 18:52:52 2005  
Subject: [R-390] Unusual Facility in UK

Fellows,

When I left San Diego in July 2004, there was still one on the silver strand. You had to drive down to the very south end of the strand to see it. Roger KC6TRU

From roy.morgan at nist.gov Fri Sep 9 09:17:35 2005  
Subject: [R-390] Unusual Facility in UK

wrote: >Fellows, >When I left San Diego in July 2004, there was still one on the silver strand.

At Yahoo Maps, I discover that there is a Naval Radio Station on that peninsula. Roy

From ezeran at ezeran.cnc.net Fri Sep 9 10:44:27 2005  
Subject: [R-390] Unusual Facility in UK

> When I left San Diego in July 2004, there was still one on the silver strand.

Imperial Beach radio facility.

From KA4PRF at peoplepc.com Fri Sep 9 11:31:16 2005  
Subject: [R-390] Unusual Facility in UK

I went to school there back in the early sixties. chuck

From GBabin73 at aol.com Sat Sep 10 03:40:41 2005  
Subject: [R-390] Unusual Facility in UK

It's been shut down for a few years now. It used to be NRRF (Navy Radio Receiving Facility). The antenna array is still there (The elephant cage), but the building is empty. I was lucky enough to get a tour while it was operational, absolutely the most amazing RX system on Earth. 73! DE N5MCJ, Jerry

From lwolcott at copper.net Sat Sep 10 15:49:18 2005  
Subject: [R-390] Radio Equipment From Estate

Hi everyone, sorry for the delay in getting back to you all. Due to the overwhelming response to my previous posting, I've decided to list the items on eBay and contact the list with details.

Here's a list of equipment: <http://www.larrywolcott.com/radios>

DO NOT RESPOND TO THIS EMAIL or the list, because I don't check this account. Use [objectcoder@hotmail.com](mailto:objectcoder@hotmail.com) if you would like any more information. Thank you all for the emails and interest. Best Regards, -Larry Jr.

From future212 at comcast.net Sat Sep 10 16:10:15 2005  
Subject: [R-390] R-390A Coax question

Hello to the group,

I have a couple of questions that I hope someone can help me with. Is the coax cable used throughout the receiver 50 ohm impedance?

If it is 50 ohm, would RG-74 make a good replacement, or should I try to find some better coax, with lower loss? The runs are only about 1 foot long, I think the loss at HF would be insignificant, but maybe someone has some better ideas.

How hard is it to re-work the Mini BNC connectors? I have looked high and low on the web and don't think they are available. Thank you in advance for all of your help. 73's DW Holtman WB7SSN

From shoppa\_r390a at trailing-edge.com Sat Sep 10 16:50:59 2005  
Subject: [R-390] R-390A Coax question

> Mini BNC connectors? I have looked high and low on the web and don't think they are available

Fair Radio (<http://www.fairradio.com/>) has the connectors and cables (used) for very affordable prices.

Others here on the list post them for sale from time to time too. Tim.

From roy.morgan at nist.gov Sat Sep 10 18:09:53 2005  
Subject: [R-390] R-390A Coax question

Quoting >: > Is the coax cable used throughout the receiver 50 ohm impedance?

DW,

I think so, but it probably does not make much difference what you use.

> If it is 50 ohm, would RG-74 make a good replacment,

I don't remember offhand the nature of RG-74, but if it is about the same diameter as the original stuff, then it will work in the MB connectors.

should I try to find > some better coax, with lower loss?

Loss at HF for those distances is irrelevant.

The runs are only about 1 foot long, I > think the loss at HF would be insignificant, but maybe someone has some > better ideas.

>

> How hard is it to re-work the Mini BNC connectors?

It's not all that difficult if you know a couple of tricks:

1) Heat the solder of the covers on the connector and tap it just right against the edge of the bench and the little cover will fly out.

2) A very sharp knife will allow you to strip insulation correctly if you are gentle so as to not cut through the shield wires.

I have looked high and low > on the web and don't think they are available.

Contact RF Connections - they may well have them. <http://users.erols.com/rfc/index1.htm>

Ask also if they have the correct coax for use in the radio.. they may well have it. Buying just a few feet will not break you. Roy Morgan

From stevehobensack at hotmail.com Sun Sep 11 08:38:49 2005

Subject: [R-390] Re- Coax question

The runs of coax are so short that impedance (100 , 75, 62, 50 ohms) is not that big a deal. More important is to use coax that will not short out years in the future. Sony earphone coax seems ideal but will short out as will the original stock r-390a coax. Foam dielectric is bad. ....Steve...N8YE

From Flowertime01 at wmconnect.com Sun Sep 11 12:40:39 2005

Subject: [R-390] Unusual Facility in UK

Roy,

The elephant cage is just one of many antenna's at the site. I have no idea what else is going on out on the silver strand. The North end of the peninsula that forms the silver strand and the outer bank of the San Diego Bay, is a naval air station. It is called north Island as once upon a time it was an island.

There were gaps in the silver strand sand bar. The gaps were filled in and a rail road, trolley line was built on the strand. You could ferry across the bay to Coronado Island. These islands were separated by a marsh. That marsh also has been filled in. Today there is a big tall bridge across the bay from the main land to the peninsula. The Navy Seals still storm the silver strand beach about once a month as part of their training exercises. Roger.

From Flowertime01 at wmconnect.com Sun Sep 11 12:54:30 2005  
Subject: [R-390] Unusual Facility in UK

ezeran,

Yes, thanks, the small city in the very most south west corner of the continental united states. Imperial Beach radio facility. That is where the Antenna is located.

Imperial Beach does an awesome sand castle building event on the beach there each summer. A real party on the South end of San Diego. The other party is on Fiesta Island in the mission beach north end of San Diego. A strange game named over the line is played there. The event goes over the line. If New Orleans does not recover, San Diego may become our best party city.

However, I find US cities do not party like many other cities in the world.

When I arrived in San Diego in 1984 there was a real awesome dipole strung up in Lemon Grove. It was taken down in the mid 90's while I was in Los Angles. There were three towers with a center feed. I think the towers were over 200 feet. I was told it was a Navy LF antenna for ship to shore. I was up on a "high" land location. Roger.

From sacramento.cyclist at gmail.com Sun Sep 11 18:07:08 2005  
Subject: [R-390] Noise when warm ('390A)

Hi everyone,

I've noticed lately that after a few hours of operation, a "frying bacon" or "snap-crackle-pop" noise begins to occur, slowly increasing as time goes on. No real difference in band or mode.

Any quick troubleshooting hints to isolate to a stage? What is the consensus...more likely a cap or a tube? Thanks for the advice, Dennis

From krkaplan at cox.net Sun Sep 11 18:44:03 2005  
Subject: [R-390] Nostalgic Kit Central website notice

Hi,

This is just an fyi to let those who may not know that I built a website to present information on Kits. It covers Heathkit, Allied Knight Kits, Eico, Precise, EMC and Paco.

My intention is to document by picture, specifications and schematics all of the kits offered by these companies. I am also going to try to document as much of the history of these two companies as I can. Why? Fifteen reasons of which the first four follow:

1. To help fellow hobbyists understand what may be available in the used market to enhance their enjoyment of their hobbies.
2. Bring a tear while you remember that kit you built and still wish you had <g>.
3. As far as I can tell, it hasn't been done.
4. I'm crazy.

I would appreciate hearing comments both good and bad. If you have any material that you would like to contribute to the site, I'd be happy to include it.

The site address is: <http://www.qsl.net/kb7rgg/>

Hope you find it useful, Ken kb7rgg

From damcdonnell at bellsouth.net Sun Sep 11 19:13:02 2005

Subject: [R-390] Unusual Facility in UK (now talking about a place in california)

an satellite image of the antenna system.

<http://maps.google.com/maps?q=Imperial+Beach+CA&ll=32.591985,-117.127090&spn=0.013070,0.020262&t=h&hl=en>

and at terraserver

<http://terraserver.microsoft.com/image.aspx?T=1&S=10&Z=11&X=2439&Y=18030&W=3&qz=%7csan+diego%7cCA%7c>

another one in Alaska

<http://terraserver.microsoft.com/image.aspx?T=4&S=9&Z=6&X=3470&Y=67955&W=3>

the elephant cage (wullenwebber) antenna on Diego Garcia has been dismantled.

[http://www.spaceimaging.com/gallery/spacepics/diego\\_garcia\\_01\\_01\\_05\\_1M](http://www.spaceimaging.com/gallery/spacepics/diego_garcia_01_01_05_1M) zoom to the upper left of the island. you'll see a brown circle were the antenna was.

From krkaplan at cox.net Sun Sep 11 20:12:00 2005

Subject: [R-390] Neat antenna site

Hi,

A few year ago I was on a business trip to the San Diego area and just happened across a mighty big antenna. I found a sign on a fence that said something like "Navy Receiving Facility." This place is close to Imperial Beach. Check the URL below to see a picture (approx. 182kb). Anyone know anything about this site? I'd love to connect my R-390A to it!

<http://members.cox.net/krkaplan/image011.jpg>

If you start Google Earth, go to San Diejo at about 20,000 feet. Then go to:

32deg 35min 36.68s N

117deg 07min 44.76s W

Eye elevation 1000 ft



I was at:  
32deg 35min 12.32s N  
117deg 07min 42.00s W

Isn't the Internet cool!? 73 - Ken kb7rgg

From sparks at codepoets.com Sun Sep 11 20:25:31 2005  
Subject: [R-390] Neat antenna site

Ken, that's a Wellenwebber (SP?) DF antenna, AKA dinosaur cage used by Naval Security Groups for HF DF. There were a lot of these monsters all over the world, many are gone and now part of the cold war history. The one down at Homestead FL was destroyed in Hurricane Andrew in 1992 and never restored to my understanding. I think Sabana Seca PR is gone too, as well as many others. I was not a Communications Technician (CT) type (I was a Radioman) so I can't say what they used for receivers but you can bet the R-390 was there. 73 Tom K4NCG

From shoppa\_r390a at trailing-edge.com Sun Sep 11 21:02:21 2005  
Subject: [R-390] Noise when warm ('390A)  
In-Reply-To: <d13941db0509111507428576d1@mail.gmail.com>

> "frying bacon" or "snap-crackle-pop" [after a few hours] > What is the concensus...more likely a cap or a tube?

The tubes get up to operating temperature within a few minutes of power-on.

I would begin to suspect arcing over in the chokes or transformers.

See if turning the rf gain all the way back to low gain makes the problem go away or if it stays there. If it stays there, it's probably something on the AF deck (which has plenty of transformers, chokes, capacitors, etc.)

One of my two R-390A's has this and I've traced it to the Limiter switch on the chassis. Snap-crackle-pop only when the limiter is off. I suppose it could be some part in the limiter stage though I suspect that stage is pretty much supposed to be bypassed when the limiter is off. Tim.

From llgpt at aol.com Sun Sep 11 22:04:13 2005  
Subject: [R-390] Noise when warm ('390A)

The voltage regulator tube OA2 has been known to have those symptoms. Les Locklear Gulfport, MS.

From N4BUQ at aol.com Sun Sep 11 22:29:34 2005  
Subject: [R-390] Noise when warm ('390A)

Is you radio located near a kitchen? If so, do you listen early in the morning?

My radio does the same thing sometimes. I always attributed it to a capacitor, but I recapped all the

paper caps so I'm not sure. Someone suggested the VR tube. Maybe I'll check that out on mine too. 73,  
Barry - N4BUQ

From sacramento.cyclist at gmail.com Sun Sep 11 23:50:26 2005  
Subject: [R-390] Noise when warm ('390A)

Update.

First thing I did was start unplugging modules to try and see when it went away.

Guess what.

It goes away when the antenna is unplugged (sigh). Sorry guys. Should have checked that first, although it still doesn't sound like its from the antenna.

Is there any failure mode anyone can think of that would only be apparent when the antenna is connected? Haven't changed the antenna configuration here by the way. Its a 120' dipole fed with open wire line to a balun. Coax to the balanced antenna jack fed according to Rippel's instructions. Thanks for all the suggestions from all. Dennis

From jlkolb at jlkolb.cts.com Mon Sep 12 01:08:23 2005  
Subject: [R-390] Unusual Facility in UK

The transmitter site, commonly referred to as the Chollas Heights antenna towers, and the Imperial Beach receiver site were both open to the public on Armed Forces Day back around 1975. Don't know if the rx site is still open occasionally or not. John

From GBabin73 at aol.com Mon Sep 12 02:07:51 2005  
Subject: [R-390] Neat antenna site

The site is NRRF (Navy Radio Receiving Facility). It was shut down a few years ago. I was volunteered into doing a retirement ceremony there in 1997 and ran into a civilian employee that worked there (He happened to be a ham I that had known for several years). He gave me the grand tour. What a set-up! I'd swear you could receive someone rubbing two wires together in Pohang and be able to pin point it to within a couple of degrees. It was rumored that they assisted SDG&E (the local light company) pinpointing noisy transformers. At the time, it was filled with racks of Watkins-Johnson, etc. type gear, although I'm sure it was once filled with racks of R-390's. The antenna array is still there, but the building is now empty. The last time I was there, I was stationed with the Sea-Bees and we used the site to store excess heavy equipment. The empty building, completely gutted, was a sad sight. 73! DE N5MCJ, Jerry

From jlkolb at jlkolb.cts.com Mon Sep 12 03:10:03 2005  
Subject: [R-390] R-390A Coax question

I've got a few available as mini-BNC to BNC adapters that could be salvaged.  
[http://jlkolb.cts.com/site/fs\\_misc.htm](http://jlkolb.cts.com/site/fs_misc.htm) John

From glwebb at gundluth.org Mon Sep 12 08:56:20 2005  
Subject: [R-390] Unusual Facility in UK

I was surrounded by (Wullenwebers) on Guam and in the Canal Zone, Panama 1967- 1970:  
[http://www.anzwers.org/free/navyscpo/guam\\_intro.html](http://www.anzwers.org/free/navyscpo/guam_intro.html)

[http://www.anzwers.org/free/navyscpo/Guam\\_035\\_big.jpg](http://www.anzwers.org/free/navyscpo/Guam_035_big.jpg)

[http://www.anzwers.org/free/navyscpo/NSGA\\_Galeta\\_Island\\_Site.jpg](http://www.anzwers.org/free/navyscpo/NSGA_Galeta_Island_Site.jpg)

Since it has been a while I may be wrong, but I think on Guam we could also use some rhombic arrays for weak? very important signals.

The CDDA's were used for direction finding and getting fixes on certain signals usually ships and usually Soviet Union. Gary L. Webb NI9V

From dave\_faria at hotmail.com Mon Sep 12 10:57:53 2005  
Subject: [R-390] Traveling

GM list. I will be traveling thru New Mexico, Arizona, Utah, and Colorado. Are there any interesting surplus electronics in those states. This is a walk about so I can take detours. Thanks for any info  
Dave Faria Austin, Tx

From jmiller1706 at cfl.rr.com Mon Sep 12 11:56:40 2005  
Subject: [R-390] Noise when warm ('390A)

Here is what happened to me Stewart Warner 390a few years ago. I would get snap/crackle after warming up just like you said. And it tended to go away when no signals were present (such as antenna disconnected, hence no AGC). I discovered that as the AGC voltage increased when a signal was present, the noise would start up. No AGC voltage (no signals) and the noise went away. I tried everything, it drove me crazy. Then someone on the list (forgot who) said this could be caused by a breakdown of the center dielectric in the miniature coax cables that carry the diode load voltage from the IF strip to the AF deck and some of the front panel controls. Even with the low voltages there (7-10 volts) the little coax cables would start to break down causing the popping. Sure enough, I replaced the mini-ax cable from IF deck to the terminals on the back, to the front panel, etc. and cured it. You can verify this by temporarily running a good cable from the IF deck to the AF deck or an external audio amp, isolating all other cable runs. Replacing the cables can be a pain if you are a purist and want to pull the old cable from the wiring harnesses, or you can just run the new cables along side the harness.  
Jim N4BE

From roy.morgan at nist.gov Mon Sep 12 12:03:43 2005  
Subject: [R-390] Noise when warm ('390A)

wrote: >It goes away when the antenna is unplugged (sigh). Is there any failure mode anyone can think of that would only be apparent when the antenna is connected?

YES. Static electricity building up on the antenna can make such noises.

Put an RF choke or moderate value resistor (100 K or so) from the antenna to ground to see if it goes away.

The R-390 antenna input transformer primary is isolated from ground for DC, so if you do not have one side grounded (which most of us do) then static electricity on the antenna can build up. (The neon lamp in the antenna relay is across the UN-balanced antenna input jack.) Roy

From jmiller1706 at cfl.rr.com Mon Sep 12 12:15:36 2005  
Subject: [R-390] Noise when warm ('390A)

Correction to previous post, I meant to say "Diode Load Voltage", not AGC. The AGC is not carried on the mini-ax cable, but it is proportional to the diode load voltage on the mini-ax. As signal increases, so does diode load voltage up to the point of dielectric breakdown and the popping noise. It tended to go away on weak or no signals. You will have to open the largemultipin connector on the IF deck to get to the end of the cable there. I forget the pin number, it's on the schematics. If you disconnect that end, and run a temporary cable from the connector to an AF amp, and if that cures it, then there you have it. Just one idea, however, that worked for me.

From sacramento.cyclist at gmail.com Mon Sep 12 14:58:49 2005  
Subject: [R-390] Noise when warm ('390A)

Hi Jim,

Well they say great minds think alike...<grin>. I'm going down the same path.

After my last post, I continued poking around looking at relevant voltages and resistances to ground.

Remember that bad filter with a partial short to ground? Well, looks like something else is dragging the AGC line down again. I thought I heard the return of the strong signal distortion.

I'm not looking forward to digging around in the IF deck again. Troubleshooting that thing requires some time and effort for me, and I'm not likely to get to it till the weekend unless I get really lucky.

In the meantime...I have another "Poll" type question. How likely do you all think that one of my two remaining filters has developed a partial short to ground? How unexpected is that? I've already isolated the fault to the IF deck by the way.

Would a leaky blocking cap contribute to a filter's slow demise, or would that take it out in milliseconds?

Thanks to all... Dennis, who wishes he could just send his IF deck to a depot for overhaul...

From jmiller1706 at cfl.rr.com Mon Sep 12 16:01:56 2005  
Subject: [R-390] Noise when warm ('390A)

Dennis

I assume you have already replaced the "kiler cap" C-553 in the IF deck. If it leaks and shorts it will kill your mechanical filters. <http://www.r390a.com/html/C-553.htm>

I have also seen a lot of loose hardware in IF and RF deck. The screws holding sockets and terminal lugs to ground tend to loosen over time resulting in degraded performance and intermittants. Check the

tightness of these. While that would probably not cause a partial short to ground in the IF filters, it's worth a look otherwise. Jim

From jmiller1706 at cfl.rr.com Mon Sep 12 16:20:54 2005  
Subject: [R-390] Noise when warm ('390A)

Dennis

I read some of your past posts on your AGC problem,.. wow that's a good one. When I worked through my Stewart Warner I recall getting some questionable AGC behavior. The bypass caps on te AGC line would of course read fine with the VOM test. I finally just brute-force replaced ALL bypass caps in the darn thing. I suspect they could behave differently under power. Went through the whole radio, IF and RF decks, any bypass cap that touched the AGC line got replaced with a new one from Mouser. It wasn't elegant, but it cleared up a lot of problems. (I have used the brute force "replace 'em all, don't ask questions" approach on plate, screen and cathode resistors too.) Jim

From jmiller1706 at cfl.rr.com Mon Sep 12 17:29:45 2005  
Subject: [R-390] Noise when warm ('390A)

Dennis

If I were you I would replace the problem caps, C553 especially, regardless of how new they look. It's still a 40+ year old deck and they can still start leaking with time. The AGC bypass caps in my radio were disc types also, but even they developed leakage apparently as I was able to remove some problem behavior by replacing them as well. I don't recall any disassembly required in the IF or RF deck to replace these, I used a small pencil type soldering iron with lots of solder wick to get the solder out first, then some dentist picks to loosen the wires and remove the capacitors. A magnifying lamp helps also. Your past posts seemed to indicate that the AGC to ground resistance dropped when you plugged in the IF deck, so these are suspects. Look also at caps C547, C548 (0.1) around the AGC time constant tube V506A. An earlier post mentined seeing 350-400K on the AGC line when the ID deck is plugged in. This is probably normal since R547 220K and R545 100K form a path to ground. And then there's also the story that the antenna trimmer shaft is actually at AGC potential in the RF deck. Too much oil and grease on it can create a path to ground there and mess up the AGC in the RF stage. A VOM/VTVM test will never detect that, only actual operation of the radio. Not sure I have helped, unfortunately I have found that part by part replacement may be the only way to finally isolate a problem, starting with the mosr likely culprits firts. The best indicator of a bad part is how it misbehaves in the radio, not a VOM test. Jim

From: "Dennis Wade" <sacramento.cyclist@gmail.com>  
Subject: Re: [R-390] Noise when warm ('390A)

Thanks for the notes Jim.

I may have said this in previous posts, but in case I didn't...the IF deck is a recent vintage EAC deck that was "factory" modded for SSB (Rippel on his site has a short description). It had no black/brown beauties, and all the "problem" caps were the West-something sealed variety. Therefore I took the "only replace if needed" approach with the radio. My primary concern was physical access to the caps in the IF deck, especially the ones near V501 and V503.

The bypass caps in there now look like disk ceramic (in shape). Are they really paper? And yes, of course they test good.

Do you remember having to go through any disassembly to get to those caps to replace them? That is my major reluctance...incurring damage in getting to them.

I am beginning to think wholesale replacement (at least in the IF deck) is indeed warranted even in a late EAC deck. Anyway, thanks for your input..I appreciate it. Dennis

From jmiller1706 at cfl.rr.com Mon Sep 12 17:37:21 2005  
Subject: [R-390] Noise when warm ('390A)

My story about oil on the antenna trim shaft reminds me,... any oil anywhere on tube sockets or rotary switch materials can cause problems, even deoxit and contact cleaner. If the oil soaks into the tube socket or switch phenolic, you have a nice high impedance path formed, and it doesnt take much to disrupt a high impedance circuit like the AGC line. I fought with a Collins KWM2 radio once thinking I was doing good to clean the tube sockets with contact cleaner... NOT... messed up performance and AGC big time. Have to use deoxit very sparingly, q-tips or tooth picks just where you want it. If you suspect oil intrusion into any sockets or switches, use Big Bath <http://www.newark.com/product-details/text/catalog/59473.html> or similar to displace it. These are high impedance circuits, everything you learned in solid-state books doesn't matter here. It just gets funner and funner doesnt it? Jim N4BE

From shoppa\_r390a at trailing-edge.com Mon Sep 12 17:44:59 2005  
Subject: [R-390] Noise when warm ('390A)

> And then there's also the story that the antenna trimmer shaft is actually at AGC potential in the RF dec. Too much oil and grease on it can create a path to ground there and mess up the AGC in the RF stage.

On my blue striper, where the rubber spacer fell was decayed to such a point that it was a messy goo, I replaced it with some glass-epoxy washers. Worked like a charm, even if not quite original. Tim.

From vk2abn at bigpond.net.au Mon Sep 12 20:29:04 2005  
Subject: [R-390] 390a Snap Crackle +pop

Hi all I have experienced this recently as I have 3 receivers and SPARE modules I very quickly isolated it to the IF module ,which I have PUT to one side to fix on a rainy day of which in Australia we don't get too many of these days, but I noticed that it has the tubular black bypass caps with coloured rings ,I have found these caps to be leaky in the past, the fault was as you described ,At first I thought it was lightning but after disconnecting the Antenna I realised it was in the RX

From jmiller1706 at cfl.rr.com Mon Sep 12 21:37:26 2005  
Subject: [R-390] WWL New Orleans

Broadcasting Katrina news 24/7 on 870 Khz AM, 100 KW, local news and call-ins. Simulcast on shortwave WHRI <http://www.wwl.com/Article.asp?id=114239>

From N4BUQ at aol.com Mon Sep 12 22:13:06 2005  
Subject: [R-390] WWL New Orleans

Nice signal into North Alabama. Barry - N4BUQ

From ToddRoberts2001 at aol.com Mon Sep 12 22:20:20 2005  
Subject: [R-390] WWL New Orleans

writes: Broadcasting Katrina news 24/7 on 870 Khz AM, 100 KW, local news and call-ins.

I can't hear a thing on 870KHz here on the East Coast in South Carolina, day or night, except a station in eastern Tennessee when conditions are just right. I thought AM stations were limited to 50 KW in the U.S.? For a clear channel station it looks like most of their signal goes into the Gulf. 73 Todd  
WD4NGG

From jmiller1706 at cfl.rr.com Mon Sep 12 22:37:42 2005  
Subject: [R-390] WWL New Orleans

You're right, my bad. 50 kw. I'm getting them at +60-80dB in East Coast Florida on a dipole with deep fades mixed with a south american or cuban station at times.

From w9ran at oneradio.net Mon Sep 12 22:38:57 2005  
Subject: [R-390] WWL New Orleans

wrote: > Broadcasting Katrina news 24/7 on 870 Khz AM, 100 KW, local news and call-ins. Simulcast on shortwave WHRI <http://www.wwl.com/Article.asp?id=114239>

Worth noting that since the storm, WWL's parent company Entercom joined forces with Clear Channel Radio and other independent stations to launch The United Radio Broadcasters of New Orleans. Otherwise competitors are staffing the Big 870 WWL-AM blowtorch and several other local AM and FM stations to provide emergency recovery and relief information to residents scattered through much of the nation, and as noted, via the WHRI shortwave relay. Great example of doing the right thing. 73,  
Bob W9RAN

From sacramento.cyclist at gmail.com Tue Sep 13 01:26:57 2005  
Subject: [R-390] WWL New Orleans

20 - 30 db signal here, fading in and out with the south american/spanish language station. When its up, its pretty intelligable. 120` dipole about 40 ft up. Dennis

From CRIPS01 at MSN.COM Tue Sep 13 01:40:37 2005  
Subject: [R-390] WWL New Orleans

WWL is one of the few US broadcast stations that also broadcasts on HF. go here for there broadcast schedule <http://www.wwl.com/> Ken

From pwokoun at hotmail.com Tue Sep 13 02:07:00 2005  
Subject: [R-390] WWL New Orleans

Not bad. S7 @ 5835 outside Honolulu at 2 AM EDT.

From bill.riches at verizon.net Tue Sep 13 07:22:13 2005  
Subject: [R-390] WWL New Orleans

At 1100Z WWL is s9 - good copy - 20-30/9 in the evening in Cape May, NJ. 73, Bill Riches, WA2DVU

From oscar873 at aol.com Tue Sep 13 09:42:22 2005  
Subject: [R-390] Dallas Area

Hi looking for places in the Dallas area for R390's etc. Thanks Al

From r390a at bellsouth.net Tue Sep 13 12:08:48 2005  
Subject: [R-390] Another SAQ transmission the 25th

From the "WUN" mailing list --  
To: SAQ-GROUP  
From: Lars Kalland

EXTRA TRANSMISSION FROM GRIMETON RADIO/SAQ  
On Sunday September 25th 2005 there will be transmissions on VLF 17,2 kHz with the Alexanderson alternator at 09:30 UTC and 12:30 UTC.

From ToddRoberts2001 at aol.com Tue Sep 13 18:20:56 2005  
Subject: [R-390] WWL New Orleans

writes: At 1100Z WWL is s9 - good copy - 20-30/9 in the evening in Cape May, NJ.

Glad to know others are hearing WWL 870KHz pretty well recently. I tried again last night and it was coming in fine here in SC. Don't know why I couldn't hear it for the last week or two after the hurricane. Could it be they were on a different antenna/reduced power for a while after the storm or just plain bad condx? I know we have had a series of strong solar flares in the past week. I thought something was wrong with my receiver when I couldn't hear WWV on 5,10,15 or 20 MHz over the weekend and the ham bands were dead. 73 Todd WD4NGG

From crips01 at msn.com Wed Sep 14 14:09:29 2005  
Subject: [R-390] WWL New Orleans

As I understand it from their web site they where off the air for a few days on their AM broadcast band side. The HF side was always up and running because their two HF transmitters/towers are located in land. Ken de W7ITC



From courir26 at yahoo.com Wed Sep 14 15:25:26 2005  
Subject: [R-390] WWL was off the air, New Orleans

wrote: >As I understand it from their web site they where off the air for a few days on their AM broadcast band side.

Ken,

That is correct, during the height of the storm they were knocked off as were most of the New Orleans broadcasters. I was hoping is was not the antenna, and apparently it was not.

Many backup gens down here simply ran out of fuel due to the long duration of outage.

WWL set up shop is a makeshift control room when they can back on, and now I think they are in Baton Rouge.

They had sports guys (former Saint fullback Hookie Gajan) working the graveyard shift, sending out storm information.

I just checked and WTIK (690) is still off the air. Tom

From r390a at bellsouth.net Fri Sep 16 18:11:10 2005  
Subject: [R-390] Wanted - junky, very junky RF deck for 390A

Subject says it all. It can be totally stripped of all electronics, the racks, etc. In all honesty all I need are a couple or so detent springs, but it would be nice to have a few spare gears and clamps as well. Thanks all Tom NU4G TGIF, etc

From CRIPS01 at MSN.COM Fri Sep 16 22:45:31 2005  
Subject: [R-390] I ran across this interesting little tid-bit

Here is an interesting little tid-bit. I recall there was a member of this list who toured the USS Pueblo, AGER-2 It would seem the North Korea is hinting on returning her. <http://www.sfgate.com/cgi-bin/article.cgi?f=/n/a/2005/09/07/national/w003008D15.DTL> Ken de W7ITC

From odyslim at comcast.net Sat Sep 17 09:54:56 2005  
Subject: [R-390] USS Pueblo link needed

I lost the email with the link to the USS Pueblo. Forgot to bookmark it. Does anybody still have it?  
Scott

From odyslim at comcast.net Sat Sep 17 11:24:42 2005  
Subject: [R-390] Tubes glow blue

OK, I noticed something interesting. I am sure most of you already know this. If a tube is glowing blue ( besides OA2) it should be replaced. Well, I had 2 6AK6's glowing blue. 1 was V504 and the other V603. No problem, I have a couple hundred of them. I install 2 new ones and they are glowing blue. I

try 2 more of another brand and they are doing the same. Crap! I tried 4 or 5 different brands and got the same result. They would also glow blue when pushing the test button on my TV7.

Something must be wrong here. These are all NOS, NIB shiny new tubes.

I decided to install 2 in a junker and just watch for a while. Well, I came back in an hour and they were no longer glowing blue.

So, for the new tubes is this gas burning off? A burn in? I have only noticed this with 6AK6's. No others.

Sorry if this seems off topic or an ignorant question. Maybe the tube Guru on the list can fill me in.  
Scott

From ToddRoberts2001 at aol.com Sat Sep 17 11:25:55 2005

Subject: [R-390] I ran across this interesting little tid-bit

writes: Here is an interesting little tid-bit. I recall there was a member of this list who toured the USS Pueblo

I think I read somewhere the USS Pueblo has a radio room with a bunch of remote-controlled R-391's inside? Wonder if the NK's left the radio room intact? I think they turned the ship into some kind of display showcase so they may have taken good care of it. That would be quite a time-capsule. 73 Todd  
WD4NGG

From RLucch2098 at aol.com Sat Sep 17 12:12:16 2005

Subject: [R-390] FS: EAC R-390A receiver, pick 'em up only!

Hi All;

A nice EAC R-390A recvr with both meters & covers. FP is excellent, knobs cud use a spray. Was playing nice when last used a few years back. Pick up only on LI, NY for \$400. Tnx & 73..Rich  
WA2RQY

From odyslim at comcast.net Sat Sep 17 13:48:46 2005

Subject: [R-390] meter faces on eBay

There are several R-390x meter face decals for sale on ebay. One item number is 5809813667. Be warned that these are pure crap. I bought a set last week. It is just a low quality scan, a low quality print on an address label. Nothing more. The picture on ebay looks better than the product. Scott

From muttman at charter.net Sat Sep 17 15:15:01 2005

Subject: [R-390] meter faces on eBay

It's probably some scum bag that stole my free scans at: <http://webs.lanset.com/buzz/meters/faces.html> and is now making a buck off of my efforts. Buzz

wrote: > There are several R-390x meter face decals for sale on ebay. One item number is

>5809813667. Be warned that these are pure crap. I bought a set last >week. It is just a low quality scan, a low quality print on an address label. >Nothing more. The picture on ebay looks better than the product. >> Scott

From Flowertime01 at wmconnect.com Sat Sep 17 16:19:57 2005  
Subject: [R-390] I ran across this interesting little tid-bit

Fellows,

The North Koreans have the USS Pueblo on display. One of the tour guides is the Captain of the ship that captured the USS Pueblo. What a wonderful retirement plan. If you ever get to North Korea you can go for a tour. Have your photo taken while standing next to a shell hole in the super structure.

The ship was on TV last week. They showed some nice shots of the R390/A s. The Koreans were wanting to give the ship back some time ago. But got pissed over something that was said in Washington and are still keeping the ship.

All the remote controlled receivers I worked with were VHF UHF links. With that many crew men on board why remote a receiver? Where are you going to link it to? Who is going to keep the antenna platform stable and pointed at the satellite? More likely was the use of wide band tape recordings that could be carried home and run over and over until every last radio transmission was eked off the tape and analyzed for content. Roger KC6TRU

From CRIPS01 at MSN.COM Sat Sep 17 16:20:29 2005  
Subject: [R-390] USS Pueblo link needed

I am not sure which link you need. I notice the one I supplied to the SF Chronicle doesn't work anymore. Here is the link the site put together by the crewmen <http://www.usspueblo.org/> and the News about it possible return is here: <http://news.google.com/nwshp?hl=en&tab=wn&q=uss%20pueblo> The reason why I mentioned is someone on this list visited the ship and posted photographs of the R390 radios still racked up in it's radio room. As was mentioned in the news reports the North Korean use it as a museum ship and proof of how superior the North Korean Navy is over the US Navy. Ken

From gregorymengell at comcast.net Sat Sep 17 16:32:55 2005  
Subject: [R-390] KSM

Greetings to the list. KSM is on the air sending CW on 6474 kc and 12993. running a ID wheel, Good hunting. 73 Gregory

From Flowertime01 at wmconnect.com Sat Sep 17 16:33:44 2005  
Subject: [R-390] Tubes glow blue

Scot,

Not such an odd observation. The question is the noise level of the tubes. After you let a couple burn in for some hours, how is the signal to noise performance of the receiver? If the tubes loose the blue glow and are not noisy let them be. The blue glow is ionized gas. That gas is being smacked by electrons in

transit. Smacked gas makes noise.

A couple dead horses on the subject back when. Warming the tubes with a Zippo lighter will take the blue glow out. The reason this works is, you heat the getter stuff and it gets some more of the gas. At least enough of the gas is absorbed so the gas is not visibly glowing blue. In old tubes not heated through use, the getter stuff can let some of the gas loose. Very little gas and very long time (years) to get loose.

Your NOS may not be NOS but service pulls and stuffed back in the box. They could be victim's of old age. If the emission is OK and the noise level below your acceptance use them. Roger KC6TRU

From mjmurphy45 at comcast.net Sat Sep 17 18:24:27 2005

Subject: [R-390] I ran across this interesting little tid-bit

Something about NK wanting Condoleezza Rice to visit as a good faith gesture before they give up the ship... Not a bad trade if you ask me. Mike Murphy WU2D (Yes former WB2UID)

From CRIPS01 at MSN.COM Sun Sep 18 02:56:37 2005

Subject: [R-390] meter faces on eBay

They don't look like your scans, but I sure wish there was a way of posting the address for you free scans on his customer rating page. That would burn his ass. Ken

From roy.morgan at nist.gov Sun Sep 18 10:16:38 2005

Subject: [R-390] meter faces on eBay

Quoting >:> They don't look like your scans, but I sure wish there was a way of posting > the address> for you free scans on his customer rating page. That would burn his ass.

Ken,

How about posting an "auction" with a buy it now price of 39 cents (first class postage) offering to mail nice prints of the things for postage only! Of course you could use the exact same item title as he did.

Roy

From paolo.gramigna at controllo.it Sun Sep 18 13:49:27 2005

Subject: [R-390] Looking for an AN/USM-116 multimeter...

Hi all,

Does anybody know a source where i can buy an AN/USM-116 multimeter? Cheers, Paolo from Italy

From pstaue at qwest.net Sun Sep 18 17:42:15 2005

Subject: [R-390] R-391 help

Folks,

Just fired up a beautiful R-391 from a local friend who kept his radios in immaculate condition. I

carefully brought it up with a variac power supply that had a voltmeter and an ammeter. I was wondering why the ammeter kept bouncing from 1.4 to over 2A until I realized that the crystal ovens switch was ON. That's a bad thing... keep the ovens off folks...

Now the next challenge is to get the tuning mechanism operational. Anybody out there have a connector for the 24V tuning side of this beast? Best regards, Paul W0AD Minneapolis

From barry at hausernet.com Sun Sep 18 20:12:26 2005  
Subject: [R-390] R-391 help

Hi Paul & list

Yup keep those ovens off.

The '391 uses the same round connector as the R-390/URR (notice I went out of my way not to write "non-A").

I don't remember the pinout -- it's in the manual, but the 4 pins are 2 for AC, one for ground and one for 24 vdc. The ground is common I think.

The autotune 24 vdc should be supplied with "amp-le" current -- at least 5A, maybe 7A due to the surge factor.

Also, you should pre-check the autotune mechanism as much as you can without powering it up. If it looks as though it's gunked up with dried out/hardened lube -- don't bother, it won't work and could cause damage to apply power to it. Also check under the lower part of the front panel -- as I recall, you can see without removing the panel. In particular, look at the full length of the worm drive shaft which traverses about 2/3rd's the width of the receiver. Look for bronze shavings or powder where the shaft passes through 4 or five bosses in the "spider" -- cast metal frame. There are "oilite" bearings (sintered porous bronze "permanently lubricated" bushings" at each point. The shaft should rotate when the mechanism is turned (locking keys tight on both KC and MC knobs), but there should be no lateral play. If there is, that means the bearings are shot. If the mechanism binds up when power is applied it may then grind up the bearings if they aren't already worn.

(Don't ask me how I know this ;-) ... or should I say ;-(

Be sure you go through the synchronization procedure in the manual that involves turning the worm drive with a bristol wrench through a hole on the right side (when you are facing the receiver, not "left" as it says in some manuals). There are also two adjustments -- one on each autotune head. It's explained in the manual.

Also, to avoid a heart attack or close simulation thereof, when you apply the 24 vdc, first make sure the locking keys on the tuning knobs are loose and the channel selector is on the same channel as the number showing in the little window, otherwise it will immediately actuate. (A difference or "not equal" condition is what triggers the sequence.)

If you're game, then tighten down the two keys -- not too tight, but snug -- and change channels but brace yourself and be ready to cut DC power from the source -- e.g. switch on the DC supply. Even when it works right, it makes a loud racket -- basically driven by geared down Hamilton Beach motor (and many have Hamilton Beach tag on the motors) -- basically same as the motor used in a blender or

mixmaster on steroids.

Again, be ready to pull the plug on the DC. Most of these need overhaul -- complete disassembly, cleaning and relubing. The two control units -- one on each of the MC and KC controls -- contain pawls -- stacks of metal pieces with hook ends which engage notches in disks which are also stacked on common shafts. The metal pieces have to slide freely against each other for the whole thing to work. That's easily defeated by hardened, sticky lube and unless someone has already overhauled the thing and operated it recently, it's a virtual certainty that it won't work. However, it may well power up -- and try to self-destruct.

Common failure mode - starts up with a loud whine and a clatter (normal) and the knobs and counter start turning. Comes to the end of the travel of one or both ranges (KC and/or MC) but tries to keep on going, banging up against the end of the 10-turn stops. It is conceivable that it can do damage or partially de-synch an RF deck.

I have two of them. First one - loaded with grease as if someone thought they were topping up the rear end of a half ton truck. Second one -- bronze bearings shot. I think the second one started to work, nearly doing two cycles, before the two bearings nearest the motor ground up and the gear at the end of the shaft that mates with the motor or nearest intermediate gear, kicked out of mesh and started grinding. Would go in one direction, but not the other.

The general problem is that many of the autotuners on the '391's have not been in use in a long time. Many previous owners just operated them as a "non-391" and let the autotune mechanics languish. Or ran it once and didn't care for the noise and clatter. The vibration also runs against the grain -- wear and tear on tubes (and 3TF7) as well as on fine mechanical and electronic alignment work. Shakes everything up. Interesting to watch though -- once or twice.

Paul Anderson overhauled one of these a couple of years ago and was writing an article for the Hollow State Newsletter. We hope to pick it up again, finish it and publish on the HSN website. He had the procedure all written up, but the stumbling block was the photos needed to get it across. The web site venue should help with that. Barry

From llgpt at aol.com Sun Sep 18 20:50:38 2005  
Subject: [R-390] R-391 help

"The '391 uses the same round connector as the R-390/URR (notice I went out of my way not to write "non-A").

Well, well, a person with good old fashioned common sense!!! R-390/URR or R-390A/URR, see how easy it is? Art Coalins Coalins Steam Radio Cedar Lake, Ohio

From barry at hausernet.com Sun Sep 18 21:13:08 2005  
Subject: [R-390] R-391 help

Well, of course, I wouldn't want to be one of those non-common-sense guys.

'scuze me, Art, I gotta go stoke my steam radio, it's starting to drift a bit when the pressure drops. They're noisy, but very sensitive, even more so when the gauge reads in the red zone. The tag on this one reads R-390/USR as similar to "USS" where the two S's don't mean solid state. ;- ) Barry

"The '391 uses the same round connector as the R-390/URR (notice I went out of my way not to write "non-A").

Well, well, a person with good old fashioned common sense!!! R-390/URR or R-390A/URR, see how easy it is? Art Coalins Coalins Steam Radio Cedar Lake, Ohio

From roy.morgan at nist.gov Sun Sep 18 22:34:00 2005  
Subject: [R-390] Looking for an AN/USM-116 multimeter...

Quoting: > Hi all, > Does anybody know a source where i can buy an AN/USM-116 multimeter?

Paolo,

Have you checked Fair Radio Sales? I seem to remember that they had some. Yes, they do: See: <http://www.fairradio.com/voltme.htm>

"ME-180/USM-116 AC-DC VOLTMETER, features 20 Hz to 100 MHz response and full scale Volt ranges 1-3-10-30-100-300 AC-DC and 1000 VDC. Also seven Current ranges 1 to 1000 DC MA and Resistance 1 ohm thru 1 Megohm. High frequency AC probe has 6923/EA52 tube. 7x8.3x9, 21 lbs shipping. USED-reparable, \$45.00; CHECKED, \$95.00 MANUAL for USM-116, partial repro, \$15.00"

These are fine meters. The meter face is not all that big compared to most vtm's but the thing is very rugged and reliable. Very HEAVY.

From richardlo at admin.athabascau.ca Mon Sep 19 00:30:14 2005  
Subject: [R-390] R-391 help

wrote: > Art Coalins> Coalins Steam Radio> Cedar Lake, Ohio

Dang it! Somebody left the vanilla extract out on the counter again, the bottle is now empty and that stuff is expensive. Richard Loken VE6BSV --

From roy.morgan at nist.gov Mon Sep 19 10:06:56 2005  
Subject: [R-390] Tubes glow blue

wrote: >.. If a tube is glowing blue ( besides OA2) >it should be replaced. ...

Baloney.

Beware, beware! There are two (three, actually, or more) kinds of blue or other color of glow in tubes:

1) The thing is normal and operating properly. It is likely a beam power tube and the electrons that don't get glommed by the plate whizz on by and hit the inside of the envelope. The \*glass\* glows. This condition is recognizable because the glow is ON the INSIDE of the glass envelope.

This is not harmful or indicative of any fault or weakness in the tube.

2) The tube has some gas inside (when it should not have much at all). The electrons whizzing toward the plate hit the gas particles and the gas glows. This condition is recognizable because the glow is AMONG the tube elements, NOT on the inside surface of the glass.

This IS indicative of a fault or weakness in the tube. However, if you run the tube for a while, the heat \*may\* make the getter material glom onto the gas, reducing or eliminating the gas and the glow goes away.

Certain relatively new tubes (such as made by the Viac company for audiophiles) have special getters attached to the plate, which plates run so hot as to heat up the getter device and activate it further to glom more gas. These unusual getter devices may be washer- or ring- shaped things that are seldom seen in old tubes.

Notes on terminology:

"whizz" to travel at a high rate of speed. In the case of electrons travelling from a cathode to somewhere else, accelerated by the electrostatic potential difference between the electron and the somewhere else.

"glom" a special term borrowed from the seller of the engagement ring now in our family, who would sternly caution the Groom while He was examining candidate diamonds, "Don't Glom the Stone!" - meaning grab onto, cause the brilliant to become dull, or otherwise mess up by attachment of dirt or whatever. Very used tubes such as transmitting tubes, power tubes such as 807's, 6550s, KT-88's and the like can sometimes be identified as being past their useful life because the getter material flashed upon the inside of the glass has turned brown or discolored. The shiny stuff has become glommed by sucking up too much gas. "getter" any material or structure inside a tube intended to glom the gas.

Notes on Good kinds of Glow.

Any of the following tubes are supposed to glow and if they don't, something is wrong:

- any voltage regulator or voltage reference tube. Voltage reference tubes often both have stuff on the inside of the glass (intentionally) and glow very faintly anyway, so you may not see the glow easily

- Rectifiers of the mercury vapor or Xenon gas containing sort. These include 872A, 866, 866A, 816, 3B28, 3B32. (The 0Z4 was an abomination of design and manufacture, was intended to save power in car radios, almost never lasted very long, had metal envelopes anyway, and should be discarded instantly whenever encountered.)

- gas relay tubes such as the 2020, 2D21 and the like.

- Most thyratrons.

(Scott continues...) > Something must be wrong here. These are all NOS, NIB shiny new tubes.

Nope, possibly nothing is wrong. If the blue is on the inside of the glass everything is just fine. Enjoy using your excellent new tubes.

>So, for the new tubes is this gas burning off? A burn in? I have only noticed this with 6AK6's. No others.

The gas may have been glommed by the getter material, or the plate. Roy



From jpl15 at panix.com Mon Sep 19 10:18:32 2005  
Subject: [R-390] Tubes glow blue

wrote: > Beware, beware! There are two (three, actually, or more) kinds of blue or > other color of glow in tubes:

>

Ya forgot one. Maybe the dang tube's just \*sad\*..... Cheers John KB6SCO

Roy's otherwise-excellent post unaccountably omits mention of one particularly-to-be-avoided form of glow in tubes.

When a metal 6L6 starts glowing visibly, then you have a serious problem and need to investigate it \*IMMEDIATELY\*. That's especially true if it's glowing blue. I've never seen one get past glowing red, and then only for a fairly short time. ;=), wth tongue firmly in cheek, in case you hadn't noticed.

He's right about beam power tubes, too: a properly-operating beam power tube can show a really pretty blue glow just inside, or even in, the glass. I don't know how fast the e- move in a 6L6, and hadn't thought it would be fast enough to stimulate Cerenkov radiation, but it sure is the right color. Mike Andrews, W5EGO

From roy.morgan at nist.gov Mon Sep 19 11:16:02 2005  
Subject: [R-390] Tubes glow blue

wrote: >Roy's otherwise-excellent post unaccountably omits mention of one >particularly-to-be-avoided form of glow in tubes.

Oh, goodie.. something of interest to hear about! Thanks, Mike, for helping with this technical stuff.

>When a metal 6L6 starts glowing visibly, then you have a serious >problem and need to investigate it \*IMMEDIATELY\*. That's especially >true if it's glowing blue. I've never seen one get past glowing red, >and then only for a fairly short time.

Ah yes. This reminds me of the article (was it in QST?) many years ago of a set of 6 or 8 6AG7's being run to a KILOWATT peak input in a linear by being inverted in oil and run with some 1000 volts on the plates. I think they experienced "reduced tube life".

It also reminds me of the 6550's in a Western Electric audio amplifier I have here that ran (briefly!) with one pair of plates quite red. I really must replace those old coupling caps and check the bias supply....

>... hadn't >thought it would be fast enough to stimulate Cerenkov radiation, but >it sure is the right color.

"Cerenkov radiation"? Hmm.... www.dictionary.com says: "light produced by charged particles (as electrons) traversing a transparent medium at a speed greater than that of light in the same medium called also Cerenkov light "

\*I\* think the electrons whamm the glass which un-glomms some blue photons it's been keeping. Did you know you can buy 6550's with blue glass? They sound much better, some say. AES has 'em from JJ Electronics. Only \$40 each. Roy

From ghayward at uoguelph.ca Mon Sep 19 11:24:33 2005  
Subject: [R-390] Tubes glow blue

When I killed an 807 in my Viking II (screen resistor failed, B+ spiked and there was a flash from the getter to the metal it deposited on the glass - the spark cracked the glass and left a crater on the inside) the nitrogen glow was pinkish. I've seen the blue when the electrons hit glass and have pushed the glow around with a magnet. The glowing tube got mighty hot too! Cheers, Gord VE3EOS

From wak9 at cornell.edu Mon Sep 19 12:18:58 2005  
Subject: [R-390] Tubes glow blue

For what it's worth, I've seen guitar amp output tubes get to glowing a nice blue or purple when they are driven pretty hard, which can be desirable in a guitar amp, probably not so in a communications receiver. These tubes tend to loose their glow when you back off on them a bit. Bill

From tshoppa at wmata.com Mon Sep 19 12:32:38 2005  
Subject: [R-390] Tubes glow blue

> I've seen guitar amp output tubes get to glowing a > nice blue or purple when they are driven pretty hard  
Yeah, I've seen 6146's in finals do this too especially when they break out into a parasitic oscillation. Not a "nice" glow as usually some capacitors or chokes die shortly afterwards...

But the 6AK6 in question isn't a beam power tube, is it, it's just a beefy pentode? IIRC the tube is getting pushed pretty hard (if you've solid-stated the power supply and not put in a dropping resistor you may be pushing right up close to 300V on the B+, which is the max plate voltage speed for the 6AK6. I think typical consumer equipment ran this tube closer to 150V.) Tim.

From kherron at voyager.net Mon Sep 19 18:58:21 2005  
Subject: [R-390] Fwd: Tube Tester and manuals for sale

>Hi Gang,

>

> Yup, it's time to clean house and see if I can find the floor in > the basement! >I have a tube tester that's extra to my needs and some tube tester manuals >that are >the same way. See what you can use here and help me get out of the >doghouse with the >XYL... Your help is much appreciated!!

>

>1. I-177 tube tester. This is basically a Hickok 600 is a slightly >smaller box (metal) > It was issued to the Air Force. Tests all you antique tubes, > octals, 7 and 9 pin mini's > acorn, and sub-mini's etc. I have a complete set of manuals and > addendums for it.

> Now for the bad news. It's not working. The tubes test good and > the meter is good > because I can set the line input voltage with the control. The > filament transformer appears > to be good because tubes light up when plugged into the > sockets. Might be dirty/bad switch, > tube socket, component out of range, I don't know. I haven't had > the time to dig > into it further. So it's a project for \$75.00 shipped. Fix it, > use it for parts, etc. Your call.

>  
>2 B&K 667/607 Dyna jet Tube Tester set up chart . Original that is >in decent shape. > Can't find a date in it, but would appear to be late with the > numbers that are in it. \$7.00 shipped in the US  
>  
>3. B&K 667 Tube tester manual. Nice original. \$7.00 shipped in the US  
>  
>4 B&K Model 700 Nice original \$7.00 shipped in the US  
>  
>5 B&K 700 setup charts. 7 years of updates on the cards that go in >the lid of the > tester. Updates through 1978. \$17.00 shipped.  
>  
>6 Eico 635 Instructions and setup chart. Original in nice >shape. Again no date but must be > late with the tube numbers I see in there \$7.00 shipped in the US.  
>  
> Please ask any questions that I haven't answered for you. Checks > and MO's are fine and we'll > even consider Paypal. Let me know what you need. Thanks!! Kim Herron W8ZV 1-616-677-3706  
Outgoing mail scanned for virus and worms

From mjmurphy45 at comcast.net Mon Sep 19 20:40:26 2005  
Subject: [R-390] Tubes glow blue

I definitely made the 1625's in my command set sad when I put 800 V on the plates. Mike WU2D

From CRIPS01 at MSN.COM Mon Sep 19 21:40:11 2005  
Subject: [R-390] meter faces on eBay

There you go .39 cent buy it now. wouldn't that chap some body's ass. Ken

From N4BUQ at aol.com Mon Sep 19 22:38:19 2005  
Subject: [R-390] meter faces on eBay

Got my "stickers" today and they are pretty poor. While I agree with Scott, I have to say that the seller really didn't misrepresent his product (although he may have stolen the scanned images). Perhaps if I had asked about exactly what he is selling, I might have steered clear. He isn't claiming they're deluxe quality or anything so I suppose I got what I paid for.

In a way, I'm glad that if this is the first eBay deal I've had to go "less than expected", I only lost \$6.00 on the deal. Barry - N4BUQ

From odyslim at comcast.net Tue Sep 20 10:09:56 2005  
Subject: [R-390] meter faces on eBay

> There you go .39 cent buy it now. wouldn't that chap some body's ass.

>  
That is what I will do with mine!! Watch and see! Scott

From CRIPS01 at MSN.COM Tue Sep 20 11:38:57 2005  
Subject: [R-390] meter faces on eBay

Yes, this is going to be fun.!!!

From odyslim at comcast.net Tue Sep 20 17:25:50 2005  
Subject: [R-390] meter faces on eBay/ more

> There you go .39 cent buy it now. wouldn't that chap some body's ass.

Item 5811239570

From wa6knw at sbcglobal.net Wed Sep 21 12:01:11 2005  
Subject: [R-390] TEST

Things have been awfully quite lately. RICH WA6KNW

From barry at hausernet.com Wed Sep 21 12:52:21 2005  
Subject: [R-390] TEST

Everybody's lurkin' Shhhhhhh!

From trains at fidalgo.net Wed Sep 21 13:08:46 2005  
Subject: [R-390] TEST

That is correct!

From wa6knw at sbcglobal.net Wed Sep 21 13:45:55 2005  
Subject: [R-390] H&W TRAFFIC

Now that I have your attention.... Does anyone have any INTEL on the H&W of our friend Nolan? I believe his home is in SUN, LA. RICH WA6KNW

From wa6knw at sbcglobal.net Wed Sep 21 13:49:40 2005  
Subject: [R-390] Fwd: Interesting HF Signals

Anyone listening to 15,285.00 KHz? RICH WA6KNW

From wa6knw at sbcglobal.net Wed Sep 21 14:10:36 2005  
Subject: [R-390] Fwd: Interesting HF Signals

wrote: > Some very weak AM (or USB) voice - sounds like broadcast. Antenna trouble here and lots of QRM so can't quite make it out.

FYI: RICH WA6KNW

WWL New Orleans (870 KHz clear channel) Shortwave Radio Simulcast: Following is the tentative schedule WHRI will follow. They employ a split feed from a 250KW transmitter to two antennas to cover North America.

All Times are Central Daylight Time.

WWL Simulcast on Shortwave Radio Station WHRI

Monday-Friday

12-6am 5.835

7-9am 11.785

9am-3pm 15.285

Interrupted 10am-1pm for maintenance, as required)

5-7pm 9.840

Saturday

12-7am 5.835

9am-12pm 15.285

6-7pm 9.840

7-9pm 5.835

10pm-12am 5.835

Sunday

12-7am 5.835

9am-12pm 15.285

1-4pm 15.285

9pm-12am 5.835

From CRIPS01 at MSN.COM Thu Sep 22 03:25:22 2005

Subject: [R-390] meter faces on eBay/ more

Cool!!! this is the way to get back at scammers. Ken de W7ITC

From Thomas.Guest at TRW.COM Thu Sep 22 06:39:41 2005

Subject: [R-390] Dead R390A Need HELP

Hi everyone,

I am new to the R-390A but do antique radios. I may have bitten off more than I can chew at the moment but I hope that will change.

I picked up this set from Fair Radio (used repairable) and powered it up and get almost nothing.

I have replaced the killer cap in the IF, the 8 ufd audio section cap, and the electrolytic tests good at full rated voltages. Fuses are good. I have a short antenna 20' hooked up to the balanced input with the other half of the connector grounded to the chassis. The ballast tube is good. The brown beauty caps in the set have NOT been replaced! I see B+ of 285Vdc at the back panel fuse.

I have a Hallicrafters R-42 speaker (600 ohm input) tied to the set and get only a faint scratching noise from turning the volume control.

No signals across the board on this set. The carrier meter deflects about 1/2 way (my meters are not the factory ones) and I get no deflection on the line meter.

Problems that I did find was the VFO was not connected to the front panel knob, & the rear terminal strip was loose and could have been shorting the RF gain jumpers to the chassis. After fixing these issues still have the same results.

Any ideas on where to look next?

Or is there a way I could inject signals into the set to prove out a section at a time?

Thanks in advance. Tom Guest

From wewilsonjr at gmail.com Thu Sep 22 07:10:20 2005  
Subject: [R-390] Dead R390A Need HELP

Tom,

You can inject 455 KHz (modulated) into either one of the IF deck inputs and check the IF deck alone. After that checks out OK, you can start moving back through the RF deck one stage at a time, using the RF deck test points to inject signals into to grid circuit of each mixer. Details are in any of the R-390A field depot manuals, many available for free download.

If the PTO was disconnected from the front panel, the first thing I would do is set it at 2455 KHz at 7+000 KC (that's 1 KC above 7 999 KC). While at this position, check that all the camshaft pointers line up with the black alignment marks on the front of the RF deck. The deck is so selective it won't receive any signals if the RF tuned circuits are a little off.

Good luck. I have lots of alignment information on my website, [www.r-390a.us](http://www.r-390a.us) Walter - KK4DF

From odyslim at comcast.net Thu Sep 22 08:18:17 2005  
Subject: [R-390] emergency freqs

Does any have any of the hf emergency freqs for the upcoming storm? Scott

**From mbalaw at optonline.net Thu Sep 22 09:20:20 2005  
Subject: [R-390] Dead R390A Need HELP**

**The very first thing to do is to be certain that the jumpers (RF gain control to ground 1 to 2, AGC to normal 3 to 4, diode detector output to audio input 14 to 15) have been installed on the back panel terminal boards. Any one of these will kill the set dead.**

**The very second thing is to make sure that all of the interconnect plugs (both the mini-BNC RF cables and the power plugs) between the modules are properly connected and fully seated. A loose or disconnected plug from the VFO to the RF deck will produce no signal. Don't forget to check**

the cabling to the antenna relay.

**One more quick fix -- be sure the Noise Limiter is set to OFF. When it works, the Noise Limiter pretty effective at killing the audio at anything above "2" or "3" on the dial. When the pot wears out it's even more effective. The OFF setting bypasses everything.**

**If you don't have test equipment, there are a couple of quick checks you can perform:**

**(1) Turn the radio on, let it warm up and leave it on for all of these tests.**

**(2) Det the FUNCTION switch to MGC and both the RF and Audio gain controls wide open:**

**(2) Crank the IF gain pot on top of the IF subchassis wide open.**

**(A) You can hear scratchiness when diddling the Audio Gain control. That's the first test, and the radio passes.**

**(B) Pull V602 out of the socket on the IF chassis. You should hear a "pop" on audio. If not, the problem is somewhere between V602 and the Audio Gain control (2nd or 3rd IF amplifiers, detector or audio preamplifier). If OK, reinsert the tube.**

**(C) Pull V601. You should hear the same thing, only louder. If not, the problem is the 1st IF stage, the BANDWIDTH switch, or the mechanical filter. If OK, the IF subchassis and audio subchassis are probably good enough to hear something.**

**(D) Rotate the MEGACYCLE control to some setting above 7 MC -- say 8 MC. Then slowly rotate the control between any two adjacent stops (say 8 MC and 9 MC). You should hear a "pop" and a change in the noise level when the switch goes out of detent. If not, the problem is: the 1st or 2nd mixer or the crystal oscillator.**

**Last: Remember the doctor's adage; "When you hear hoofbeats, think horses, not zebras." That is, look for the most common faults: (1) a bad tube or the wrong tube; (2) a disconnected plug -- before looking for something exotic. Miles Anderson, K2CBy 16 Round Pond Lane Sag Harbor, NY 11963 k2cby@arrl.net**

From tshoppa at wmata.com Thu Sep 22 10:01:13 2005

Subject: [R-390] Dead R390A Need HELP

> I picked up this set from Fair Radio (used repairable) and powered > it up and get almost nothing.

As my yellow striper arrived from Fair Radio, there were a couple of broken tubes and a few connectors undone. Also missing the appropriate jumpers on the back. Tim.

From wd8kdg at worldnet.att.net Thu Sep 22 10:43:57 2005

Subject: [R-390] Dead R390A Need HELP

Good Morning Tom,

You have come to the right place. Just about everyone on the list has played with these beast for some

time. Going back through the archives and reading earlier posts will help with issues. I don't think there is anything new under the sun with R-390A's that hasn't been solved with this motley group.

Do down-load (and print) the Y2K manual, it might be in a second revision and is 312 pages loooooonng. It is a must read!! There are several sites where it can be found, a search on google is a step in the right direction. Most of your future issues can be solved with a VOM of sorts,(DMM, VTVM, Dual FET-VOM,etc.)sig-gen(URM-25D is referred to in the Y2K manual), and a tube tester is sort of nice to have.

The issue of capacitors will of course start quite a ruckus here, there are the replacers and keep everything original sides of the story. I let a Sprague TO-6A decide which caps get to stay and which have to go. All of the brown beauties in my R-390A were bad, poor, or no insulation resistance. Several of the electrolytic were shorted and or leaky.

You haven't bitten off more than you can chew. The R-390A was the first receiver I've ever worked on. The Y2K manual will take you through every step. I think the only thing missing in this document is a step by step (with pics) description assembly of the gears. It can be found elsewhere on the web, I can give a URL if needed.

I'll take a guess the receiver from Fair might have been modules put together for a complete radio. It has to be in mechanical alignment before an electrical alignment will bring things together.

Got mine running in less than two weeks. Keep'em glowing 73's wd8kdg Craig

From ToddRoberts2001 at aol.com Thu Sep 22 17:16:37 2005

Subject: [R-390] SAQ transmission on 17.2KHz This Sunday 09/25 09:30 & 12:30 UTC

Gentlemen, Fire Up Your R-389's (Or other good VLF RX's) SAQ transmissions Transmissions from SAQ on 17.2 kHz will take place on the 25th of September 2005 at 09:30 UTC and 12:30 UTC . (That is 5:30AM and 8:30 AM EDT)

QSL reports can be given via:

- E-mail to: info@alexander.n.se

- or fax to: +46-340-674195

- or via SM bureau

- or direct by mail to: Alexander - Grimeton Veteranradios Vaenner, Radiostationen, Grimeton 72, SE-430 16 ROLFSTORP, SWEDEN Note: SAQ is now a member of the Swedish Amateur Association (SSA) and "QSL via bureau" is OK. 73 Todd WD4NGG

From odyslim at comcast.net Thu Sep 22 17:30:59 2005

Subject: [R-390] SAQ transmission on 17.2KHz / VLF ????

Thinking of VLF receivers. What would one recommend? I will probably never get the chance to own a 389. Scott W3CV

From n4buq at aol.com Thu Sep 22 18:16:49 2005

Subject: [R-390] SAQ transmission on 17.2KHz / VLF ????

At that frequency, can't you just use your ears? Barry - N4BUQ



From ToddRoberts2001 at aol.com Thu Sep 22 18:46:09 2005  
Subject: [R-390] SAQ transmission on 17.2KHz / VLF ????

writes: Thinking of VLF receivers. What would one recommend? I will probably never get the chance to own a 389. Scott W3CV

Hi Scott,

Recommending a good VLF RX could probably open up a whole new big topic here! One suggestion would be using a good VLF converter in front of an R-390A. Palomar Engineers sell a good one, also LF Engineering still sell some good ones. A few good older boat anchor RX choices would be:

RAK - TRF/Regenerative Detector 15-600KHz WWII vintage

RBL - TRF/Regenerative Detector 15-600KHz WWII vintage

SRR-11 - Superhet Sub-mini tubes 14-600KHz 50's vintage

FRR-21 - Superhet Sub-Mini tubes 14-600KHz 50's vintage

RBA - TRF 15-600KHz WWII vintage

SP-600VLF - Superhet 15-600KHz 50's vintage

WRR-3 - Superhet 14-600KHz 60's vintage

There are several other older TRF/Regen sets out there like the Mackay and Radiomarine.

Also many of the newer premium RX's will tune down to the VLF Range like the Harris RF-590, Several Racal sets like the RA-1772, RA-6778 and others too numerous to mention here! Good luck, 73  
Todd WD4NGG

From shoppa\_r390a at trailing-edge.com Thu Sep 22 19:30:03 2005  
Subject: [R-390] Trade tubes for meters

I have a need for both a carrier level and line level meter, and I happen to have spare tubes for everything in a R-390A (with the exception of rectifier tubes). Most are JAN/milspec and NIB. The exception is 3TF7's, of which I have two used but known good units.

So, if you've got a spare meter, either "original" or a suitable substitute, let me know what tubes you'd like in trade. Tim KA0BTD.

From redmenaced at yahoo.com Thu Sep 22 19:48:00 2005  
Subject: [R-390] Dead R390A Need HELP

> Last: Remember the doctor's adage; "When you hear > hoofbeats, think horses  
++++++

Good advice! Make sure everything is RIGHT, then look for what is wrong. Joe

From CRIPS01 at MSN.COM Fri Sep 23 01:35:12 2005  
Subject: [R-390] Really cool link

I have just got to share this link, <http://www.konfabulator.com/> click on widget gallery. You will find some of the most useful desktop items I have ever seen, I have the hurricane Owl which switches between radar, pressure gradient, and projected paths of hurricanes. There are fun ones like the

Werewolf monitor which shows the path and phases of the moon. One widget is called Oilprice which gives a continuously updated price of light sweet crud oil which as I type this is \$66.00 a barrel. Look and the date and time widgets there are a couple of hundred kind of clocks. Ken de W7ITC

From n4buq at aol.com Fri Sep 23 09:12:16 2005  
Subject: [R-390] Meter Faces on eBay - Update

I "won" one of those meter face sticker sets and I got a notification from eBay this morning that the user's auctions had been removed and his eBay trading privileges have been suspended. Oh well, as I said, if my worst "loss" on eBay is \$6, I suppose I'll be okay. Barry - N4BUQ

From kf4yio at charter.net Fri Sep 23 09:27:26 2005  
Subject: [R-390] RF sub chassis slug rack problem

Hi Group

I'm new to the group and am restoring a 1963 Teledyne R390A. I have a problem. I'm cleaning all the slug racks and roller bearings and one of the rack's bearings are frozen tight. They have apparently been this way for quite a while as grooves have been worn on each side of the bearing where it slides up and down the mount. The outer bearings on this particular rack that roll on the cams are ok and cleaned up well. I just can't get these inner bearings to unfreeze. That's right, both sides are like this. All the rest of the slug racks have been cleaned, reassembled lubed and replaced. This rack has been cleaned lubed and replaced but I would like to either replace or fix it.

Any ideas ?

Thanks guys..... I used the R390A 's in the Navy and and NSA during the cold war and Vietnam. What a machine/rig!!!! 73 - Jack KF4YIO

From tshoppa at wmata.com Fri Sep 23 09:49:22 2005  
Subject: [R-390] Meter Faces on eBay - Update

> I "won" one of those meter face sticker sets and I got > a notification from eBay this morning that the user's > auctions had been removed and his eBay > trading privileges have been suspended.

\$6 is a lot for a sticker but eBay but they don't kick off sellers just because they're selling overpriced stuff that you can get for free elsewhere.

Maybe this guy did grab the graphics for his stickers off the web but even if he did I don't think the guy who copied graphics from the original meter to his website can claim ownership of the meter graphics. I mean there are lots of guys selling CD's filled with BAMA manuals etc. and I don't think E-bay would take down a seller just because the guy who scanned in a manual complained. They probably would if the manufacturer/publisher who did own the copyright complained.

Maybe he was selling other "downloaded from the web" items that really stepped over the line. Tim.

From g4gjl at btopenworld.com Fri Sep 23 10:02:41 2005

Subject: [R-390] RF sub chassis slug rack problem

Jack which slug rack is the problem?

I have a few spares, but not all versions. Happy to send FOC from UK if you cant get a more local fix. Will be on VAC for 3 weeks so if time is not pressing you have at least a chance. Pete G4GJL

From mikea at mikea.ath.cx Fri Sep 23 10:09:03 2005

Subject: [R-390] RF sub chassis slug rack problem

wrote: I have a > problem. I'm cleaning all the slug racks and roller bearings and one of the rack's bearings are frozen tight.

I think Fair Radio is still selling RF decks; I know they used to, and have some from there. I think they have the slug racks. Check with Fair first, to see if they'll sell you a slug rack or RF deck. If they're out or won't part one out for you, then get back with me and I'll see what we can work out. Mike Andrews, W5EGO

From n4buq at aol.com Fri Sep 23 10:20:45 2005

Subject: [R-390] Meter Faces on eBay - Update

Well, \$5 + \$1 shipping would have been a good price for me if these had been high-quality images on some of the better "sticker" media I've heard about. I'm pretty sure I couldn't buy a pack of that stuff for less than that so I was figuring this would have been a good deal for me since I wouldn't have any use for the stuff much of anywhere else. When I saw the finished product, however...

It pays to ask questions. I just didn't bother this time because the price was reasonable and I was figuring it was someone out there really trying to help out us R390[A] owners. Caveat emptor. Barry - N4BUQ

From n4buq at aol.com Fri Sep 23 10:22:37 2005

Subject: [R-390] RF sub chassis slug rack problem

Didn't some of the slug racks have non-rolling "bearings"? In other words, they were there just to keep the slug rack aligned, but didn't roll. I think some of my Motorola racks are that way. Perhaps your RF deck has a renegade slug rack from another deck? Barry - N4BUQ

From tshoppa at wmata.com Fri Sep 23 10:58:02 2005

Subject: [R-390] Meter Faces on eBay - Update

> if these had been high-quality images on some of the better > "sticker" media I've heard about.

Not that I have anything against those who make high-resolution raster scans of dials, meter faces, etc., for others to use, but for the ultimate quality these graphics ought to be presented in a vector rather than bitmap format. That way you get full resolution out of whatever media they finally get printed on.

Good vector formats (including PDF, which also supports raster images) have no problem at all doing arcs, putting text along a curved baseline, etc. And it looks wonderful no matter what resolution you

zoom in to, there's no pixellation in the "vector original" at all.

At my day job I've done some SVG (scalable vector graphics) that looks wonderful at any zoom level.

If I ever get around to making my own artwork for some as-of-yet hypothetical R-390A meters I'll do it as vector PDF files and let everybody here know :-). Tim.

From paul at pdq.com Fri Sep 23 11:02:34 2005  
Subject: [R-390] Meter Faces on eBay - Update

wrote: >> if these had been high-quality images on some of the better "sticker" media I've heard about.

The other aspect of the problem is that different meter faces are different sizes and shapes, with different locations of mounting holes, etc.

To be 'perfect', we need a high resolution ink mask for each of the various common types of meters - ideal, simpson, international, etc. Paul

From n4buq at aol.com Fri Sep 23 11:55:51 2005  
Subject: [R-390] Meter Faces on eBay - Update

I agree. There's a program floating around the internet called simply "Meter". It allows you to make a very detailed image of whatever kind of meter face you want. I don't know what image type it creates, but hopefully it will have sufficient resolution such that any pixellations aren't noticed. One of these days... Barry - N4BUQ

> if these had been high-quality images on some of the better > "sticker" media I've heard about.

Not that I have anything against those who make high-resolution raster scans of dials, meter faces, etc., for others to use, but for the ultimate quality these graphics ought to be presented in a vector rather than bitmap format. That way you get full resolution out of whatever media they finally get printed on.

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At my day job I've done some SVG (scalable vector graphics) that looks wonderful at any zoom level.

If I ever get around to making my own artwork for some as-of-yet hypothetical R-390A meters I'll do it as vector PDF files and let everybody here know :-). Tim.

From future212 at comcast.net Fri Sep 23 11:35:58 2005  
Subject: [R-390] MB (Mini BNC) connectors

I recently acquired some very high quality Coax (RG-188) from one of the many helpful members of this group. Does anyone have any helpful hints on rebuilding the straight MB connectors? The 90-degree connectors look easy. However, the straight connectors look much more difficult to rebuild.

Is the coax shield attached with a crimp? I have opened one up, but I'm a little bit nervous about tearing it apart, for fear about breaking the part holding the braid behind the pin.

Does the small Teflon ring that rests at the base of the center pin installed before or can it be put on after applying the heat?

Any help would be a lot of help. 73's DW Holtman, WB7SSN

From n4buq at aol.com Fri Sep 23 12:03:19 2005  
Subject: [R-390] MB (Mini BNC) connectors

Isn't there a cross-sectional view of the MB connectors in one of the manuals? I'm not sure it gives step-by-step instructions, but it might clarify what's in there for you. Barry - N4BUQ

From viculver at verizon.net Fri Sep 23 12:07:54 2005  
Subject: [R-390] Looking for DAVE in Birmingham

Gentlepersons: Sorry if this is a little OT, but I'm looking for a route to Dave in Birmingham. I know he's on one of the lists, but the old brain cells just can't come up with location information -- not even the list he follows. Thanks for any pointers. Vic

From JMILLER1706 at cfl.rr.com Fri Sep 23 15:16:21 2005  
Subject: [R-390] RF sub chassis slug rack problem

I'm cleaning all the slug racks and roller bearings and > one > of the rack's bearings are frozen tight.

Assuming it is really a roller bearing and not just a guide, try some Liquid Wrench to loosen the bearing. Heat from the tip of a soldering iron or a few gentle taps may also cause the bearing to loosen it up.

From hankarn at pacbell.net Fri Sep 23 15:31:52 2005  
Subject: [R-390] NOLAN LEE

I hope he is well taken care of as he is truly missed on the reflectors for his expertise and humor. Some times they just pop out of it or slowly come around. Pray for Nolan and may Gods blessings help him Hank KN6DI

From r390a at bellsouth.net Fri Sep 23 16:53:11 2005  
Subject: [R-390] Meter Faces - hi res pdf already exists

**Pete Wokoun made a set of high res meter faces several years ago in PDF form and they fit perfectly. There's no need to make three or four more sets of meter faces. With Buzz and Pete's there should be more than enough to go around.**

**Are Pete's scans on the "Pearls" site? Tom NU4G**

From r390a at bellsouth.net Fri Sep 23 17:46:21 2005  
Subject: [R-390] MB Connector Assembly Instructions Online

For those that don't already have it, or that don't have a manual right in front of them...

Very small file, about 80K Adobe 6 or better. [http://www.fernblatt.net/\\_radio/MB-connector.pdf](http://www.fernblatt.net/_radio/MB-connector.pdf) Tom

From redmenaced at yahoo.com Fri Sep 23 19:14:46 2005  
Subject: [R-390] NOLAN LEE

wrote: > He didn't remember me or the R-390 List and said > "I'm going back to > bed."

The last update on his website was in January 2003. The Redneck Boatanchor site is still up! Joe

From ba.williams at charter.net Fri Sep 23 20:34:11 2005  
Subject: [R-390] NOLAN LEE

> The last update on his website was in January 2003. > The Redneck Boatanchor site is still up!

Rich,

Thanks for the update to the list. Wow, bad news to hear about Nolan.

I've got a lot of past posts saved on another computer. Anybody care to repost some 'classics' of his? I think the one I remember most is the one about taking the chassis outside and washing it with a garden hose. It was the one full of dirt dauber nests, I think. Some people got overtorqued after reading his story of pulling it out of the attic. Well, the one about the club meetings with him charging some monster sized caps in the other room and letting them zap loudly enough to disrupt the meetings was funny too.... Barry Williams

From redmenaced at yahoo.com Fri Sep 23 20:46:13 2005  
Subject: [R-390] YOUR CHANCE FOR FAME -- WIN FRIENDS AND INFLUENCE PEOPLE, ETC.

--- Nolan Lee <nlee@gs.verio.net> wrote:

wrote: Need contributors for Hollow State Newsletter articles, so if you've got one under your hat, drop me a line. We're due for a nicy, juicy R-390A article, but anything on R-39x, R-388, R-648, transmitters too, as well as SP-600, HQ-170/180, etc., higher end Hallicrafters, and other golden glowy oldies. Also, appropriate test equipment -- URM-25x's, TV-X and Hickok tube testers, SSB converters ... well, you get the idea.

>

I've always wanted to write historical porn. Yep, pornographic stories with important historical females as the central characters.

>

It would be easy enough to incorporate the BA gear angle into the stories. Suppose I create a fictional female character that worked as a Navy inspector. Let's say that she was the secret daughter of Eleanor Roosevelt or Eva Braun. She lands a job as a Govt inspector in the <fill in the blank> plant that built <fill in the blank> BA gear. The hi-jinx begin....

>

I think it's got potential. We could do a different plant each > month.

>

>Don't worry about writing skills -- most of you don't need much help in that >department -- and, that's what an editor is for. (including removal of dangling participles - ed.)

>

I couldn't tell you what a participle is if my life depended on it. I despised English class. If it was up to me, I'd have hung > the old gal with barbwire from a telephone pole.

>

Barry, If you need a space filler you're more than welcome to use my 17,640 hour R-390A endurance run test story that I posted last Fall. I could rewrite it and incorporate the secret twin nympho daughters of Tojo if you like. <grin>

>

holler back, nolan

From wewilsonjr at gmail.com Fri Sep 23 20:53:12 2005

Subject: [R-390] YOUR CHANCE FOR FAME -- WIN FRIENDS AND INFLUENCE PEOPLE, ETC.

>

> --- Nolan Lee <nlee@gs.verio.net> wrote: you wrote:

Barry, If you need a space filler you're more than welcome to use my 17,640 hour R-390A endurance run test story that I posted last Fall. I could rewrite it and incorporate the secret twin nympho daughters of Tojo if you like. <grin> holler back, nolan

Nolan seemed to like the swedish twins. An excerpt from another of his classics.

From: Nolan Lee <nlee@gs.verio.net>

Date: Jun 6, 2000 11:47 PM

Subject: RE: [R-390] 2 questions from a new user

To: r-390@qth.net

At 07:21 PM 6/6/00 -0400, you wrote: >I thought the metal-cased Vitamin-Q caps were the ones to get rid of, and >that the yellow-waxy ones held up better. Now, I hear the opposite.

Change ALL of the paper caps, period. It's cheap insurance. Undoubtedly someone will tell you otherwise. I've listened to people bitch and moan about the amount of effort it takes sine I first brought up the idea back in late 1998 but it's well worth doing.

"Ooh, it's too hard and I might burn my little fingers or break a nail."

"I'll miss Star Trek tonight..."

"Whine whine, I've got a hot date with a pair of Swedish nympho twins".

"My dog chewed the cord off of the soldering iron."

"The voices in my head said not to."

"Those caps have worked fine for the last 45 years, why?"

"If it ain't broke, don't mess with it."

Yeah, right. Who needs Gatling guns, we can travel faster without them....

I've listened to dozens of reasons why there is no need to change them and it's a wasted effort, etc. I still think that for the person that actually uses their radio and doesn't have it as a trophy sitting on a table somewhere where they stare at it while they drink some sissy drink like lite beer or some twisted version of coffee that doesn't even contain chickory, and intend to keep the radios for the duration, should put forth the effort and change the caps.

From peuhs at bellsouth.net Fri Sep 23 21:39:19 2005  
Subject: [R-390] Nolan

Friends,

I also am most saddened about Nolan...I will keep him in prayer. John.... (JLAP...)...(Cathy's husband's great uncle...)

From gregorymengell at comcast.net Fri Sep 23 23:54:15 2005  
Subject: [R-390] Test

From paolo.gramigna at controllo.it Sat Sep 24 03:34:31 2005  
Subject: [R-390] Mini-BNC connectors: where to buy?

Hi, Where can i buy mini-bnc connectors and RG-188 online? I can't find them here in italy... Paolo

From odyslim at comcast.net Sat Sep 24 10:04:57 2005  
Subject: [R-390] emergency freqs

Hi, I had posted a query last week about any emergency freqs that might be used during the hurricane season for emergency. Several others showed some interest. Here is what I found. There are 11 pages of them at the site below.

[www.ominous-valve.com/hurricane.txt](http://www.ominous-valve.com/hurricane.txt) I found this link on a great page called: [www.radiointel.com](http://www.radiointel.com)  
Scott W3CV

From roy.morgan at nist.gov Sat Sep 24 12:09:59 2005  
Subject: [R-390] Mini-BNC connectors: where to buy?

Quoting : > Where can i buy mini-bnc connectors and RG-188 online? I can't find them > here in italy...

RF Connections is likely to have MB connectors and also the correct coax.  
<http://users.erols.com/rfc/index1.htm> They may not be listed on the website so send an email to them at:  
- email address: [rfc@therfc.com](mailto:rfc@therfc.com) Roy, a happy customer of RF Connections

From roy.morgan at nist.gov Sat Sep 24 12:09:55 2005  
Subject: [R-390] Mini-BNC connectors: where to buy?

Quoting: > Where can i buy mini-bnc connectors and RG-188 online? I can't find them here in italy...



RF Connections is likely to have MB connectors and also the correct coax.

<http://users.erols.com/rfc/index1.htm> They may not be listed on the website so send an email to them at:  
- email address: [rfc@therfc.com](mailto:rfc@therfc.com)

Roy, a happy customer of RF Connections

From ToddRoberts2001 at aol.com Sun Sep 25 09:18:48 2005

Subject: [R-390] RECEPTION OF SAQ 17.2 KHz SUCCESSFUL AT HOME LOCATION

Hi All,

Wanted to report I had successful reception of SAQ 17.2KHz Sunday morning at 12:30 UTC! Somehow I overslept the 09:30 UTC transmission but it may be just as well as I was able to really dial-in my receiving setup before the 12:30 transmission.

SAQ was about RST 329 and copy was good - light static on the band and the signal was not too strong but very readable and clear. My CW is a bit rusty and I was only getting bits and pieces of their copy - it sounded like they were sending about 18WPM. If they had sent about 10WPM I think I would have gotten solid copy. Sorry I didn't have a battery tape recorder to use so wasn't able to record the transmission. If I had recorded it I could have gone over it a few times and I am sure I would have gotten solid copy of the message. The transmission lasted 5 minutes. I did send them a reception report - not sure if anyone else in the USA heard them but now I have a good idea of exactly what to listen for and what kind of signal strength to expect. If anyone else in the USA East Coast has a reasonably quiet location they should have been able to copy them also.

I owe my successful copy to using a Hagan large ferrite-core loop receiving antenna with converter and using a battery-operated receiver. The R-389 would have done a good job but I had to be able to divorce the receiver from the power lines in order to get reasonable copy down at 17.2KHz. I ended up using a Drake R8A on batteries. After cutting the main breakers to the house I found that by carefully aligning the loop I was able to null out about 80-90% of the awful power-line harmonics and noise that was normally running about S-7 on the Drake R8A S-meter. I was able to null the power-line hash down to about S-2 - S-3 on the meter and I don't think I would have been able to copy SAQ if I wasn't able to null out the noise. When I switched the house power back on I was unable to null the noise and it was a constant S-7 on the meter which would have made copy impossible. I sent them a signal report and mentioned that I hope they would be able to make another transmission sometime during the winter when conditions are best. 73 Todd WD4NGG

From w5or at comcast.net Sun Sep 25 17:24:18 2005

Subject: [R-390] RECEPTION OF SAQ 17.2 KHz SUCCESSFUL AT HOME LOCATION

Excellent report. Glad you heard it. Under Rita's electrical storms here down South there was little chance of hearing anything on any band.

Send along more details of your antenna when you get the chance. There are several active LF'ers here on the list. Don

From mjmurphy45 at comcast.net Sun Sep 25 17:27:19 2005

Subject: [R-390] RECEPTION OF SAQ 17.2 KHz SUCCESSFUL AT HOME LOCATION

Hi Todd,

Even at 180 kHz where I used to do some lowfering, the noise was so high, that I too, was driven to a battery powered receiver. My setup was all homebrew - a voltage probe antenna into a single conversion receiver with a 4 MHz upconverted IF based on a large crystal ladder filter and a double balanced mixer used backwards (IF out is the antenna connection).

Typically all of my listening was done mobile. The antenna which looks exactly like a 5/8 2M whip is stuck on the roof and you drive to a quiet spot and listen. Never tried 17 kHz. Mike WU2D

From mikea at mikea.ath.cx Sun Sep 25 21:16:24 2005

Subject: [R-390] RECEPTION OF SAQ 17.2 KHz SUCCESSFUL AT HOME LOCATION

wrote: > Even at 180 kHz where I used to do some lowfering, the noise was so high, > that I too, was driven to a battery powered receiver. My setup was all > homebrew

I'm having some mild difficulty imagining driving around with a 5/8-wave whip for 17 KHz stuck on the roof of my Chrysler T&C, actually. ;=)

But yes, a battery-powered rig out away from what we call "civilization" sounds ideal. I'm not at all sure how I'd manage that here in central Oklahoma. Drive NW into the panhandle, maybe, and set up on Black Mesa, or up to the Great Salt Plains National Monument, which would make a fine ground. Congratulations and kudos to Todd. Mike Andrews, W5EGO

From richardlo at admin.athabascau.ca Mon Sep 26 14:15:00 2005

Subject: [R-390] NOLAN LEE

Cats. The OTHER white meat.

IMOH, the biggest stir was caused by the tale of butchering game in an apartment block parking lot but all his outrageous tales were good.

Then there was his policeman's perspective on crack addicts which would certainly raise the ire of most liberals. Richard Loken VE6BSV

From richardlo at admin.athabascau.ca Mon Sep 26 14:26:01 2005

Subject: [R-390] YOUR CHANCE FOR FAME -- WIN FRIENDS AND INFLUENCE PEOPLE, ETC.

wrote: Gee, I don't remember this one. Must have been in The Betty Ford Center to dry out.

> --- Nolan Lee <nlee@gs.verio.net> wrote:

>> I've always wanted to write historical porn. Yep, pornographic stories with important historical females as the central characters.

>> Don't worry about writing skills -- most of you don't need much help in that department -- and, that's what an editor is for. (including removal of dangling participles - ed.)

It would have been great! Hey, we could have done like the guys who wrote "Naked Came the Stranger", the editor would send chapters back to the authors if they were too well written.

I always thought that I could create a computer programme that would generate porn (or romances or westerns with a few changes to the dictionary).

"Oh John I need your R-390! Give it to me now!"

Richard Loken VE6BSV

**From wc4g at knology.net Mon Sep 26 15:19:39 2005  
Subject: [R-390] Thinking of Nolan Lee**

**Below is one of the typical posts from my friend Nolan. I think we all enjoyed his posts and writing ability. 73, Don WC4G**

**(May 1999)**

**I've had a couple of requests for the list of items I did when I went thru my EAC last year so I'm reposting my original message on it to the list. The EAC has been running 24/7 since October of last year and I have no complaints. I've been wanting to pull it out of the rack and do a "visual" of it and check the tubes and the alignment but haven't had the time. Maybe this Fall. Your mileage may vary  
nolan**

**-----snip from Oct 1998----- Well, after spending months slowly going thru my two R390A's, one is finished. Below is an outline of the steps that I took during my overhaul. This was probably one of the more evolved R390A "overhauls" done in the South. The other, will take longer, I'm going to replace all of the bushings in the RF deck among other things that I didn't do with this one.**

**The victim: I started with a cherry 1967 EAC contract model that was the "lowest mileage" R390A I've ever seen. All of the original modules, meters, covers, etc. were still on it. In addition, all of the tubes in it had date codes within a two or three month period of each other in 1968. Even with clean gears, there wasn't even a hint of a wear pattern in any of the gears and all of the aluminum finish in the tracks on the RF deck was still intact. The green paint on all of the module hold down screws was even 100%. I'd be surprised if this thing saw more than a few hours operation after the burn in period. There's no diode load hole in the front panel or adjustment hole in the top dust cover for the meter adjustment.**

**Jerk all of the modules out of it and rip it's gizzard out and scatter and toss the parts around! I tried, but I managed to not loose any of the parts and didn't even have any extra ones left over.**

**Chassis: Tested the dial lamps, checked the value of all of the resistors, the diode, the 2 capacitors, the meters, tested the selenium rectifier, and the antenna relay and inspected the contacts in the relay. Verified function of the main power micro switch, it's placement, and measured the resistance of it. Measured the resistance of all of the front panel switches and potentiometers, and very lightly lubed the shafts of each, checked the ovens switch, verified the values of the fuses,**

checked their resistance, replaced one of the fuse holders that I didn't like the look of with a NOS one, and replaced the rear panel IF connector, the center terminal was missing.

Checked the line filter, and checked the tightness on all of the screws holding the whole damn mess together. I removed all of the knobs and inspected and lightly lubed the set screws. Also verified that the index washers were installed in the two big knobs that prevent the clamps from turning. The next step ate up a lot of time. I removed all of the hoods of the chassis connectors to inspect and then measured the resistance of EVERY damn wire in the chassis. Then I installed a NOS military 3 wire 8 foot rubber 16 gauge power cord with a molded plug. Nice and flexible SJ. The original strain clamp for the cord was still there. First one I've ever seen. :-)

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The grooves were of a dimension that I didn't have any key stock for so I used two 12" long pieces of 1/4" ground steel rod. I centered the two pieces of rod, lengthwise, one in each of the two grooves, clamped the three pieces together. Then by measuring and comparing the distances between the four rod ends, I could determine the exact angle that the grooves were from each other. This part of the process was a wasted effort, the coupling center piece from the EAC was 90 degrees like it should be and so were the ones in spares that I checked. When I finally assembled the receiver and physically aligned the PTO to the chassis, mechanically and electrically, the dial indicator measured a total movement in the center section of the oldham coupling of .003 when the KHz knob is turned. Close enough! Put that spring on!

Oh, I used a little dab of Penzoil wheel bearing grease to lube the coupling. It's red and contrasts, in a pleasing fashion, the blue label of the Cosmos PTO. :-) Crystal Oscillator Module: Tested the tube, and tightened the screws holding the tube socket to the chassis, they were loose. Checked resistor values, transformer windings and crystals. Bad 10 MHz crystal, throw one in it from

spares. Most are still on the money, the few that are "off" are well within 1 KHz or maybe a shade more. I decided against spending ~250 dollars on new ones.

Measured the resistance of all of the wiring and switch contacts and tested all of the fixed capacitors and spun all of the trimmers a couple of turns. Powered up the oven and verified function of the thermostat. Also, "timed" the two switch bodies. They were "off" a bit. Then when thru and re tested everything on it's underside just to make sure. I figured that anything that was a pain to remove, I double check everything.

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Installed two new .022 400V orange drops in the location that Chuck likes, and NOS Vitamin Q's in the other locations. I have the orange drops on hand and could have used them thru out but didn't like the way they sit on the circuit board. I did use an Orange Drops to replace the one on the chassis under the circuit board. All of the new caps were tested for leakage at their rated voltage and tested to verify their value before installing.

Checked all of the resistors for value, replaced a couple. Tested the mica cap, no problem there. Tested all of the tubes, they all passed but tossed the 0A2 and stuffed a new 6626 in it's place. I don't trust used 0A2's, had some weird problems with them. Tested the relay and measured the resistance of the wiring, the chokes, and the transformers. I left the 800 cps filter alone. Probably not a whole hell of a lot of R390A's out there that still have their original 6AK6's

All of the tubes are original except the rectifiers and the regulator. :-) IF Module: Tested the tubes and the 3TF7. Measured the resistance of the wiring, the transformers, the switch contacts, and the resistors. I replaced more than a half a dozen resistors that were out of spec. Checked the capacitors and resistors inside the IF transformer cans, that could be tested. Some could not be tested in circuit. I tested the big above chassis oil filled capacitor for leakage and value. Tested all of the mica capacitors for leakage and value and then ripped all 18 or so of the axial lead paper capacitors out of the module and tested them just for kicks. EVERY "brown beauty of death" tubular capacitor that was in it leaked like hell and a good percentage had microscopic cracks in the bodies within maybe .020 of the seams and paralleling them. Most of these caps leaked at voltages below 50 volts when tested. Only one of the metal can axial capacitors leaked when tested. I replaced all 18 of the capacitors with Orange Drops. For the .1 and the .033 values I used 400VDC rated ones and for the .01 values, I used 600VDC rated ones. The reason that I didn't use 600V rated ones thru out was their size. It was a pain in the ass to the fit the ones that I used in there properly. If I'd have used the 600V ones everywhere, I'd have had to move the locations of some of the capacitors and a bunch of them would have had excessively long leads. I didn't think that this was such a hot idea in the IF section and figured that the best placement of the parts was in the original locations. ;-)

Let's see, other than checking all of the screws and nuts, I think that was it for the IF deck other than lightly lubricating the shaft extensions where they passed thru the front of the IF module chassis. I didn't test the mechanical filters. I tested the blocking cap before I tossed it and it had tested good even at 100 volts over it's 300V rating. Whew!

The last one, the RF deck: After removing it, the first step was to take it apart. I removed all of the tubes and tested them, the crystal oven and tested it, all of slug racks and springs, four of which (for the variable IF slug racks) were really weak, so I installed NOS ones in that location when I put everything back together. The geometry for those 4 springs suck, they're stretched a lot more than any other location. I removed all of the RF coil assemblies and measured the resistance of all of the windings and checked what capacitors I could. The bridge wouldn't work on some, so I kept track of those in case I had some weird assed problem when I tried to align it later. I disassembled the gear train and tossed all of the parts, except for the counter, in a coffee can and sprayed a mess of gunk in there and let them brew. They weren't really dirty, but the original lube had mostly evaporated and what was left was stiff as hell and I don't really find the gear train much of a mechanical challenge so I ripped it apart. About the only thing I didn't take apart was the 6 camshafts and the antenna trimmer can. I worked a few drops of penetrant into the bearings of the cam shafts and kept lubing and wiping them until only clean oil would come out.

Oh, I used 10W30 Mobil 1 synthetic oil for the RF deck except the detent where I used Penzoil wheel bearing grease. Two of the cams appear to have been stamped, I guess, with cracked dies, leaving a couple of sharp burrs on the surface that the rollers ride on. I stoned these down while maintaining the original cam profile. :-) When you take the split gears apart, tie them together, with a bit of soft wire in the orientation that they were originally assembled with. I suspect that the halves were matched.

**While all of the stuff soaked, I replace the three paper capacitors, with Orange Drops, and replaced close to ten resistors that were out of spec, checked all of the other capacitors and found a cracked .005 1KV ceramic disc. And yes, I measured the resistance of all of the wiring and of the band switch. ;-) I found an odd thing.**

**One of the tube sockets only had one screw holding it to the chassis. When I attempted to install a screw there, it turned out that the little "C" shaped piece of metal that curves all of the way around one side of the socket had an unthreaded hole in it for the screw. I'm surprised that an inspector didn't catch this at the factory. I tapped the hole and moved on. Most of the gear clamps were either viably cracked or showed cracks when dye checked. I guess that they must have been over tightened when it was built. I replaced all of them with NOS clamps to be safe.**

**I found that several of the roller retainers had been over staked on a couple of the slug racks. This prevented the rollers from turning. In addition, a few of then ends were not square and had to be straightened. Burrs and gouges on the end surfaces had to be stoned down and polished. The fit and finish of mechanical portion of this EAC RF deck didn't impress me at all. The old Collins decks were much more finely finished mechanically. I wiped each of the RF cores out with a pair of damp Q-tips, wiped the slugs off, and eye balled them. The Collins part numbers on all of the RF slugs are all the same EXCEPT the six variable IF slugs. They are different from the RF slugs. So, they aren't interchangeable.**

**I assembled the RF deck and mechanically aligned it and put the receiver back together. For what it's worth, the repeatability of the RF slug racks averages about .001, the repeatability of the variable IF slug racks averages .004 on one and .005 on the other. I suspect that this could be improved upon by relocating the location of the attachment point on the chassis of those four springs. This would require either shorter springs or possible just creating spring "wells" that extent slightly below the chassis so that standard RF deck rack springs could be used. I fired it up and let it cook a while in Standby mode, at 7+000. None of the magic smoke escaped so I switched over and set the PTO to 2455 KHz and tightened the clamp.**

**I stuck a VTVM lead into the unbalanced antenna connector and cranked it down to WWL on 870 and let it run more than a day before I did the first alignment. I always like to align a receiver**

twice. I go thru it and then when I'm finished, I start all over again. I've been playing with it for about a day and a half since the alignment. This is the most sensitive receiver I've ever owned. It kicks ass.

I did a few sensitivity tests using my URM-25F. I questioned the results so I dug out the URM-25D and tried them again. REAL close. I started with a receiver that hadn't been abused and tried to do the best job that I could going thru it. I wanted something that I didn't have to screw around with every few weeks. Something that wouldn't wake me up at night with a burst of light like a Romulan disrupter (I've had R390A's do that before). Something that would sit there and run for month after month and need nothing but tube and dial lamps like my R-1051B's.

Hopefully, this will do that. Many of the of the steps that I took, were "over kill", but I had fun doing it and learned a few more things. The numbers you ask? Lets just say that they're as good as the best sensitivity levels that I've ever seen posted or in print on the R390A. Numbers, that up until now, I always had my doubts about. Guess I better feed the critters and make me a mess of grits for breakfast,

nolan

**---If an infinite number of rednecks riding in an infinite number of pickup trucks fire an infinite number of shotgun rounds at an infinite number of highway signs, eventually they will produce all of the world's great literary works in Braille. ---**

From David\_Wise at Phoenix.com Mon Sep 26 16:33:51 2005  
Subject: [R-390] RF sub chassis slug rack problem

I'm cleaning all the slug racks and roller bearings and one of the rack's bearings are frozen tight.

Some kind soul on this list once sent me a bunch of spare racks. I used one or two, and the rest are just sitting. I'll be out of town for a week, but when I get back I'll tell you what I have. 73, Dave Wise (SWL in Portland Oregon)

From greybeard5150 at sbcglobal.net Mon Sep 26 19:28:59 2005  
Subject: [R-390] Re: Thinking of Nolan Lee

I'm one of the many lurkers on the list and to be frank I remain that way because I have nothing to contribute. None the less, like the rest here I am fascinated by the R-390a, and look forward to having mine back in the near future. I too genuinely miss the input of the list's resident philosopher Nolan Lee, and was pleased to see some of the reposts that have surfaced recently. As for his detailed description of his EAC rebuild, it came through on my end somewhat chopped-up as in a forwarded mail. Due to the fact that it contains much of Nolans inimitable insight, I stripped and cleaned it, and did my best to reorganize it and make for an easier read. I figured that others on the list might possibly appreciate the effort and want to save the post, so here it is ..... DQ

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chokes, and the transformers. I left the 800 cps filter alone. Probably not a whole hell of a lot of R390A's out there that still have their original 6AK6's. All of the tubes are original except the rectifiers and the regulator. :-)

**IF Module:** Tested the tubes and the 3TF7. Measured the resistance of the wiring, the transformers, the switch contacts, and the resistors. I replaced more than a half a dozen resistors that were out of spec. Checked the capacitors and resistors inside the IF transformer cans, that could be tested. Some could not be tested in circuit. I tested the big above chassis oil filled capacitor for leakage and value. Tested all of the mica capacitors for leakage and value and then ripped all 18 or so of the axial lead paper capacitors out of the module and tested them just for kicks. EVERY "brown beauty of death" tubular capacitor that was in it leaked like hell and a good percentage had microscopic cracks in the bodies within maybe .020 of the seams and paralleling them. Most of these caps leaked at voltages below 50 volts when tested. Only one of the metal can axial capacitors leaked when tested. I replaced all 18 of the capacitors with Orange Drops. For the .1 and the .033 values I used 400VDC rated ones and for the .01 values, I used 600VDC rated ones. The reason that I didn't use 600V rated ones thru out was their size. It was a pain in the ass to fit the ones that I used in there properly. If I'd have used the 600V ones everywhere, I'd have had to move the locations of some of the capacitors and a bunch of them would have had excessively long leads. I didn't think that this was such a hot idea in the IF section and figured that the best placement of the parts was in the original locations. ;-)

Let's see, other than checking all of the screws and nuts, I think that was it for the IF deck other than lightly lubricating the shaft extensions where they passed thru the front of the IF module chassis. I didn't test the mechanical filters. I tested the blocking cap before I tossed it and it had tested good even at 100 volts over it's 300V rating. Whew! The last one, the RF deck: After removing it, the first step was to take it apart. I removed all of the tubes and tested them, the crystal oven and tested it, all of slug racks and springs, four of which (for the variable IF slug racks) were really weak, so I installed NOS ones in that location when I put everything back together.

The geometry for those 4 springs suck, they're stretched a lot more than any other location. I removed all of the RF coil assemblies and measured the resistance of all of the windings and checked what capacitors I could. The bridge wouldn't work on some, so I kept track of those in case I had some weird assed problem when I tried to align it later. I disassembled the gear train and tossed all of the parts, except for the counter, in a coffee can and sprayed a mess of gunk in there and let them brew. They weren't really dirty, but the original lube had mostly evaporated and what was left was stiff as hell and I don't really find the gear train much of a mechanical challenge so I ripped it apart. About the only thing I didn't take apart was the 6 camshafts and the antenna trimmer can. I worked a few drops of penetrant into the bearings of the cam shafts and kept lubing and wiping them until only clean oil would come out. Oh, I used 10w30 Mobil 1 synthetic oil for the RF deck except for the detent where I used Penzoil wheel bearing grease. Two of the cams appear to have been stamped, I guess, with cracked dies, leaving a couple of sharp burrs on the surface that the rollers ride on. I stoned these down while maintaining the original cam profile. :-)

When you take the split gears apart, tie them together, with a bit of soft wire in the orientation that they were originally assembled with. I suspect that the halves were matched. While all of the stuff soaked, I replace the three paper capacitors, with Orange Drops, and replaced close to ten resistors that were out of spec, checked all of the other capacitors and found a cracked 005 1KV ceramic disc. And yes, I measured the resistance of all of the wiring and of the band switch. ;-)

I found an odd thing. One of the tube sockets only had one screw holding it to the chassis. When I attempted to install a screw there, it turned out that the little "C" shaped piece of metal that

curves all of the way around one side of the socket had an unthreaded hole in it for the screw. I'm surprised that an inspector didn't catch this at the factory. I tapped the hole and moved on. Most of the gear clamps were either viably cracked or showed cracks when dye checked. I guess that they must have been over tightened when it was built. I replaced all of them with NOS clamps to be safe. I found that several of the roller retainers had been over staked on a couple of the slug racks. This prevented the rollers from turning. In addition, a few of then ends were not square and had to be straightened. Burrs and gouges on the end surfaces had to be stoned down and polished. The fit and finish of mechanical portion of this EAC RF deck didn't impress me at all. The old Collins decks were much more finely finished mechanically. I wiped each of the RF cores out with a pair of damp Q-tips, wiped the slugs off, and eye balled them. The Collins part numbers on all of the RF slugs are all the same EXCEPT for the six variable IF slugs. They are different from the rest of the RF slugs, so they aren't interchangeable. ;-)

I assembled the RF deck and mechanically aligned it and put the receiver back together. For what it's worth, the repeatability of the RF slug racks averages about .001, the repeatability of the variable IF slug racks averages .004 on one and .005 on the other. I suspect that this could be improved upon by relocating the location of the attachment point on the chassis of those four springs. This would require either shorter springs or possible just creating spring "wells" that extent slightly below the chassis so that standard RF deck rack springs could be used. I fired it up and let it cook a while in Standby mode, at 7+000. None of the magic smoke escaped so I switched over and set the PTO to 2455 KHz and tightened the clamp. I stuck a VTVM lead into the unbalanced antenna connector and cranked it down to WWL on 870 and let it run more than a day before I did the first alignment. I always like to align a receiver twice. I go thru it, and then when I'm finished I start all over again. I've been playing with it for about a day and a half since the alignment. This is the most sensitive receiver I've ever owned. It kicks ass.

I did a few sensitivity tests using my URM-25F. I questioned the results so I dug out the URM-25D and tried them again. REAL close. I started with a receiver that hadn't been abused and tried to do the best job that I could going thru it. I wanted something that I didn't have to screw around with every few weeks. Something that wouldn't wake me up at night with a burst of light like a Romulan disrupter (I've had R390A's do that before). Something that would sit there and run for month after month and need nothing but tube and dial lamps like my R-1051B's. Hopefully, this will do that. Many of the of the steps that I took, were "over kill", but I had fun doing it and learned a few more things. The numbers you ask? Lets just say that they're as good as the best sensitivity levels that I've ever seen posted or in print on the R390A. Numbers, that up until now, I always had my doubts about. Guess I better feed the critters and make me a mess of grits for breakfast.. Nolan

--- If an infinite number of rednecks, riding in an infinite number of pickup trucks, fire an infinite number of shotgun rounds, at an infinite number of highway signs, eventually they will produce all of the world's great literary works in Braille.

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Greybeard 5150 aka: DQ

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LOUD Pipes & Stars 'n Stripes . . . La Vida Bueno! Make Your Choice: Get Busy Livin' or Get Busy Dyin'

From Flowertime01 at wmconnect.com Mon Sep 26 21:34:31 2005  
Subject: [R-390] Dead R390A Need HELP

Thomas,

Sorry to come in late on this one. I was up at Fair Radio in Lima getting myself another R390A. Spent \$900.00 on travel to avoid \$50.00 shipping charges. Its a Polish thing, don't ask. OK so I was going to visit Mom in Michigan and just stopped on the way up as on the way back was scheduled for a Saturday and Sunday.

Once you get to the point where you have a calibration tone every 100 KC you have a working R390/A. Between a working R390/A and a wonderful receiving R390/A is a range of work. A working R390/A and a wonderful receiving R390/A should not be confused with a good looking R390/A. Each of these are different.

Good looking R390/A are selling for over \$1000.00 on Epay and may not work at all.

A good working tube and a real good tube is a range that a tube tester will not evaluate for you. Old used tubes can work better than some new tubes. I do not want to send you out shopping for bunches of new tubes, because what you buy may not in fact be any really better than what you have. All tubes are not equal. Swapping the 5749s around will change your signal to noise. Changing the 6C4s will also make a difference. Finding a good 6DC6 can be a treasure hunt. Swapping the 5814s around will make differences. The 6AK5s or 5654s also make differences. Start looking for tubes for your receiver. Accept what you can find when you find them. If you really need some tubes because some are just bad and you have nothing else to use, then buy some new ones. Hopefully not from Radio Shack. RCA and Sylvania are good. Other good brands are also around. Old JAN tubes are likely OK.

Then comes alignment. Do the mechanical alignment of the dial over run and set the zero adjust to center before doing the RF cams. Once through the mechanical alignment of the RF cams will get you OK.

Once the PTO is set you are OK. You can set the PTO against WWV and zero the cal osc to WWV. The mechanical coil alignment of the RF deck will improve with as many as 4 passes. If you change any RF tubes, 6C4, 6DC6, a realignment is in order. The Y2K manual will get you through that OK.

A signal generator and a volt meter will get you through any alignment you need.

Truth is that the cal tones and a volt meter will get you into good alignment. A good frequency counter that lets you set the PTO and BFO is a blessing. Not required, but use it if you have it.

Real good reception comes from just swapping tubes into the same socket and evaluating the results.

As my ear is not calibrated, I use a signal generator and a volt meter. I like my signal generator as I can turn the modulation on and off. This compares CW to Modulated, AM. Some (Military) like to call this signal to signal plus noise test.

I hang a 580 ohm (600 Ohm) 1 watt resistor across the local output on the terminal board with an

AC volt meter. My AC voltmeter has a DB scale. A good receiver will put out 1/2 Watt so you need a 1 watt resistor or spares to burn.

Using any signal frequency you can and start swapping tubes for comparison. Run all the tubes through a tube tester some where just to get the shorted ones discarded. Watch them all to get out the ones that glow blue. In the receiver circuit thump them all a time or two to get out the microphonic ones.

Get all your 5749's or 6BA6's and sub them one at a time into the first IF socket. Using the same level of signal generator input. inset a tube and compare the audio output level with the signal generator modulation turned on and turned off.

A good (acceptable) receiver will have 10 DB difference. A nice (up to military spec) receiver will have 20 DB difference. 25 is very doable in today's R390/A even with their age. 30 has been seen on many receivers and can still be achieved today. (You may spend more on tubes and caps than you paid for the receiver to get there.)

So sticking several tubes into a socket and comparing them to each other you can judge them for noise. Put the better performing ones into some of the other tube sockets. Set the test up again and compare the tubes you pulled. Find the best of what you have and use those tubes. Doing the 5814's needs two test to get each side of the dual triodes. Run the 6AK6's in the last IF not the audio deck. Swap the 6C4 into the second mixer above 8MHZ. If you are not blessed with tubes, Just buy your self a new 6DC6. Compare it to the one or ones you have and write that down some where (on the tube box side) so you can judge it again at some later date.

The Army ran these receiver 24 x 7 for six months or 4380 hours. Tubes would go for a year or 8760 hours. We would check all the tubes every six months and swap out the poor ones to get the receiver back up to minimum of 20 DB signal to noise at 1/2 watt output. Also need 4uv sensitive to get the 1/2 watt. If you do not have a calibrated signal generator this means nothing. It also has no impact on your ability to get your R390/A working very good. You can compare tubes using the Cal tone and BFO on and off. It will let you compare the same tube type in same socket and judge them from best to not best. You can them insert the best to the front end and work down the line from there with what you have.

If you have a signal generator that puts out 150 uv at 455 you can get the IF deck into shape real fast. You need 150 uv in to the IF deck by moving the IF out jumper wire over to the IF input and feeding the BNC connector on the back panel. Set the RF gain adjust on the IF deck to -7 volts on the diode load. Set the RF gain to mid range and adjust the generator for -7 volts on the Diode load. Set the band switch to .1 setting and rock the signal generator frequency for maximum signal level through the 455Khz crystal. You can zero the BFO against the signal generator. This will get you amazingly close. If you think you generator is close, set it to 150 uv and then set the RF gain to -7 volts. Set your generator modulation to 30%.

Open the IF bandwidth back up to 2KC. Turn the BFO off. Start swapping between modulation on and modulation off, you need a 30 DB difference. If you do not have this 30 DB difference in the IF deck and Audio deck string, you will never get a 20 DB difference for the full receiver. You will get 30 DB in the IF deck and have the meter needle bumping around. This random noise will not get it. You may get 28 and have a rock solid flat meter needle. This may be OK and things are just not all that exactly calibrated. So accept this and get on with life. Better tubes will come in the future. A bouncing needle may be a leaky cap. More likely its a noisy tube. Over time and repeating these test, you will get a feel for what is passable. Just get your receiver as good as you

can with what you have today. Enjoy it.

The IF front end 5749's will make the most difference. The 6AK6's are next in order. The 5814's will also make a difference. You can swap poor ones into the line audio path. Some 5814's are in the limiter, 455 cathode follower, and AGC circuit. You can get the better tubes into the critical path and put some of the others elsewhere until you can find some better tubes.

Once you are getting 30 DB in the IF deck and audio string, you know that end of the receiver is good. You can move over to the RF deck. In the RF deck you run 4 uv into the antenna input and look for a 20 DB difference between modulated signal generator to unmodulated signal generator.

You can set the IF band switch to the .1 position and rock the generator frequency into the band pass. Once you tweak over peak, you can roll the KC knob for maximum signal point. Doing the cap or core slug alignment in the RF deck within 50KC of the specified number in the procedure will not cause you any grief in the final alignment and signal to noise ratio. Get the generator close and use the KC knob to get max signal. Then do adjustments.

When you are done, go find the Chuck Riddle RF gain setting procedure and use that to get the best receiver sensitive setting.

Swapping tubes in the RF deck will make improvements. When comparing tubes, do not try to align the RF deck for each tube. Just plug what you have of each tube type into the same socket for comparison.

You will get real hot great gain tubes. Some will have lots of noise. Some lower gain tubes will give better noise ratios. Its just a plug and try process.

Once you get the best of what you have sorted and the bet moved to the front of the line the receiver will improve in sensitive. Do the RF deck alignment more than once over with a set of tubes. It will make a difference.

If the R390/URR receiver TM there is a procedure to feed both sides of the balanced antenna input from one signal generator wire through 2 each 68 ohm resistors, one to each side of the balanced antenna input. This set up lets you adjust the first antenna cap in the octaves of the RF deck. Any resistor pair between 50 and 120 ohms has been shown to work for this test setup. Grab a pair of resistors and do this alignment on your receiver at least once. While any single ended input setup will show no difference in output or signal to noise having these caps balanced will improve the minimum signal you can hear. If you ever get to feed the receiver from a balanced antenna, you will want these caps adjusted. The R390/A URR manual has never covered this alignment procedure.

I do use an antenna match box and band pass filter with my R390. It has a balanced output into the receiver. So I do this alignment.

Dave at Fair Radio provided you a working receiver. It works. What it needs now is within your ability to provide. The US Military taught thousands of guys and some gals to convert that receiver into an up to spec receiver with under 4 hours of hard work using only a screwdriver, spline wrench, volt meter, 600 ohm resistor, signal generator and one hand behind their back for safety. It took the instructors 50 weeks to teach the required theory and mechanical skills to each student. It took 40 hours to teach someone every thing the military mind knew about an R390/A and what was needed to service any problem that Receiver may ever have. Two Instructors taught me what I needed to know as part of a class of 10 guys. I used what I learned to fix

**receivers for 8 years back in 68 to 75. I have still not found a R390 problem I could not isolate and fix. The credit goes to the receivers. The engineers at Collins did an awesome job. For as many parts as these receivers have they are still flat reliable and simple. Thomas, there is not any problem in that receiver you cannot fix. Ask hear on the R390 reflector and you will more help and humor than you will need to get er done. Roger KC6TRU**

From Flowertime01 at wmconnect.com Mon Sep 26 21:46:24 2005  
Subject: [R-390] RF sub chassis slug rack problem

Jack,

If someone has not offered you an RF rack direct, ask for one here. All the RF racks are the same. You do not need the slugs or the keepers on top.

You see what your other racks have. Flat sides are not what you were expecting to see. Even if you get yours to freeup, they will hang again every time the flat rolls over to the rail.

If after asking you do not get an offer call or E-mail Dave at Fair Radio. They have the parts. Do not ask for more than you need. That just cost money and then you have parts setting not in circulation.

If you got some help, please put a thank you out here so we know the problem is resolved. You do not need to list the ugly details. Just a Thanks to someone (insert name here) for solving my silly little problem. So happy you had one to part with. Sorry I do not have one to offer you Roger KC6TRU

From Flowertime01 at wmconnect.com Mon Sep 26 21:52:32 2005  
Subject: [R-390] RF sub chassis slug rack problem

Barry,

I think you are on it here. If Jack has one of these, he may want to just get it replaced. Fair Radio did still have them in stock last Wednesday. You can get just the Rack from them. I see in the mail here that Jack has a couple offers for the part. Roger KC6TRU

Didn't some of the slug racks have non-rolling "bearings"? In other words, they were there just to keep the slug rack aligned, but didn't roll. I think some of my Motorola racks are that way. Perhaps your RF deck has a renegade slug rack from another deck? Barry - N4BUQ

From flood at Krohne.com Tue Sep 27 12:21:53 2005  
Subject: [R-390] Nolan Lee

Greetings,

Perhaps I missed some messages recently. Are we missing the Nolan Lee as we usually do every few months, or , has he become a casualty to the weather in the Gulf Coast? John Flood

From gregorymengell at comcast.net Tue Sep 27 16:11:29 2005  
Subject: [R-390] FS R390A

Good day . I have been asked by a friend of mine to post his exceptional EAC R390A to the list . It is extremley well maintained and has just been fully overhauled. It has the original meters and covers. It is fully operational, stable, has all filters and very sensitive. R 390A is in good cosmetic condition. He is asking \$1000.00. I am willing to transport up 100 miles for gas expense. This is a very fine R -390A.  
73 Gregory

From gregorymengell at comcast.net Tue Sep 27 22:40:20 2005  
Subject: [R-390] R390 For Sale

Earlier I listed an EAC R390A For Sale.Since then I was given a site where you can look at it at your liesure.Pls go to [briefcase.yahoo.com/stereo@pacbell.net](mailto:briefcase.yahoo.com/stereo@pacbell.net) Enjoy. 73 Gregory

From john at gumlog.net Wed Sep 28 20:33:03 2005  
Subject: [R-390] R-392 VFO End Point?

My R-392 VFO is almost 7Kc long between 000 & +000. Anybody remember a thread about setting the end point of one of these critters?

TIA for any info you can supply. I've searched my manuals from cover to cover and can't find any reference to the end point correction. TIA John, W4NET

From Flowertime01 at wmconnect.com Wed Sep 28 21:47:24 2005  
Subject: [R-390] R-392 VFO End Point?

John,

For luck the R390/URR R390A/URR and your R392 all share the same PTO.

I think 7 KC is still well within adjustment range.

If you are 7 KC long you may be needing to open the can, undo the heater wires, open the inner can and change the winding on a very small coil. Or add / subtract some small (2PF) caps.

Watch the mail here, someone is already looking for the archive thread and will post that for you also.

On the front of the PTO there are two cover caps. You want the inner one on the right between Z702 and the shaft. Behind cover cap 1 is an end point adjustment.

Like Alice, one way will make you longer (taller) and the other way will make you shorter (smaller). Can you screw 7 KC out of that adjustment? Try it before you go opening cans of wires.

If you have a frequency counter you are better off. You can make adjustments with the PTO hanging out of the receiver. If not then you have to

- 1.) remember where you are.
- 2.) Pull the PTO
- 3.) make and adjustment.
4. Remember if you went left or right



- 5.) put in the PTO
- 6.) set the PTO on one end
- 7.) dial off to the other end
- 8.) determine if this is better or not
- 9.) consider if next adjustment will be left or right
- 10.) consider how much to adjust
- 11.) repeat until perfect.

If you have a counter it just goes faster.

Dial the PTO to X.455 and draw a mark across the coupler and the frame. Carefully rotate dial If you go the wrong way you will hit the stop before you get 10 turns. So having learned which way to go, start over and dial it off in the correct direction We think clock wise is down in frequency and counter clock wise is up in frequency.

Think about the KC knob and the way the frequency conversion is done.

Rotate off 10 turns, line up your mark and see what the counter reads.

Every time you change the end span adjustment, the points will move.

So make an adjustment.

Line up for the counter at X.455

Mark the dial to frame

Roll off 10 turns

Line up the mark

Read the counter

You will either be getting closer or further off the exact 1Mhz

If you hit the end of the adjustment before you get exact there are two options

A.) accept what you get.

B.) Read some more help from the archives and prepare for some PTO surgery.

It is not hard to open the outer and inner can and do repairs. Good Luck with the fix. Roger KC6TRU

From Flowertime01 at wmconnect.com Wed Sep 28 21:56:10 2005

Subject: [R-390] R-392 VFO End Point?

John,

R392 were considered tactical radios and got treated different from the R390 receivers.

If your R392 did not work, it was sent away from you for repair. Your repair guy was likely a module swapper. If your PTO was out of spec, it was just swapper. For a long time PTO's just piled up out back of the Depot. Then someone invented a "portable" frequency counter and it was discovered that the PTO could be easily "refurbished". It is not amazing there is nothing in the TM about making what is a simple adjustment. We know there are several good things missing from the R390 TMs.

Back when there items were new, you could get 10 plus years on a PTO and never need to adjust it. Once you get yours set, it may never need adjustment again. It likely has never been adjusted in its life or maybe once or twice. Roger KC6TRU

From cfandt at netsync.net Wed Sep 28 22:27:55 2005  
Subject: [R-390] NOLAN LEE

wrote: He made it OK thru the storm but it seems he had a stroke a couple of >years ago and he doesn't remember most everything.

Man, I still am a bit bummed about this news about Nolan, Rich. I really, really enjoyed his stories and technical comments on the 390s and had wondered out loud to the list several times in the past couple of years as to where he is. Others occasionally asked too. Thanks for tracking him down.

He and I both knew of a really neat, small surplus outfit up here in NY State, near Rochester. I bought my nice R-390A/URR from that fellow back around 18-20 years or so ago and I believe Nolan had gotten several items from him too. The surplus dealer told me he got the 390A from an auction of stuff at the NSA. That surplus place is long gone now. Sigh . . . :-(

Sun, LA where Nolan lives is just above where Katrina tore up everything. I hope Nolan's property was spared for sure.

He sure had a bit of fun making himself out to be a "dumb" redneck at times and apparently enjoyed it too. But, by God, he sure was not dumb at all especially when it is observable how articulate he was from his writing and the way he did detail work on his 390s, TV-series tube testers, and R-1051s. I never got out of him exactly what profession he was in, but drug enforcement was vaguely suggested once in a while on the list. We seemed to have lost a good man.

One thing that came to my mind the other day: Is he aware of his website still being up and are the hosting charges still being paid? There is one heck of a lot of important info on those pages which obviously took a LOT of work to develop and should not be lost. Should somebody at least mirror the complete site just in case it's forgotten or something and is at risk of being shut down and in fact potentially lost? Peace, everyone. -Chris F. NNNN

From joe.fallon at philips.com Thu Sep 29 10:18:31 2005  
Subject: [R-390] Whitewater mechanical filter

Came across a Whitewater electronics 8KHz filter P/N F455 X8 in the same form factor as the Collins filters in the R390A. Anyone familiar with this part and how it stacks up against the Collins brand? Joe WA1IWQ

From barry at hausernet.com Thu Sep 29 20:52:58 2005  
Subject: [R-390] Xtal Question

Hi Gang

Can anybody tell me -- is the 17 MC xtal in the calibrator/oven interchangeable with the one in the xtal osc. deck, or is some parameter different? I think they're the same standard mounting style. Barry

From jlkolb at jlkolb.cts.com Fri Sep 30 02:08:26 2005

Subject: [R-390] Whitewater mechanical filter

wrote: >Came across a Whitewater electronics 8KHz filter P/N F455 X8 in the same  
>form factor as the Collins filters in the R390A.

Don't have any in stock at the moment, but the Whitewaters I've seen look identical to the Collins. I believe they put their labels on filters manufactured by Collins. Motorola filters, on the other hand have a different style terminal, clearly not an exact copy. John <http://www.jlkolb.cts.com/>

From Flowertime01 at wmconnect.com Fri Sep 30 17:08:30 2005  
Subject: [R-390] Xtal Question

Barry,

**The 17MHZ crystals are the same and interchangeable. Roger KC6TRU (FALSE)**

From dmclaughlin3 at neo.rr.com Fri Sep 30 20:56:55 2005  
Subject: [R-390] Xtal Question

wrote: Can anybody tell me -- is the 17 MC xtal in the calibrator/oven interchangeable with the one in the xtal osc. deck, or is some parameter different?

Barry,

**The one in the calibrator/oven is a CR-27/U type. Crystal specs are at 75 deg C and it should be operating at this temperature or the frequency will be off.. The ones in the crystal oscillator chassis are CR-36A/U type. Speced at room temperature. Some one on the list had the MIL specs in pdf format on their web site. Dennis McLaughlin**