

R-390 Reflector February 2002 Edited

From Llgpt@aol.com Fri Feb 1 00:02:53 2002
Subject: [R-390] Re: [Hammarlund] Boys Toys

In a message dated 1/31/02 9:41:38 AM, tbigelow@pop.state.vt.us writes:

<< Yep, I did Sandy - was pretty much what I expected, too - lasted all of 3 seconds or so. Two SP-600s in a rack, looked like the 'Northern' converted models. Nice and crisp, decent color, too. >>

You got it correct, they were Northern Radio modified SP-600's. I've seen racks full of them in Chicksands a listening post in England in the mid 50's. My father used to go up there regularly from just outside london to do teletype and Crypto work. I'd tag along many times. Les Locklear

From ba.williams@charter.net Fri Feb 1 00:41:15 2002
Subject: [R-390] Re: Hammarlund in the Subject

Bill, There are too many points that you are missing here. You are talking about programs (Outlook Express), and we are talking about operating systems (Mac OS and DOS) and shell programs (Windows). I will give you a chance to reconsider your 'engage brain before using keyboard' comment once you figureout the subject of the thread. You can even buy me a beer to get back on my good side.
Barry

p.s. I'm leaving Hammarlund in the subject line too. I'm really going to get some folks mad at me now!

From ba.williams@charter.net Fri Feb 1 00:49:36 2002
Subject: [R-390] Re: Hammarlund in the Subject

Hammarlund

> I was with Steve Jobs at the NCC (National Computer Conference) when the Xerox > machine was first > displayed with a mouse and iconic GUI. Steve said right then it was a great > idea. > > Michael

Hammarlund

Some say that the Lisa was mostly an experimental model that went into limited production. I know that you had to do some upgrades on it to get it to run the first generation of Macintosh software due to code incompatibilities. Sort of like the 6 byte code incompatibility with IBM computers and clones, if anyone remembers that fun problem.

I can't remember the name of the Xerox system. Barry

From hbreuer@debitel.net Fri Feb 1 01:45:02 2002
From: hbreuer@debitel.net (Heinz und Hannelore Breuer)

The Lisa was not an experimental model it was really sold to customers at a prize of about \$10k. I was an Apple dealer back then but we never sold a Lisa. The Lisa faced two major hardware upgrades and a software upgrade. It was finally renamed Macintosh XL. Later we got two service customers who had a

Lisa. One customer used his Lisa until his retirement about 1995. He donated us his Lisa but I gave it away to a collector friend when I closed my company. The Apple II was our main produkt well into 1985. The Macintosh took over 1986 after the introduction of the Mac Plus two years after the first Mac was released in 1984. Those were the days... Now back to Hammarlund ... oops R-390 73 Heinz DH2FA, KM5VT

From DAVEINBHAM@aol.com Fri Feb 1 03:16:54 2002
Subject: [R-390] Recap kit Update- Wife back in hospital -SNOW

My fellow R-390 Drivers,

Inquiries about the recap kit keep coming in each day. The most often asked question is do I have any left ? Answer is yes. I have 8 kits with in-the-can electrolytics and 8 kits with under-the-chassis electrolytics. Normally I ship same day I get your check but due to my long suffering wife being back in St. Vincent's hospital, I will try to ship in 2 days of receipt of checks. Unless the weather girl is right and we get SNOW. If we get SNOW, I will ship soon as it melts. When it SNOWs in Birmingham, Alabama no one in his right mind drives anywhere. And in spite of the well known motto of the US Post Office, mail delivery is usually suspended in SNOW emergencies. It only SNOWs here about once every 2 or 3 years so no one has any experience driving in it. Moreover, the police shut down the interstate hiway system. The surface streets become bumper car city. Twenty to thirty car pile-ups are everywhere. So, I stay home when it SNOWs. Fortunately, the hospital is less than 2 blocks away so I can walk there to visit my wife. And most important, THANK YOU to all the nice folks on this list who have sent me email about my wife. Belive me, it helps.

Kindest regards,
Dave

R390A capacitor kit.

I have put together a ReCap kit for the R390A.

It consists of:

(13) 0.1 ufd

C256, C309, C504, C505, C517, C521, C528, C531, C536, C538, C543, C547, C548

(7) 0,033 ufd

C275, C529, C533, C534, C541, C545, C602

(7) 0.01 ufd

C549, C553, C601, C604, C605, C607, C608

(The above are Orange Drops or equivelent.)

(3) 30 ufd 300 v electrolytic C603A, C603B, C603C

(2) 47 ufd 300 v electrolytic C606A, C606B

(The above electrolytics have axial leads. You can wire them under the chassis and leave the originals in place to retain stock apperance. Or you can order capicators small enough to fit inside the cans of C603 & C606. Just remember you will have to deal with the Dreaded Black Ukkumpucky to get the guts out of the cans of C603 & C606. If you do not specify at time of your order, the under the chassis capacitors will be shipped.)

Finally, one each of :

0.047 ufd 100v C227
8 ufd 30v tantalum electrolytic C609
50 ufd 50 v electrolytic C103
0.22 ufd 100 v C101

I cannot find a source for:
2 ufd 500v C551 oil filled paper

so, I will include a very high quality poly cap. I have installed one of these in one of my R390A's and I can say I cannot hear any difference. They work great. This is the AGC capacitor.

Send orders to:
Dave Holder
Biological Instruments, Inc.
820 South 29 th. Street
Birmingham, Alabama 35205-1004

From tbigelow@pop.state.vt.us Fri Feb 1 15:36:46 2002
Subject: [R-390] SBE, make of Orange Drops, to be sold...

Dave's post reminded me of something I thought might interest the crowd here. SBE (makers of the famous 'orange drop' caps) is in the process of being sold, or it may even be finalized by now. When my pal who works there told me this, I was nearly in a state of panic, but he reassured me that the new fellow intends to keep things just as they are and even (hopefully) improve business. Seems the new owner-to-be is also a ham, so I'm going to see if I can catch up with him at some point for a chat about products. Apparently Perry Browning (the previous, or soon to be previous owner) is staying on for a while to help out. Perry is the one who created SBE from the remains of Sprague's Barre, VT plant and took over the orange drop line as well as others.

So, while our beloved OD's appear to be safe and in good hands, I was reminded that they are but a small part of the business. I'm not sure what else they sell, but a lot of items I'd guess. Sure would be nice if we could get 'em to make the twist-lok electrolytics again, huh?

I'll dig around for the email to see who the new owner is, if anyone is interested. I think he had a 7 or 8-area call, not that this indicates where an op is from anymore. But I won't go into that... 73 de Todd/'Boomer' KA1KAQ

From jlap1939@yahoo.com Fri Feb 1 15:45:50 2002
Subject: [R-390] No, I am not

Friends, I owe an apology for suggesting that I use the 390 "perfectly"...Dumb... Few if any do anything perfectly... However, I wonder if I deserved the two public attacks for the mistake.....I will do better in the future. John

From tbigelow@pop.state.vt.us Fri Feb 1 15:56:05 2002

Subject: [R-390] Recap kit Update- Wife back in hospital -SNOW

This must be a hoot to see, you should sell videos! We got over a foot of snow last night, then it changed to freezing rain and sleet for my drive in to work. Made it in with 3-6" of snow and slush on the interstate, closer to a foot when I hit the offramp into town. Thought I was late, but I actually beat the crowd since gov't offices had a delayed opening.

The biggest problems we have up here are with the out-of-staters(referred to as 'flatlanders' and 'citiots') from outside New England just have no concept of using their noggins when conditions change. They just keep right on trying to barrel down the highway at 80mph with their lame all-season radials, then wonder why they end up as a lawn ornament out in the median or over the bank. You don't have to creep along at a snail's pace generally, but you can't drive like you're at LeMans, either.

I came in around 40-60mph with no trouble. I 'spect you folks could get around just fine with the little dustings you get down there. Nothing that a good set of tires (with an aggressive tread) and 4WD can't handle. Oh - and a little bit of practice, too. ;)

Now, this is no joke - my current Hammarlund SP-600 was given to me by a fellow who was carrying it in the back of his little japanese car as extra weight for added traction! I happened to stop into a place nearby here for a cup of coffee and he was there, asked me if I wanted an old radio. Seems he'd had it given to him and then didn't want to try to take it out of his car. I even offered to pay him for it and he said "No! If you just GET it OUT of there for me, you can have it! I insist!".

Glad I bumped into him in the spring. ;) 73 de Todd/'Boomer' KA1KAQ - from the land where boatanchors are sometimes used as ballast

Ok. Are we gonna start a thread of strange tales of "How I got my radio."???

Ok. I'll start (grin):

The RT-1B Clandestine transmitter at K1LKY.

At an antique radio club monthly meeting, one tailgater had an odd, very heavy transmitter.

Roy: "What is that gadget?" (my often-used lead-in to start negotiations)

Seller: "If I told you I'd have to kill you."

Roy: (after a cursory look) "Looks like a transmitter."

Seller: Yup. Might be.

Roy: "What do you have to get for it?"

(Negotiations concluded in a few minutes) The thing turns out to be a 100 watt, 90-pound transmitter used by embassies and CIA folks in the 50's and 60's. It bears no type marking or manufacturer label. I know of only three owned by people who will admit to it. See the thing itself with many details at: <http://www.geocities.com/saipan59/clan_radio/rt1.html>

(If any one has or ever sees a power supply, one of the other owners would LOVE to hear about it.)

Roy

From amcdonald@toyodatrw.com Fri Feb 1 16:56:34 2002
Subject: [R-390] Line Meter wiring

Hello All, I have a blue-striper which I received without meters. In attempt to hook up a meter I found that 3 wires were cut for the line meter. I can only find 2 wires listed to connect to the meter on a schematic that I have, (no wire color code specified). My wires come out of a tightly bound pack. They are white wires with a single stripe each of black, red and orange. The black one seems to originate from somewhere low in the radio. I assume that 2 of the wires hook to a single post on the meter. Does anyone know the correct setup of these wires to the meter? Thanks, Alex

From wa9msd@ggnet.net Fri Feb 1 21:13:41 2002
Subject: [R-390] 26Z5 vs 26Z5W

Hi Guys,

FYI, I ordered a couple of these tubes Monday from Alltronics (\$8 each per their Website) and spoke with the owner directly. He mentioned that he had orders for over 90 of these tubes and that he had no problem with stock (take that to read he has more but not sure how many more). BUT he warned me that he has to retrieve them from his warehouse and test them so he said he would not be shipping orders until Feb 8th or 11th.

So if you ordered any of these be patient they will be on there way soon. 73, Joe, WA9MSD

From cbscott@ingr.com Fri Feb 1 21:27:08 2002
Subject: [R-390] How I got my radio.

Hey Roy, Great news! I saw a picture of one of those power supplies! It was on that web page you gave. Does that other owner want me to tell him/her about it? Barry(III) - N4BUQ

From wy6k@yahoo.com Sat Feb 2 01:04:53 2002
Subject: [R-390] How I got my radio.

The link you posted for us to use to see this wonder - it no workie.

From DAVEINBHAM@aol.com Sat Feb 2 05:25:53 2002
Subject: [R-390] Thank You

Dear R-390 Drivers,

Thank you for all the nice e-mails you have sent to me since last night. I came home around lunch time today and printed out several of them and took them over to the hospital to my wife. Right now her vision is so poor from complicitations of the medicines she is taking that she could not read them. (Her doctors say that is temporary and, hopefully, her vision will eventually be restored to normal.) So, I read them to her. They seemed to cheer her (and therefore me too) up a lot. She told me to thank all of you. So, thank you. Those kind words mean more to us than you will ever know. Oh, yeah. Gotta make this R-390 related in some way. Seems several of you are already snowed in and asked me to reserve a recap kit in your name until you can get to the post office. OK, done. There are still 6 recap kits available with under-the-chassis capacitors and 5 for in-the-can ones. I think most of you realize I do

not do the recap kits for the meager profit involved but rather for the satisfaction I get from it. Every time I ship a recap kit I say to myself

" Well, Dave, maybe you have made a small contribution to keeping another one of these old radios alive." Whether it is really true or not is probably immaterial. It makes me feel good. So, thank you for buying the recap kits.

I have personally answered many of the nice e-mails concerning my wife, but there were more of them than I have time to answer right now, so I just want to say to all of you on this list " THANK YOU". You have brought happiness this day to one very sick lady, my wife.

Kindest regards, Dave & Margaret Holder Birmingham, Alabama USA

From w7itc@hotmail.com Sat Feb 2 08:46:27 2002
Subject: [R-390] MB, Mini-BNC. Amphenol 45525

I have found a couple of sources of the mini-BNC connector.

<http://hdcom.com/mbconn.html>

<http://www.surplussales.com/Connectors/MB.html>

I have a couple of Amphenol 45525 MB's new in the package. having looked them over I hope I never have to put one together the center pin is tiny, and looks to be a real PIA to solder. The coax you must use is also a pain to work with.

Surplus Sales Of Nebraska (the second URL) has a rather bad reputation around here, I have never purchased anything from them so I have no first hand experience with them. A couple of My friends have and not been happy with the outfit. Ken

From: liber.fab@iol.it (Fabio Liberatori)
Subject: [R-390] 725/URR

Hello, I need some info and advice from the kind experts here...

I have the opportunity to buy one 725 in fair condx, and would like to know its approx. price (range).

Actually I was looking for a 390 non-A to add to my 390A, but I have found this one, and would like to know your opinion : is the 725 similar as performer to a 390 non-A ?? What are the pros and cons of this radio ?

Sorry for the bandwidth, but I have never seen one.

Best 73, Fabio, I0LBE

From courir26@yahoo.com Sun Feb 3 14:51:00 2002
Subject: [R-390] 725/URR

Fabio and Group,

The R-725/URR is a R-390A with the main difference being the replacement of the IF deck with a R-390 style tuned circuit IF deck. This was for use in DF sets. The radios were modified by Arvin and Servo, with a few modified by Motorola. There is also a PTO hum bucking mod. Make no mistake, the IF deck in the 725 is not interchangeable with the R-390 (although they look 99.5% alike).

The R-725 is relatively rare, less than 1000 made I estimate, so it is worth more than a 390A on the market.

For a given condition, given our economy etc, I'd say about 50% more than the equivalent 390A.

I had one and regret selling it because of the great sound it produced, so I made my own and that is what I use now.

73 Tom N5OFF

From courir26@yahoo.com Mon Feb 4 13:10:34 2002
Subject: [R-390] How to Make a R-725/URR
Message-ID: <20020204131034.16472.qmail@web13802.mail.yahoo.com>

Gentlemen?

Someone asked me how to make a R-725/URR.

Ingredients:

- R-390A
- R-390 IF deck
- two IF-out adapters from the back of 390A junkers
- two short cables with BNC's on each end
- my article from Electric Radio, contact Barry at er@frontier.net

Simply follow the wiring modifications I described in the article (schematic is included) and you will soon be enjoying the mellow sound of the R-390 IF deck (or just get a R-390).

The theme is to modify the filament wiring in the 390IF to work with the lower voltages provided by the 390A PS. You also have to drop the B+ on one or two tubes to meet the gain intents for the R-390IF. The adapters will allow crossover for hooking up the signal cables.

The result will be a 390 IF deck that you can drop into any R-390A anytime you want that good sound (see also Chuck Rippel's simple audio mods).

Technically this is not a complete R-725 mod as it does not address PTO hum bucking.

Questions welcome.

73 Tom N5OFF

From w7itc@hotmail.com Tue Feb 5 18:56:18 2002
Subject: [R-390] great site

I Found a great Military surplus site.

<http://www.armyradio.co.uk/>

Among the things for sale are Racal RA-17 HF receivers, wow what a looker. LS-206A/U Speaker box for the R390. A Murphy B-40 communication receiver, this radio has a heavy duty industrial/military look.

Ken

From tbigelow@pop.state.vt.us Tue Feb 5 19:06:20 2002

Subject: [R-390] great site

They had a really nifty Zeppelin radio on there a year or so back, like the one used in the Hindenburg. Never did find out how much they were asking, but it sure was interesting. Good condition, too. B-40* is indeed a heavy-duty rig, used by the Brits in WWII on ships and the likes. Was trying to get a deal going with a fellow over there to trade my spare SP-600 for one with him, but it never came to pass. Damned thing would probably cost \$500 or more to ship here.

Boomer

To All,

I refer to The FAQs, Pearls Of Wisdom/Power Supply, compiled by Wei-Li. This is a compilation of information by subject that is easy to access.

<Http://www.r-390a.net/pearls.htm>

Within the power supply section, around the April 2000 time frame or about half way through the P/S section. Dr Gerald Johnson describes a solid state replacement that he has "scratched out on paper with components chosen. Its not been tested." Dr Jerry indicates that his circuit would use a couple of IRF820s three zeners and a TL431A1Z plus some resistors and caps. There is additional follow-up discussion from Barry Hauser where he describes a solid state replacement for 6082s in an 391 he had acquired.

I recall that within the past few months there has been some talk on this topic but can't seem to find anything specific on the circuit. What I would like to know is where to get more info, a schematic and a list of parts. Also has any body tried Dr. Gerry's circuit.

I am restoring an R-390 and have decided to go the solid state route for the 26Z5 and 6082 if I can get the above information. I have ordered 6080s to replace the 6082. I have selected a filament transformer, the Magnetek VPP12-4400 or the Hammond 183K12. If everything works out as planned all this will be reversible using plug and play modules.

I know all this has been covered before but discussion would be appreciated. Al

From Barry Hauser <barry@hausernet.com> Wed Feb 6 01:17:11 2002

Subject: [R-390] [Fwd: R-390 Replacing 6082 With Solid State]

Hi Al & gang:

The whole shebang is the subject of Issue #52 of The Hollow State Newsletter. Dr. Jerry had been working out a replacement (on paper), then I happened to acquire an R-391 (electronically the same as the non-A) which was heavily solid-stated, including a fairly simple replacement for the 6082's. This used a couple of zeners and a dual Darlington pair. A fed Dr. J. the info to sort of "reverse engineer" the circuit. He authored the article and included a list of suitable currently available transistors.

While the mods on this particular R-391 were not done reversably, the 6082 replacement circuit could be built on a small board that would fit right in the 6082s' "cubicle" with a single octal plug making the connections -- or a few hard wired leads..

You can get a copy from Ralph Sanserino for \$2. His email address is sanser@gte.net

Or, if you're in a hurry, being editor of HSN, I have an emailable copy on file right here I can shoot over to you. However, there's a catch -- an underhanded sleazy weasel deal of the kind the Fifth Estate may sometimes arrange. You have to build a reversible plug 'n play, then write it up (with my help) for a followup in a later issue. I'm making this big time \$2 bribe because right now I need authors more than subscribers.

So Al, whaddya say, hmmm? Barry

From beral@videotron.ca Wed Feb 6 04:03:31 2002
Subject: [R-390] [Fwd: R-390 Replacing 6082 With Splid State]

Barry & All,

Some of us have a big foot but still manage to get it firmly lodged into an even larger mouth. So I will take you up on your offer and will also send Ralph a couple US 1 dollar bills.

Just one snag. The R-390 is all in pieces now. Cleaning up the pieces, replacing resistors and all those other good thing. The front panel needs repainting and that's a spring project. Spring comes a bit late north of you northern border. The bottom line is that I would not be able to get the project tested in the radio until the summer. So if you can wait until then you have a deal. I have lot of free time now to do the building. So Barry, if you email me the info I can get started within a couple of days.

BTW how and to whom you subscribe to the Hollow State Newsletter. Al Jeffrey L. Adams

From rbethman@comcast.net Wed Feb 6 20:33:24 2002
Subject: [R-390] Perhaps Dumb question

My R-390A/URR just blew F103, 1/4 amp. The rig is now dead in the water. Before I go into my maniac mode, can someone(s) suggest a narrowed down search? Obviously the IF deck is dead too.

Bob - N0DGN

From R390rcvr@aol.com Thu Feb 7 13:11:30 2002
Subject: [R-390] removing cigarette smoke

Dear List:

I need suggestions on how to safely remove smoke from the front panel of a R-390A. Silk screened. The nicotine stains are pretty bad, and I don't want to remove the silk screening along with the stains. Any safe, magic formulas out there?

Thanks Randy

Randy,

Tar and nicotine is pretty easy to remove with safe stuff like dishwashing liquid and water. It will start to loosen up and run off right away. My worst residue to remove has been on the little plastic tube radios that were normally kept in or near the kitchen area. Those have years of grease coated on the cases and require at least 3 days of soaking to start loosening up the stuff. Nicotine is much easier to remove.

I would start with a fairly heavy concentration of dishwashing liquid applied over a towel to catch the runoff. Be careful to not scrub too hard until you see how durable the silkscreened paint is. You may have to do this quite a few times until you get down to bare paint. Barry

I don't know of any magic bullet. Warm water, mild soap, paper towels for broad areas, Q-tips or the like for tiny ones.

I know others have recommended DuPont 409, and it does work, but it also eats some paints a little bit. Mike Andrews

From Barry Hauser <barry@hausernet.com> Thu Feb 7 14:45:48 2002
Subject: [R-390] removing cigarette smoke

Hi Randy:

First thing to try is just some plain soapy water -- from regular Ivory type bar soap. The water should be very warm and use a soft cloth to avoid abraiding the silk screening.

If that doesn't seem to work, waterless hand cleaner, such as GoJo should work safely. I've used that with success -- it doesn't lift the paint or dull the surface. But be sure you get the regular, original version of the waterless hand cleaner. They have two types -- original non-abrasive, and with abrasive additives, like pumice. You don't want the latter. Barry

From R390rcvr@aol.com Thu Feb 7 15:03:54 2002
Subject: [R-390] Smoke removal

Thanks for all the advice guys. I may try different techniques in different areas and compare. I am removing the knobs and cleaning them, and the underlying area. Should be a major improvement in appearance. There are even nicotine stains on the chassis! Randy

From davidmed@sbcglobal.net Thu Feb 7 20:49:05 2002
Subject: [R-390] [r390] Limiter Problem

I have an R-390 which has a limiter problem. With the limiter off there is horrible audio distortion. As soon as it is turned on the radio sounds normal. I seem to remember some discussion of this problem a while ago re the R-390A. Would appreciate some suggestions. Regards David Medley Check my Web Page at: <<http://www.davemed.info>>

From courir26@yahoo.com Fri Feb 8 01:23:18 2002
Subject: [R-390] Perhaps Dumb question

For dumb questions, you have come to the right place.

You may want to gather up a bunch of fuses, or a 120V light bulb in its place.

Try powering up the rig with the modules out, until you isolate the module with the problem.

Once you do that, look for a bad capacitor that bypasses the circuit that is on that fuse, it is B+ if Im not mistaken.

Good luck

From ba.williams@charter.net Fri Feb 8 01:27:34 2002
Subject: [R-390] Send your 7591 power amp tubes to me

Roy, Purchase, what purchase? I ain't making no stinkin' purchase. (g)

I run free ads in the for sale bulletin that comes out every week in several sections stating that I am looking for tubes, old equipment, radios, etc for restoration as a hobby. I get some calls from people trying to sell something of grandpa's for mint prices, but most calls are from people wanting the BA stuff we love to find a good home. The receiver was offered free if I drive an hour to Montgomery to get it along with a Heathkit VTVM that the guy built. The guy is moving and remembered reading my ad last November. He is a very interesting guy who flew B-29s over Japan in the big one. He has already told me a lot of neat stories over the phone.

I guess I've gotten around 80% of my stuff from those ads for free. I've paid very reasonable prices for collections of tubes here and there. This receiver isn't worth mortgaging the family farm over. Someone has already written that the 7951's are known to have a short life. It appears that a mod over to the 5881 is in order....one day maybe. At least the reciever won't be thrown out on the street when they move!!! Who knows, maybe someone will call with a barn full of 7951's one day. Those ads are free and I'm going to keep on running them every week. Barry

From w7itc@hotmail.com Fri Feb 8 01:47:54 2002
Subject: [R-390] removing cigarette smoke

I have used tooth paste, the kind that cleans up tobacco stained teeth. This works very well on plastic, it should work on the paint as well. use a very soft tooth brush, water, and elbow grease. One thing about this if it doesn't work no harm done. Ken

From jetemp01@athena.louisville.edu Fri Feb 8 03:59:36 2002
Subject: [R-390] [r390] Limiter Problem

Hi David,

I just solved a similar problem.

On Chuck Ripples site, there is a section in the "technical" area that discusses "frequent problem" areas. In the discussion, there are mentioned three capacitors that affect the limiter, that when replaced, will solve the problem. Check out <http://www.r390a.com> Jim

From kurt.brandstetter@teleweb.at Sat Feb 9 02:42:28 2002
Subject: [R-390] Collins 51J-4 Connectors

Hello from Vienna !

My Collins 51J-4 (Ser. No. 2954) has 3 connectors on the rear panel that I cannot find on a picture in the manual I have.

The green is named "Diode Load" , the white "AGC" . Whats the use for the diode load and especially I would like to know if these are original (they look original and also the printing on the backside for these 2 connectors. They are situated on the right side of the rear panel left and right of the ZF Out.

On the left side of the rear panel there is a (for me) unknown connector. It is an old 75 Ohm connector which I saw in use for some video equipment years ago at a TV station. I don't know what this connector is used for.

Can someone of you give me some help and look for the pictures at:
<http://members.chello.at/kurt.brandstetter/File/PIC1.jpg> and
<http://members.chello.at/kurt.brandstetter/File/PIC2.jpg> and help me to identify these connectors and give me some information if they are original

There is also a page with pictures from my 51J-4 under the link "Collins 51J-4" under receivers in the left frame of my homepage (after entering the first page) at: <http://www.swl.net/oe1002419> .

You can also reach the 51J-4 page directly via: <http://www.swl.net/oe1002419/Page2b51/51.htm>

Thanks in advance for your help ! Kurt

--

73 de Kurt OE 1002419

From Barry Hauser <barry@hausernet.com> Sat Feb 9 06:58:39 2002
Subject: [R-390] Collins 51J-4 Connectors

> Hello from Vienna !

Hello from Long Island Kurt!

>

> My Collins 51J-4 (Ser. No. 2954) has 3 connectors on the rear panel that I > cannot find on a picture

in the manual I have. Uh-oh! Professional looking, yet undocumented. Might still be classified. Turn encryption on.

>

> The green is named "Diode Load" , the white "AGC" . Whats the use for the > diode load and especially I would like to know if these are original (they > look original and also the printing on the backside for these 2 connectors. > They are situated on the right side of the rear panel left and right of the > ZF Out.

They look like either pin jacks or banana jacks. Are they? Could be for ease in testing/alignment. The diode load would have the same use as on the R-390(x)'s and that's familiar -- like the front mounted diode load jacks that appear on some R-390A's. The AGC jack may also be for ease in adjustment/calibration, unless this unit was modified or special order for diversity use or something. Are there any additional markings, tags, etc. or a suffix letter on the serial number? Might just be a very professional modification. Could the lettering be dry transfer. That usually doesn't hold up unless coated with something.

>

> On the left side of the rear panel there is a (for me) unknown connector. It > is an old 75 Ohm connector which I saw in use for some video equipment years > ago at a TV station. I don't know what this connector is used for.

Looks vaguely familiar but it's been a while. Did you trace the connector -- probably a length of coax going somewhere, possibly jumpered over to the terminal block just to provide a better, fully shielded alternative. If that's a "studio pro" type thing, perhaps this rx was prepared for use in broadcast work -- newsroom monitoring, diversity for a relay station, etc.

>

> Can someone of you give me some help and look for the pictures at: >

<http://members.chello.at/kurt.brandstetter/File/PIC1.jpg> and >

<http://members.chello.at/kurt.brandstetter/File/PIC2.jpg> and help me to > identify these connectors and give me some information if they are original

I also noticed the SO-239 -- I don't think these were original to the 51J-3/4, R-388/A, etc. were they?

>

Might also be a special "cold war" model. Don't mind me. It's just when I see "Hello from Vienna" I hear a zither playing in the background ding-da-ding-da-ding ... da ding ding-da-ding-da-ding ... da ding. (Third Man Theme ;-)

I would close with something like "hope this helps", but, alas, I've been of no help at all ding-da-ding-da-ding ... da ding <sigh> Barry

From w9wis@charter.net Sat Feb 9 15:26:31 2002

Subject: [R-390] 2-01C diode for EA 53 diode

I just picked up a nice replacement HP 410B VTVM. I need an extra AC probe tube diode and the new HP 410B is a later version of the one I had and it doesn't use the 2-01C (I have one of these)... it uses the EA 53.

I have a NOS JAN Eimac 2-01C that I'd like to swap for a NOS EA 53 if anyone can help me out.

Mike

From dmartin@visuallink.com Sat Feb 9 13:47:16 2002
Subject: [R-390] Re: [Collins] Collins 51J-4 Connectors

Hello, Kurt.

The diode load and AGC outputs are not really unusual. Many, but not all, J4's have them. I recall an e-mail thread of long ago that attempted to establish their appearance in the J4 production history to a serial number. I think there was some evidence that units with a serial number higher than about 1700, or so, came with the two extra back panel jacks, but I cannot remember with certainty. The SO-239 jack was also standard on (most ... maybe all?) J4's, certainly all I have seen. My serial number 1801 has the diode load and AGC jacks, too. The J4 is a fine receiver and is among my favorites.

The third jack on the back of your receiver IS interesting, though. If it is an F-type, does that connector even date to the age of the 51J4? Hmmm... Dan WB4GRA

From ai2q@adelphia.net Sat Feb 9 17:46:29 2002
Subject: [R-390] Re: [Collins] Collins 51J-4 Connectors

Hello Kurt and Dan:

My 51J-4 has the diode load and AGC jacks, and they're the same color. They serve the same purpose as they do in the R-390A, and are almost in the same parts of nearly identical circuits as used in the '390-A (wasn't the 51J-x Series the forerunner to the R-390 Series?)

The set I have uses an SO-239 for RF ant. input, and a second SO-239 feeds 500-kc. IF out, which is where I have my Hammarlund HC-10 product detector and IF strip connected.

-- Vy 73, AI2Q, Alex in Maine .-.-
From shadow@gilroy.com Sat Feb 9 18:08:35 2002
Subject: [R-390] USM 25 // Question

Hello from Silicon Valley..

I was rooming around the flea market friday morning hunting for Audio and RF Gear. I found a USM 25F / SG 103 generator with the cover. Not matching numbers, but I'm no collector. The cover did not have any accessories at all. ZERO.

When I arrived back at the Lab. I just had to look inside. Just beautiful inside. If it has been serviced and I'm sure it has been many times for its age. It just perfect inside. There is not even a scuff on any of the screws. Someone knew what they were doing. Defiantly more beautiful on the inside then outside.

So.... I powered it up with a varaic and it looks to be working unit, very correctly. Hard to believe something that old can work so well, but that why the are called precision test equipment.

I need to know if any of the accessories even necessary for general use?

If so... Then I will look at more flea markets or build them. I just need to know what they are.

I know the USM 25's are popular with the group. Seems like a good place to ask a question.

I have had lots of military stuff in my life, just not many signal generators.

The best part is that it came from a seller I knew. I always said hello and looked at his booth, even when I knew there was nothing I wanted. He chased me down as I walked by, pulled me to his booth. Just pointed and said... "This is yours, take it with you and make sure you do"

Sometime.... Just being nice to people has its rewards..

Thanks Guys.. For any information you can supply... Will be helpful.

~~~~~  
From Bob Camp <bob@cq.nu> Sat Feb 9 19:16:38 2002  
Subject: [R-390] USM 25 // Question

Hi,

I have seen a variety of gizmos in the cover of the USM 25 series generators. They more or less fall into three categories:

- 1) Connector adapters - stuff to go to BNC, N, TNC. Things you probably already have.
- 2) Cables with pads on them - hmmm, got a cable, got a 20db pad ....
- 3) Radio adapters - radio specific matching networks to correctly put a signal into a given radio.

The first two categories are no big loss. The stuff you have already is just as good as what came with the generator. The third category only matters \*if\* you have the radio in question. One example is an R-390A and the specific adapter to drive it. Almost inevitably the "fully stocked" USM-25 always has every adapter except the one you need. Sounds like you got a good deal. Enjoy! Bob Camp KB8TQ

From davidmed@sbcglobal.net Sat Feb 9 21:18:02 2002  
Subject: [r-390] R-390 audio problem solved

I have solved the audio distortion problem in my R-390. Turned out to be a little more difficult than first thought. Anyway I have written it up and put it on my web page for future reference. Regards David Medley Check my Web Page at: <<http://www.davemed.info>>

55. Definitely an "export" model.

Tom

From R390rcvr@aol.com Sun Feb 10 00:20:26 2002  
Subject: [R-390] Alan Douglas

Hi guys:

Does anyone have an email for Alan Douglas, of tube tester fame? I have a question I am trying to resolve. The other thing that might help is to check in his Tube Testers and Classic Electronic Gear for me. I have tried the solid state conversion for one of my Hickok. It tested OK in another Hickok, but provides no DC output when doing the calibration checks. Roy Morgan was nice enough to help me with the layout, but I must have somehow goofed it up, and would love to check out the original source in regard to how to set it up.

I looked at Nolan's site for his version of the Douglas mod, and that is what I tried, no luck.

Thanks

Randy

From anchor@ec.rr.com Sun Feb 10 00:44:28 2002  
Subject: [R-390] Alan Douglas

Hi Randy,

I've got his email addr here "somewhere". After a cupla HD crashes, I'll have to search some. I could give you his P.O. mail addr probably easier - he & my wife went to HS together & he still lives in the same place (we've moved abt 10 times). I swapped some gear with him 2 or 3 yrs ago - wow, what a collection of neat stuff he has. I've got the book, but he's the guy to tell you how to set them up. I'll ck later tonite. 73, Al, W8UT

From courir26@yahoo.com Sun Feb 10 18:57:53 2002  
Subject: [R-390] OT, S-Line on "Glass Bottom Boat"

Sorry for OT post, but I took a peek at the above 1966 movie starring Doris Day. Many closeup shots of WE S-Line, also QSL cards of W6IYH, W6JTI and other 6's. 73 Tom

From Llgpt@aol.com Mon Feb 11 01:31:56 2002  
Subject: [R-390] cross post New Hammarlund Web Site

Check out the updated information on the SP-600 models.

Also photos of rare SP-600JX-21A and a SP-600VLF variant.

<http://www.hammarlund.info/>

Thanks Don. I've been plodding along on that site for a good while and figured that it was pretty much common knowledge. The MIL-E-1\* tube spec manual that I posted on my site back in 1998 originally came from there if I remember right.

Or maybe it was the DSCC site. They've got a mess of documents online too. That's where I originally pulled the specs on the R390A crystals. Here's the shortcut (that has worked for over two years) to that page.

<http://www.dsccl.dla.mil/Programs/MilSpec/ListDocs.asp?BasicDoc=MIL-PRF-3098>

Here are Nolan's instructions for another site:

The key is to click on the LEFT of the page: "QUICK SEARCH" this requires no login or account. - Roy Morgan,

From Richard.McClung@Dielectric.spx.com Tue Feb 12 20:37:56 2002  
Subject: [R-390] AN/USM-118A/B

YOU MIGHT ALSO LOOK HERE FOR SOME INFO/DATA:

<[http://navymars.org/reg5/tech\\_lib\\_index.htm](http://navymars.org/reg5/tech_lib_index.htm)> <<http://www.spiritone.com/~nabil/hickok/>>  
<<http://socrates.itd.nrl.navy.mil/PEETE/footnotes.html>> RICH @B> }

Dennis Wade

From kurt.brandstetter@teleweb.at Wed Feb 13 18:29:05 2002  
Subject: [R-390] Collins 51J-4 Connectors - Thanks for info

Hello from Vienna !

Thank you all for the lot of info I got from you dealing with my question about 3 connectors on the rear of my Collins 51J-4.

The summary is (I repeat here what EA2IG wrote to me):

The Diode Load, and the AGC connector are quiet usuall in the 51J-4, as I have seen in many pictures of theses receiver. This info I got in several emails.

The third one is a Antenna connector to use this receiver with other equipment with german conectors like the Telefunken Multicoupler. ( I have one, the V-1106 wich have one input, and them outputs with theses conectors - said EA2IG). This connector is a VHF connector that was used by German manufacturers for servicing or video equipment also.

The connector on my 51J-4 is original (I have testet it and looked inside) and its a 2nd antenna connector parallel to the SO-239 for RF antenna input.

It looks like this connector was made for some export models by Collins, especially for the use in Europe. The 51J-4 I own comes from the Austrian Army and they owned quite a lot of them I think.

The pictures of these connectors are still available for taking a look at them at:

<http://members.chello.at/kurt.brandstetter/File/PIC1.jpg> and  
<http://members.chello.at/kurt.brandstetter/File/PIC2.jpg>

Let me say "Thank you" to all of you who helped me to inform me so quick. I thought I'll post this summary because the 2nd antenna connector seems to be not well known in the states, but it seems to be an "original export modification". The male connectors that fits I have from the Austrian Broadcasting Corporation ROI where they where used for video purposes and they where manufactured by Rhode & Schwarz / R&S in Munich. Also a signal generator made by a former German company "Neuwirth" in Hannover (now owned by R&S) I own is fitted with these connectors. Thats a really good signal

generator and I'll put some pictures from it on my homepage as soon I have some time. Its very exact and well built equipment. I think they where "handmade" and only some 100s of them were manufactured.

Thanks again for your help. -- 73 de Kurt OE

The folks make an OK audio tube, I have some 6BA6's that are hot on the tester. And so noisy you can not use them in a R390/A IF deck at all.

US producers are hard pressed to get enough good part stuff (filament oxide, pure metal that is low noise) to meet their demands for Military and Broadcast needs. Tons of the "did not make the grade" stuff run off the assembly lines here makes it way over seas to get fabricated into their parts over there. The demand is not there to keep a quality plant process flowing. The batch lots churn out so much almost good enough "scrap" in the start up of materiel flow processes, there is a whole second world market "recycling the scrap" into almost mill spec product that is good enough commercial product.

Can you imagine a commercial broadcast station buying a 100KW transmitter tube from the Russian tube factory?

The 3TF7 filament wire is a game of its own. I am sure the folks could stuff a wire in a glass bottle and get most of the air out.

Would that wire have the behavior we want? every tube every time for a life time?

I do not know how we would establish a world demand number and life period to plug into an engineering guess to help show the bean counters the return on investment.

Would you like to invest part of your retirement account into an inventory. That will get sold two at a time over the next 20 years to make a profit over time on your initial investment.

Alex, the questions are good. The answer is cost to make, store, distribute, market, advertize, deliver and sell the items. There is an investment of time and money in each of those steps. Each investor wants a fair return on that investment. The forecast market does not show a return. The Russian know about 26Z5 and 3FT7 tubes just like they know about 6L6 and 6BA6 tubes. they make what they make ~~because~~ because they can make money on what they make.

You will not see Mc Donald's or Burger King introducing a new product on the menu unless studies show there is a bigger return on the new menu item than what is already on the menu. You do not introduce some thing new to make less money than what you do now. Only X dollars will walk in the door. (Earth is a closed system) You do not plan to let more dollars escape out the door to suppliers than is currently escaping. (less profit) Same thing with tubes. You have to show the bean counters at the tube factory that more dollars can be make from a 26Z5 than from the 6L6 currently being made. The product mix is the maximum profit that uses all the parts and all the plant and all the warehouse that can be planned. Our pet parts just do not make the cut.

If we hang in and prepare to pay the price some day maybe. But a 3FT7 is optional An 26Z5 competes with a 4 cent diode.

Us gee I am a purest who wants a classic are not a large enough crowd to convert our fantasies into facts.

Roger.

From CORYHINE@msn.com Thu Feb 14 21:32:21 2002  
Subject: [R-390] TUBES

The trouble is that at the time these tubes were made, they were under contract and the volume and funding was there. We still had a wartime mentality..... Now, there are a few who would like to get the old tubes, but the factories, materials, and people involved are largely gone. It would not be cost effective to reinstate what existed at that time. Reality stinks! N2AQS

From amcdonald@toyodatr.com Thu Feb 14 22:29:05 2002  
Subject: [R-390] 389 inquiry

A couple of questions for the 389 crowd: Where can one obtain a reasonably priced R389 in repairable condition? Are there any blue-striper 389 models? Also, thanks to all who replied to the ballast tube pondering. It just seems that someone who already may be making a ballast tube, could make a controlled lot or batch for under say 40-50 bucks a pop. Thanks Alex

From Barry Hauser <barry@hauser.net> Thu Feb 14 21:44:30 2002  
Subject: [R-390] TUBES

Yup -- and we used to be able to put men on the moon. Same thing -- went out of style <yawn>. None of the moon rocks were diamonds, etc. so no reason to go back, and now it's a lost art. I pass by the outfit that made the landing module (Grumman) every day. Big round white tank and lots of buildings. Big tank used to say "Grumman". Then they changed it to "Northrup-Grumman". Now it's blank. I think they're going to put a mall in there. We're good at that still, well mostly. Roosevelt Field, Lindbergh's takeoff field, was turned into a mall after WWII -- one of the first of its scale in the world. Somewhere there's a plaque commemorating the flight. Probably not far from the "You are Here" map of the mall.

But think of this. Once upon a time, there were no tube factories, no machining, etc. But someone hand crafted the first tube. Ok, some glass blowing and a vacuum pump was involved. Hey, and those guys didn't have a Dremel! Heck, whaddya need, some glass, some pins, some thoriated tungsten, some itty bitty pieces of beryllium copper. Probably could harvest some of the stuff from old tubes -- especially types that are in good supply but not popular. What about refurbishing old tubes? Someone on the list has a technique for cleanly opening the glass. Just go in there and restring, recoat the filament, elements, etc. Use a microlaser to weld stuff -- borrow one from the radial keratotomy guys ("one eye just \$800, two for \$1500") Where there's a will there's a way. Maybe the Russian Toob Factory would take pity and send a rescue party. ;-)

Actually, if it isn't clear, what I'm trying to do is provoke an extreme do-it-yourself fanatic somewhere out there, y'know put a bug in his head, push him over the edge. Gimme a hand .... Barry

From CORYHINE@msn.com Thu Feb 14 22:51:17 2002  
Subject: [R-390] TUBES

I agree.... it would be nice. If you go to the r390a.com site, there is a solid state replacement for the 3TF7.... Chuck Rippel says it regulates better than the old tube. The inexpensive one goes for \$55.... Not for the purist, but it beats paying \$45 for a tube. I have one spare 3TF7 that I bought a number of

years ago before we started running out of them.

Good luck on your idea. I tried some time back to get the Russians to reproduce the KWM-2A. They were only interested in how much they could get up front. So, while a good idea, the Western mentality has not set in as yet. By the way, the Russian 811As I have work just fine in my 30L-1.

As far as receiving tubes go, I think that Art used mostly what was available at the time. Many of the tubes floating around back then were from the production of TV sets. Every house had one, and they all had a 5U4. There are still a lot of 5U4s around. I think there are some companies that do tube rebuilds, but on the expensive transmitting types. Could be possible though.....

From bill@iaxs.net Thu Feb 14 22:58:28 2002  
Subject: [R-390] TUBES

Other tries at this thread revealed that the home tinkerer might be able to build (or rebuild) an 01-A class tube with a "soft" vacuum. IF he or she could get coated filament wire.

The tubes that we want are all hard vacuum tubes. It takes an expensive set of vacuum pumps to get down to where flashing the getter takes out all of the molecules left.

Making the elements for a 7 pin miniature pentode seems to be impossible without expensive tooling - kinda like making a turbo-pump for a Saturn V engine. Both materials and tools will be prohibitive for short production runs.

And then there are the glass seals for the pins ... Regards, Bill Hawkins

Thats not a problem, you can buy new ones for around \$40.00, as Amperite still manufactures them. But why bother? If you think the 3TF7 is critical to the operation of the R-390 or R-390A, just pull it out while it is receiving.....it will be several seconds before you even noticed that it isn't plugged in anymore. Now, that's food for thought.

Of course the others know that I'm a witch as I have had several with diodes in place of 26Z5W's and don't use ballast tubes. Les Locklear

From gunsrus@optonline.net Thu Feb 14 23:11:33 2002  
Subject: [R-390] 389 inquiry

Alex,

Over the years I've owned more 389's than one should be allowed to but that is another story. I believe the number is 6. I'm sure that everyone's mileage will vary but if your looking to "collect" that rare one then that is one issue. If that is your goal then it is going to take some serious searching and in "most" cases you are going to have to get of some serious cash. There is always the exception to the rule but if you are like me it seems every time I'm looking for something it's just turned to gold but when I'm looking to sell it, well you know that story.

Now if you are just looking to listen to the grass grow on those lower freqs., then I've found that what has been as good or better then any 389 I've ever owned (ducking mode) was a 390 with the Palomar LF

converter. Done alot of A/Bing with radios side by side and the proof of the matter "in my case" is that I sold all my 389's and have 2 390's/Palomar set ups that I really like. Now that's not to say that someone else here has not had completely different luck with the same setup. I also found that I could do a world of good by paying more attention to my antenna and matching system not trying to make the radio do all the work. I found that on LF there is no substitute for more wire in the air.

Hope I've been of "some" help to you. I don't get many chances here as I'm usually the one looking for help and people around this place are REAL knowledgeable and are a wealth of information.

Tom Nicholson W1ALZ (KA1BAZ)

From s-biddle@ti.com Thu Feb 14 23:31:50 2002  
Subject: [R-390] replacement tubes

I have "reproduction" meters in my R-390A. The scales are decals done from real R-390A meters (white on black) with a white pointer. I took some "Hobby Lobby" glow-in-the-dark paint and painted the pointer. When I dim the lights, it kind of glows in the dark for a while. I figure that somewhere I could get decals made with the same kind of paint. Then for the next step I would scavenge the elements out of dead smoke detectors and pop it in the case. Then the Geiger counter would pop and I would have "authentic" meters :) :) \*\*\*LOOK\*\*\* \*\*\*RARE\*\*\* E-PAY here I come.

Date: Thu, 14 Feb 2002 16:04:16 -0800  
Subject: [R-390] 3TF7

Hi, Ouch, I just checked their 3TF7 price, \$96.65, list price \$101.73. Leo

From gwmoore@moorefelines.com Fri Feb 15 04:04:50 2002  
Subject: [R-390] 3TF7

Agree 100%. Someone in the deep black zone knows ALL about EMP. Considering the possibilities which arose after 9/11, and the possibility of a terrorist use of WMD in the ionosphere. I can't believe that what is left of the military communications outfits of all services have not come to the conclusion that one can't harden everything, but hollow state survives all the time. If that horrible day ever comes, someone is going to realize about MF/HF CW and the doorbells are going to begin ringing.

BTW do you remember the bruhaha that surfaced over the defecting MiG pilot who landed in Japan. As I seem to recall, all the gee-whiz engineering types who were building the single use, disintegrating totem poles to complete the man-moon-decade requirement were rather amused by the "backward" Soviet Union and how they equipped the MiG with Vacuum Tube equipment. The laughter stopped abruptly when the word "Nuke" was mentioned. Frankly, I would have loved to see the expression on their faces when they realised that fried silicon with melted input diodes does not make a chip work any better.

I fully believe that somewhere, as I write this, someone is disseminating a "request for bids", or more likely, contacting all the old contractors to see who might have some of the manufacturing fixtures stored away for the day they knew was coming. We just might yet, see a return of US tube availability. The audiophiles have never forgotten the even harmonics, and who knows, retro sells big. Real big. I have actually heard an owner of one of the modern "cathedral" radio reproductions, now, of course, with FM and a CD player, who knows Nothing about electronics, actually say, "Hey, this would have been

neat if they made it original, with those tube things". Actual quote.

Do Not Lose Hope!!! The 80, 25Z5, and the 50C5 ,117N7 (as well as the 3TF7) may live again, in a brand new millenium.

One can always hope for a gateway to a nearby parallel universe, where the events of 1947 never occurred :- ) 73 de Greg WA3IVX

On Thu, 14 Feb 2002 17:29:05 -0500 "Alex McDonald"

<amcdonald@toyodatrw.com> writes:

> A couple of questions for the 389 crowd: > Where can one obtain a reasonably priced R389 in repairable > condition?

They are unreasonably priced in any condition. Tom

From w2ec@attglobal.net Fri Feb 15 12:44:10 2002

Subject: [R-390] replacement tubes

FYI, I just bought two 6082W to keep as spares for my R-391, from Lowell Thomas (k6kc@lightspeed.net). Cost was \$5.50 each plus USPS Priority shipping (\$3.50 coast to coast). Very pleasant dealing with Lowell and tubes arrived quickly, NOSIB (New Old Stock In Box for those not familiar with the acronym). 73, Ray W2EC

From lal@metrocast.net Fri Feb 15 12:57:23 2002

Subject: [R-390] Info Please

Hello to all.. I just picked up a R390A receiver which has no meters. I wonder if anyone could tell me where I might be able to purchase these. Thank you in advance for your help. Merle

From roy.morgan@nist.gov Fri Feb 15 16:15:46 2002

Subject: [R-390] 389 inquiry

wrote: writes: > A couple of questions for the 389 crowd: Where can one obtain a reasonably priced R389 in repairable condition? > >They are unreasonably priced in any condition.

The last one that I know of that sold on Ebay went for just over three thousand dollars. It WAS new in the box, with the box and original manual. Good luck.

- From w9wis@charter.net Fri Feb 15 16:52:00 2002

Subject: [R-390] Re: AGC Failure Apparently Solved...

Several weeks ago many of you responded in ansewr to a problem I was having with my "new" Motorola R-390A. The problem was failure of the AGC (distortion) in any filter position on a strong signal after the set warmed up. The AGC voltage was way off the values in the manual.

I started checking tubes and found none that were obviously bad in the AGC circuit. I removed and substituted with known good tubes all of the IF section tubes and the problem persisted. After several

days I also decided after speaking with Roy Morgan to try the tubes on the RF side including the 6DC6. I removed the shields, removed and replaced all the tubes after socket cleaning and turned the rig on to warm it up until the problem resurfaced as it always did as the radio warmed up. Well... it's been over two weeks and the problem hasn't surfaced again. The AGC voltages remain steady and within the range the manual states they should be.

Apparently.... a tube I believe got jostled loose in transit to me and would go intermittent when warmed up. I wonder if a tube pin/socket wasn't seated well and the socket got warm and the metal expanded causing the problem. -- Michael Melland, W9WIS Winneconne, WI USA

From twleiper@juno.com Fri Feb 15 18:04:14 2002  
Subject: [R-390] 389 inquiry...and drifting. Watch out for Bruce.

On Fri, 15 Feb 2002 10:02:49 -0500 (Todd Bigelow - PS) writes: [edited] > Wouldn't bother me to stuff in a tube with the pins removed > and swap out other items that are easily > reversible, so long as it doesn't require a drill or sawzall.

I consider any mod that the military did to be "original" and don't worry about them being "reversible". For instance, I will not remove a "diode load" jack no matter how poorly installed, and diodes in place of 3TF7 was a standard Navy mod. Since almost all of the mods are for "A"s anyway, (the non-A needed few mods because it was already perfect) ...who cares? Tom

From: k0myw@worldnet.att.net (Mike O'Brien)  
Subject: [R-390] TUBES

In the dim recesses of my fading memory, I seem to recall plans announced about five years ago by Western Electric to revive a small manufacturing facility in Kansas City in order to renew production of their 300B tubes so prized by the hi-fi crowd.

I don't know that it ever happened. Does anyone on the list know? Of course, Western Electric no doubt would've been driven by the sky-high prices real WE300B's were bringing at the time. So if they (or another manufacturer) were to be enticed to start building some of our rare radio tubes, they would want a hefty price for 'em... 73, Mike, KØMYW

> Yes. You can buy a newly manufactured WE-300B from them or from resellers. The suggested retail price is \$400 each. They come in a wooden box. See: <<http://www.dejavuaudio.com/TUBES-WESTERN-ELECTRIC.HTM>> The Tube Store will sell you a matched pair for five cents under \$700. <<http://www.thetubestore.com/wesel30.html>> Roy

From davidmed@sbcglobal.net Sat Feb 16 02:13:39 2002  
Subject: [R-390] Wanted source for pots

I need a few 2,5k audio taper and linear taper pots such as are used in the R-390 series. The el cheapo Japanese ones won't fit because of the thickness of the panel. Would appreciate any help. Regards David Medley

From twleiper@juno.com Sat Feb 16 06:07:38 2002  
Subject: [R-390] 389 inquiry

On Fri, 15 Feb 2002 21:07:46 -0600 "w9ran@oneradio.net" <ranickel@cuisp.com> writes: ... > I'm pleased to say this is not true. I paid \$300 for mine about 6 > years ago...

Yes, but that was way back in BE...Before Ebay. R-390s were also routinely purchased for half that back then, so the '389 was comparatively high even at \$300. Tom

From w7itc@hotmail.com Sat Feb 16 09:18:18 2002  
Subject: [R-390] TUBES

RE: The suggested retail price is \$400 each

Ya these are the same clowns who try to tell you their special audio cable made from a special mungadiga alloy of tawanza and zylaphin. Which improve the transmission low notes. While the secret computerized spiral rapping of the 75 million strand O2 free inner conductor improves smoothness of transitional intonations. This combined with the Norberlaster insulation makes for the best audio cable in the world. 250.00 bucks a foot which solid platinum connectors. A sucker is born every day. Kenneth Crips

>

Hi Dave,

Check out Newark - 1-800-463 9275. They have Clarostat RN4NAYSD linear taper pots with .875 or 2.5 inch shaft. Various resistances from 500 ohm to 500 k. On page 788 of their catalog 117. Price is \$9.00. 73, Bill Riches, WA2DVU

From hankarn@pacbell.net Sat Feb 16 17:56:38 2002  
Subject: [R-390] REF: Frontier capacitor rebuild

Gang: after sending Everett a couple of the caps with the plastic and his efforts to keep the pins stable in a socket while reworking them. He came to the conclusion that he could not rework them at a reduced price by a group order. He says working with Leslie cans and fitting the caps in properly is not economically feasible with the soft base. However he will do singles at \$35.00 each plus \$5.00 if he has to get a hard socket plus postage. He tried, 73 Hank KN6DI

From wy6k@yahoo.com Sat Feb 16 19:12:07 2002  
Subject: [R-390] Audiophools

You could then sell them silver solder and retrofit kits to solve that problem! \$100 per connector sounds about right.

I was, for a few years, in the largest audio company in the world and met some of the real nuts of this type. Most of them don't work for the company but must be dealt with in some way or other. Many of them write columns. One of these so-called "golden ears" claimed he could hear the difference between cables. He also claimed that cable ends are "sexed" and he could hear it when a cable was installed "backwards". Pure bullshit. But we had beer and I let him know what I thought of that. He challenged me to blind tests - using a curtain between the equipment and him. We connected one set of cables and

then the other and had him A/B them. He picked the nitrogen filled hard line over the monster cable 22 times in a row. We then sexed the cables and he told which was the "right" way - blind listening still. Then we scrambled them and he picked the correct sexing without error 14 times. At that point I decided I didn't know as much about the world as I thought I did. If this was a parlor trick, then neither I nor my companion who is one of the most respected engineers in the audio field were unable to figure out how he did it. And we were the ones that set up the test - using our lab, our gear, and with us doing the work with no one else in the facility that could have been tipping him off. I don't get it and it made we wonder. But I'm still not a believer in that crud.

The "warm" sound of vacuum tube audio amps is a proven effect, however. As is the difference between one tube and another. The tubes cause distortion and that distortion happens to result in a pleasing sound - much like the distortion caused by a certain type of wood in certain string instruments etc. It turns the amp from a transparent device into something of a musical instrument with its own characteristic sound. This distortion of tube amps has been measured and characterized. A number of companies now make solid state DSP processor units that implement this distortion and provide the "warm sound of a tube amp". You're better off with T-Racks24 for either Windows or Mac. I never write audio to CD without processing thru it first. Barry

From gwmoore@moorefelines.com Sun Feb 17 01:03:09 2002  
Subject: [R-390] TUBES

Let us not forget the plethora of helium mass spectrometers which have been floating around for years. The primary use, at least the one I have most experience dealing with, is leak testing aircraft instruments, which after being hermetically sealed, are baked in a vacuum, allowed to be filled with dry N2, evacuated again baked again, then backfilled with a 90%N2 10%He mix and the evacuate and fill port sealed. Since the spectrometer (Which was set to measure He only, to find out if the instrument was leaking,) could only operate at a hard vacuum, they were equipped with a roughing pump which took out most of the air in the bell jar placed over the sealed instrument, a fore pump, which removed just about all that was left, and a diffusion pump to take the whole shebang just about down to nothing. Any minor presence of air in the mass spectrometer tube would render it inoperable. They also had a "cold trap" which either used a criogenic pump, or LN2 to remove all moisture in the circuit. The criogenic cooling pump didn't work all that well, and it became a daily event to fill the trap with LN2, and refilling it throughout the day as it evaporated. Working overtime on weekends, one could have a lot of fun with the LN2 and the effects of the criogenic temps on different materials (rubber balls, for example, Hockey pucks made out of GE molding compound, then frozen, or making hammers out of mercury (can you even picture trying that little stunt today??)... Somehow, I feel there has got to be a lot of these units, with bad circuitry, bad spectrometer tubes, or just plain age, waiting for use after some rather easy modification to use them to evacuate glass envelopes to a high enough vacuum. It seems to me that if one has to fix something bad enough, then one comes up with a viable solution using (hopefully) stuff considered obsolete and therefore, cheap (Important to most of us hams, who, traditionally, don't have much money) Greg

From ka0ofp@yahoo.com Sun Feb 17 01:46:57 2002  
Subject: [R-390] R-390A Parts Needed.

Hello All, I am working on another 390A. There are a few parts that I am in need of and wonder if anyone can help me out. First off, I finished up the alignment of the EAC the other day. Changed out C-327 in the RF section. Peaked the osc. and also the rf racks. I thought it was a good rx prior to this. It made a big improvement in the lower bands. Seems to be sensitive down to near a half a microvolt. This is according to my TRM-3. Not to sure if it is that accurate anymore.

I am now working on a Stewart Warner. I am in need of a couple of the small plates with the two screws in them that hold the screw for adjusting the iron cores on the rf gangs. They seem to be striped out on a couple of the 8 mc cores. Also I am looking for a source for the light bulbs for the freq. display. Looks like the number on the bulb is H 328.

Thank you in advance! 73's de Jon (KA0OFP)

From ba.williams@charter.net Sun Feb 17 02:15:22 2002  
Subject: [R-390] Audiophools

What you are saying makes sense if you think about it in terms of boatanchors and sandstate boxes. Personally, I can't stand most sandstate boxes. I hate everything about them, except a few quality boxes, and there is always something I don't like about those. But, look at all the hams and DXers out there who would never listen to a boatanchor. I never know how to relate to those guys because I know what I know about my radios. Same thing about audio equipment. Some people are happy with music that is digitized from start to finish. Some people hear the difference in sandbox receivers and tube units.

I have a very big late 70's to early 80's tower of stereo equipment that I bought when I was in the Army and everyone had a small fortune in stereo gear. I have some good stuff. I've run R-390A and SP-600 audio thru it for a long time and it never sounded better than thru my naked Bogen M120 amp. My home stereo gear has Bose Acustomass 5 speakers, equalizer, stereo remixing, DBX processing, blah blah blah and the Bogen has only an off brand guitar speaker box hooked up. There is a huge difference in audio between the two systems, and that Bogen certainly isn't home hifi grade stuff either. I'm sure it is a real slouch compared to the Fisher receiver that was given to me last weekend. I'll take my boatanchors and the tube system running thru a single speaker any day. Barry

Date: Sat, 16 Feb 2002 21:03:54 -0600  
Subject: [R-390] Audiophools

Thirty years ago I could run the function generator thru a speaker up to 18-19khz and be able to hear the 'noise'. Last time I checked (5 years back) 13-14khz is the best I could do. Even if every claim was true, I would be paying for a lot of sound I can't hear anymore.

From jam@sonic.com Tue Feb 19 02:35:37 2002

Gee, I have taken several hundred of these out of SP-600's. Maybe I should have kept them. Do you get extra for split ones?

James A. (Andy) Moorer  
Adobe Systems

From cbscott@ingr.com Tue Feb 19 21:13:01 2002  
Subject: [R-390] Tube shape

Looking at the site showing how the 300Bs are made me wonder why the 300B and other tubes have their characteristic shape. Is this for better cooling? I suppose increasing the glass area would help dissipate more heat, but is there something about the expanded shape that aids air convection around the

envelope? Just wondering... Barry(III) - N4BUQ

From redmenaced@yahoo.com Tue Feb 19 23:11:14 2002  
Subject: [R-390] Tube shape

My guess is that its an evolutionary step from the globe shape, more like a light bulb, to give the internal structure some support at the top by just closing the top of the tube inward.

From w7itc@hotmail.com Wed Feb 20 03:49:44 2002  
Subject: [R-390] Meters

I have just received the Hoyt Electrical Instrument catalog. They have several meters which, at least from a dimensional stand point would fit in an R390. Check out the Hoyt Industrial Panel Meters-phenolic #635. Included in the packet was a catalog for Standard Electric Works C. LTD Taiwan. They have additional meters that would fit. [Http://www.hoytmeter.com](http://www.hoytmeter.com)

Kenneth Crips

From amcdonald@toyodatrw.com Wed Feb 20 21:24:09 2002  
Subject: [R-390] receiver inquiry

Does anyone know anything about the R-1125/R-1230 countermeasures receiver from Fair? Would this be a worthy radio to sit alongside my 390A?

It sounds rather interesting, the text says that they don't have the power supply for it, but the voltages look very do-able. It also needs the audio board and detector. How difficult would this be to get up and going?

From cbscott@ingr.com Wed Feb 20 21:39:13 2002  
Subject: [R-390] receiver inquiry

Don't know, but I would think a 60kc bandwidth would be useless for ordinary listening purposes.  
Barry(III) - N4BUQ

From frledda@attbi.com Wed Feb 20 22:20:45 2002  
Subject: [R-390] receiver inquiry

If you can provide a narrow band IF with the necessary filters and demodulators, they are great.

Myself, I have designed and built a DSP based 65 kHz IF. With this modification, it is as good as my WRR-2, 390s etc.

Visit my web site to see a R1230 <http://web.tiscali.it/milradio73/radio.html>

Regards, Francesco Ledda

From w7itc@hotmail.com Thu Feb 21 07:48:02 2002  
Subject: [R-390] Software

RE: <http://www.ee.ualberta.ca/~schmaus/elect/tdex.html>

I have finally found software designed to inventory vacuum tubes. not only that, it has a data base of tube spec's, a substitution guide etc. The price is \$29. Does it look like it is worth the price? Kenneth Crips

From w7itc@hotmail.com Thu Feb 21 08:04:24 2002  
Subject: [R-390] Software

incidentally go to the left side and click on the software button.  
<http://www.ee.ualberta.ca/~schmaus/elect/tdex.html> Kenneth Crips

From BRingwoo@csir.co.za Thu Feb 21 08:16:38 2002  
Subject: [R-390] Software

Would there be any interest in a Windows version ? (Including pinouts and characteristic curves)?  
- Bryce

>>> "Kenneth Crips" <w7itc@hotmail.com> 02/21/02 10:04AM >>>  
incidentally go to the left side and click on the software button.  
<http://www.ee.ualberta.ca/~schmaus/elect/tdex.html> Kenneth Crips

From vze2gmp4@verizon.net Wed Feb 20 13:36:41 2002  
Subject: [R-390] Software

If it does what it says then it looks like a pretty good addition. There is a refund available if one is not satisfied.

From vze2gmp4@verizon.net Wed Feb 20 13:43:50 2002  
Subject: [R-390] Software

>From what I see of the programs, it's not too intense with graphics, so it most likely should run in a dos mode under 95 or 98. I have several programs that didn't run well or not at under 95 or 8 and work well with xp. If the author would release the source code it could be compiled to run under Linux which would be nice.

Regards, Helm. WB2ADT

From mikea@mikea.ath.cx Thu Feb 21 13:59:45 2002  
Subject: [R-390] TUBES

On Wed, Feb 20, 2002 at 09:19:25PM -0800, Ed Zeranski wrote:

> Remember the required 1/2 unit slide rule class for all > math/science/engineering studentsThe Hubble bobble had nothing to do with miscalculation, though: it was caused by a tech at (IIRC) Perkin-

Elmer putting a gauge stick in bass-ackwards, so that the mirror's focal length was off.

Challenger was a management fscup, pure and simple. Read the book Challenger: A Major Malfunction for details. It had a lot to do with stupidity, and with "taking off your engineer hat and putting on your management hat", but not one thing to do with bad computation.

The failure of the NASA Mars shot that had to do with a failure to communicate that two groups were using different sets of units was a computation fscup, yes.

But only one of those three was a real computation fscup. The other two were different kinds of fscups that fscup-type is normally-distributed. -- Mike Andrews

From rlruskowski@west.raytheon.com Thu Feb 21 16:07:27 2002  
Subject: [R-390] receiver inquiry

Twit, You owe me, I feel off the chair and re-injured myself. You saying my DX 100 is not stable on the air? Roger KC6TRU San Diego

On Wed, 20 Feb 2002 15:39:13 -0600 "Scott, Barry (Clyde B)" <cbscott@ingr.com> writes: > Don't know, but I would think a 60kc bandwidth would be useless for > ordinary listening purposes. > > Barry(III) - N4BUQ

It would be just what you need to copy somebody using a DX-100 on the internal VFO... Twit

From lal@metrocaster.net Thu Feb 21 17:31:35 2002  
Subject: [R-390] Info !

Hello... Wonder if anyone could tell me what size/number screw fits the four holes that hold the nameplate in place. Thanks.. Merle

From twleiper@juno.com Thu Feb 21 17:37:04 2002  
Subject: [R-390] receiver inquiry

"Roger L Ruskowski" <rlruszkowski@west.raytheon.com> writes: > > Twit, > > You owe me, I feel off the chair and re-injured myself. > > You saying my DX 100 is not stable on the air? > > Roger KC6TRU San Diego

I haven't heard you over here in CT, so you must not be "getting out". But if you think you can hold your carrier to within +/- 30Kc on the 20M band, I'll be glad to see if I can copy you. Tell you what, I'll brew up a nice "TV tuner" receiver with a 6MHz bandwidth, and I'll center it on 14.150 MHz, and you can give me a shout.

I had one of those dixies when I was a teen CB'er, and that VFO was impossible on 11 meters. It was great for jamming and creating a lot of intentional QSB, however, so that was the primary mission of the DX-100...making a mess of things. I have come a long way since those days. Now I do the same thing typing away on this computer. Ahh, the power of the keyboard beats the pen, the sword, and even the 6146 ! Twit Leiper

From richardlo@devax.admin.athabasca.ca Thu Feb 21 16:51:17 2002  
Subject: [R-390] Software

On Thu, 21 Feb 2002, Bryce Ringwood wrote: > Would there be any interest in a Windows version ?  
(Including pinouts > and characteristic curves)?

No. I can run this one under a dos emulation on any Intel/Unix platform so I can run it on a real computer instead of slumming around with some glorified overmarketed loader. I want an OpenVMS/Alpha version that will run under DECwindows/Motif and produces PostScript and HPGL output files for printing. Richard Loken VE6BSV

From djmerz@3-cities.com Thu Feb 21 17:57:36 2002  
Subject: [R-390] Info !

Merle, mics as #2 screw (83 mils) on mine, so I think it's a 2/56 (hard to count threads but around 50/in), gray, a steel phillips head with lockwasher on the EAC I have.

From beral@videotron.ca Thu Feb 21 18:20:18 2002  
Subject: [R-390] Info !

Merle, It's a 2/56 thread and about 0.25 inch long. Al

From rlruszkowski@west.raytheon.com Thu Feb 21 21:08:46 2002  
Subject: [R-390] receiver inquiry

Twit, I have the bias on the 6AQ5 dialed back so the 6146 plates do not glow red while I am trying to match it to the chain link fence.

I only get about 50 watts on the in line power meter. I get the SWR under 2 on 80 meter.

With the spectrum spread, I can under stand you not hearing me in the North East from my South West location. Worse even is, your off the end of my chain link fence.

I have worked as far East as the San Diego County line. And north island to the West. I would like to work North to Orange County but my fence is not orientated that way.

I would like to get an antenna up. I have some fence post up to 20 feet high. But the dog kennel two houses down has fences higher than 20 feet. I tried using my R390/A receiver wire, but I could not get the SWR meter on to the scale.

I do live in a challenging neighborhood. No ground No elevation High Voltage power lines Valley bottom. No lot size. No trees And now I'm told my transmitter is a wide band model. I could have more fun but I do not know how. Roger.

From Richard.McClung@Dielectric.spx.com Thu Feb 21 22:26:25 2002

Subject: [R-390] receiver inquiry

Well, That explains why we can't used the 120 - 235 degree beam sectors of the Wuellenweber here. I afraid I'm going to have to go thru channels to require you to post your operating schedule five minutes prior to key down so that we may alert the operators and block out those beam sectors. Besides equipment damage we have had injured operators from headphones being suddenly flung across the operations floor and bouncing from rack to operator to rack to floor, etc., etc., etc.. RICH @B> }

From gunsrus@optonline.net Thu Feb 21 23:16:42 2002  
Subject: [R-390] Software

Yes on my end.

Bryce Ringwood wrote: > Would there be any interest in a Windows version ? (Including pinouts > and characteristic curves)?

From twleiper@juno.com Thu Feb 21 23:18:32 2002  
Subject: [R-390] receiver inquiry

On Thu, 21 Feb 2002 14:26:25 -0800 Richard.McClung@Dielectric.spx.com writes: ... > Besides equipment damage we have had injured operators from > headphones > being suddenly flung across the operations floor and bouncing from > rack to > operator to rack to floor, etc., etc., etc..

Not to mention the operators that were "fused" into the superstructure...

From redmenaced@yahoo.com Fri Feb 22 00:04:48 2002  
Subject: [R-390] TUBES

> Maybe that's why "They don't make tubes like they > used to." to borrow > someone's sig line. Maybe a slip stick was needed, > with some 'magination. > Feed the parameters into a computer system and the > answer will come out > "12AU7 DESIGN COMPUTATION FAILURE -- INVALID > PARAMETER SET, REQUIRES "HARD > VACUUM", VACUUM= 0, DIVISION BY ZERO, TYPE MISMATCH, > N-C-D -- NO CAN DO"

++++++

And any student that signs up for a physics course should have at least a "B" in marksmanship FIRST! They have to do their own reloading, too.

Any student who asks why should be given an instant "D" for that semester and kicked out of college! Because they obviously don't understand what's involved or how many aspects of shooting pertain to physics, chemistry, engineering, mechanics, ethics, or politics!

I dont' care if they've been taught all about trajectory, if they can't actually do it they have no business going any further.

Oh, yes! And NO college can be accredited until they can develop a course to comply with the above. Many will say it too dangerous,..... well, YES! It is,..... deal with it!! Picking up an R-390 is dangerous,.... working on it is even worse. But we CAN do it. Joe

From mas@msu.edu Fri Feb 22 01:52:52 2002  
Subject: [R-390] Need front handles

Hi. New to the list. I need a nice set of front panel handles for an R-390A. I assume they are all the same. My 390A was built by Motorola if it matters. Any out there? Mike K8MAS

From w7itc@hotmail.com Fri Feb 22 02:04:59 2002  
Subject: [R-390] TUBES

I started with slip-sticks, and I was in college when the first HP calculator came out, HP-45 I think, The impact this one instrument had was unreal. I remember the mumbling, 9 significant digits, look at that, Log's.....WOW! I seemed like almost over night all of the beautiful slide rules vanished. It's is interesting I still find the skills developed reading between the lines on a slide rule useful. Ken

From Llgpt@aol.com Fri Feb 22 02:12:08 2002  
Subject: [R-390] Need front handles

mas@msu.edu writes: I need a nice set of front panel handles for an R-390A. I assume they are all the same. My 390A was built by Motorola if it matters. Any out there? Mike K8MAS >>

Welcome to the group, Fair Radio Sales has them. Les Locklear

From wy6k@yahoo.com Fri Feb 22 03:23:06 2002  
Subject: [R-390] CE Sideband Slicer

A friend has offered me a Central Electronics Sideband Slicer. Will this work as a product detector on my R390A? Should I get it for that purpose (assuming the price is ok)? Michael

From ea2ig@tiscali.es Fri Feb 22 04:18:14 2002  
Subject: [R-390] Need front handles

Mike. Fair Radio Sales have them Best Regards Pedro EA2IG

From mikea@mikea.ath.cx Fri Feb 22 04:19:28 2002  
Subject: [R-390] CV-1982

I have a chance at a cream-puff CV-1982 from Kahn Labs, fully tweaked and peaked. Any idea what a reasonable price is? The guy doesn't know, and neither do I. I don't want to screw him, or to get screwed, as I'd like to be able to continue dealing with him. Mike Andrews

From ezeran@concentric.net Fri Feb 22 05:14:25 2002  
Subject: [R-390] TUBES

>The Hubble bobble had nothing to do with miscalculation, though: >it was caused by a tech at (IIRC)

Perkin-Elmer putting a gauge >stick in bass-ackwards, so that the mirror's focal length was >off.

Not a normal miss calq of numbers, you are right, but still a miscalq of risk. Have you read the after event stuff by Richard Fineman? The old gnome got dismissed as 'just a CALTECH physicist' when he said the board wasn't even asking the right questions. :^)

Can't troubleshoot if you won't admit there is a problem.

From w7itc@hotmail.com Fri Feb 22 06:13:42 2002  
Subject: [R-390] CE Sideband Slicer

The Signal slicer (SS) is not a receive sideband adapter it is designed to give SSB to any of a number of AM transmitters. These are phasing rigs and with proper adjustment put our some of the best sounding SSB phone on the air. I have a CE 10B exciter which incorporates the SS with a 6 watt driver section I have had it on the air running through My Heathkit SB-200 which gives me about 65 watts using a monitor scope to adjust the wave form, fabulous sound. Kenneth Crips

From tetrode@worldnet.att.net Fri Feb 22 13:10:44 2002  
Subject: [R-390] CE Sideband Slicer

> A friend has offered me a Central Electronics Sideband Slicer. Will this work as a product > detector on my R390A? Should I get it for that purpose (assuming the price is ok)? >> Michael

It should work! Here's a pic..... [http://zeus.ia.net/~wbsorsby/N5BU/CE/ce\\_acc.htm](http://zeus.ia.net/~wbsorsby/N5BU/CE/ce_acc.htm)

Here's a manual..... <http://bama.sbc.edu/central.htm> John

From mikea@mikea.ath.cx Fri Feb 22 13:57:01 2002  
Subject: [R-390] TUBES

On Thu, Feb 21, 2002 at 09:14:25PM -0800, Ed Zeranski wrote: >>The Hubble bobble had nothing to do with miscalculation, though: >>it was caused by a tech at (IIRC) Perkin-Elmer putting a gauge >>stick in bass-ackwards, so that the mirror's focal length was >>off.

>

> Not a normal miss calq of numbers, you are right, but still a miscalq of > risk. Have you read the after event stuff by Richard Fineman? The old gnome got dismissed as 'just a CALTECH physicist' when he said the board wasn't even asking the right questions. :^)

>

> Can't troubleshoot if you won't admit there is a problem.

Dick Feynman was a Friend of a Friend, and (as you almost certainly know, and the Congresscritters should have) "just a CALTECH physicist" like Einstein was "just a mathematician". And yes, in this case, the two were of closely-comparable rank, stature, skill, and talent.

I spent three years at the Manned Spacecraft Center, working the last Mercury shot, all the Gemini shots, and all the Apollo work through the fire in the spacecraft. I was, in fact, the guy who first pulled the biomedical data for that disaster off the telemetry tape and ran it out to stripchart. NASA sure has changed since 1967, and none of it is for the better. -- Mike Andrews

From jbrannig@optonline.net Fri Feb 22 14:32:25 2002  
Subject: [R-390] CE Sideband Slicer

Yes it will work. But be careful. The Slicer uses phasing to demodulate the SSB. If the Phasing components are shot it is almost impossible to rebuild the unit. Jim

From cbscott@ingr.com Fri Feb 22 14:43:02 2002  
Subject: [R-390] Radio listed

I found this one. It's not mine! I'm not the seller!! <[http://www.dealamerica.com/deal/cgi-bin/ads/bcads.cgi?search\\_and\\_display\\_db\\_button=on&db\\_id=3126&exact\\_match=on&photo\\_size=full&query=retrieval](http://www.dealamerica.com/deal/cgi-bin/ads/bcads.cgi?search_and_display_db_button=on&db_id=3126&exact_match=on&photo_size=full&query=retrieval)> Barry(III) - N4BUQ

From tbigelow@pop.state.vt.us Fri Feb 22 15:32:43 2002  
Subject: [R-390] TUBES

I had heard that the calculation involved was one that did not take into account just how the mirror would sit once it was outside of earth's gravity. Someone should've made a scale model and taken it for a test ride in the VomitComet... Boomer Ed Zeranski wrote:

From tbigelow@pop.state.vt.us Fri Feb 22 16:07:08 2002  
Subject: [R-390] CE Sideband Slicer

Ken and group - I'm not up on all the CE products, but I have a Slicer 'B' and it is made for receivers. Came with a tri-fold green pamphlet explaining how and wear to hook it into certain receivers. I've yet to figure it all out, but I have seen one online hooked to a 75A-2 or A-3, just can't recall where. I have the impression that it's probably not up to the standards of the other CE gear in performance, perhaps because it was still a relatively new concept back then. The military adapters that have come along since are undoubtedly better in many ways, but this would at least give Joe Ham some amount of functionality. 73 de Todd/'Boomer' KA1KAQ

From frledda@attbi.com Fri Feb 22 16:45:54 2002  
Subject: [R-390] receiver inquiry

Well, another thing you could do is get a Mode Selector module from a R1051 and built an IF around it. Of course, you would need to up convert to 500kHz. It would be a lot of fan! Or, you could get an old HP310-HP312 wave analyzer and use as a 4th IF. FL

From chashugg@earthlink.net Fri Feb 22 18:46:49 2002  
Subject: [R-390] FA Cabinet for R390(A)s

Please check out my Rack Mount Cabinet that would work nice with R390(A)s, R388s, 51J4s' etc. It is up for auction at: <http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1333870046> Auction ends on Sunday. Thanks, Charlie Hugg, K5MBX

From roy.morgan@nist.gov Fri Feb 22 16:53:12 2002  
Subject: [R-390] CE Sideband Slicer

Kenneth Crips wrote: >The Signal slicer (SS) is not a receive sideband adapter it is designed >to give SSB to any of a number of AM transmitters.

You mean the "Sideband Adapter". The CE "Sideband Slicer" is indeed a receiving adapter.

It operates on the phasing principle with an IF input frequency of about 455 k. The phasing network must be present for it to work.. if that is missing you can duplicate it but it takes components of moderate precision (1%). Other than that, the circuitry is not complicated or hard to understand. The accessory input preamplifier is not normally needed, especially with the R-390 that has plenty of voltage at the IF output. I can't tell you how well it works because the one I have here it not working right. 'Dont' know why yet. Roy

From rlruszkowski@west.raytheon.com Fri Feb 22 17:15:20 2002  
Subject: [R-390] TUBES

Fellows, I was whining about the paint job on some panels at an old Aircraft Plant in Fullerton California. I meet the guy that put the paint job on a moon buggy. The kids under him still could not get a paint job on a rack panel with out runs. Blamed it on Cal OSHA paint.

Any way the old Hughes story is that in the mirror grinding process, the boys when to far. The solution was to shim up one corner of the mirror and polish that down to spec. As opposed to scraping the whole thing.

You can not just use any thing for a shim. You needed an exact shim and you needed a engineering drawing note to get the exact shim installed in the correct corner.

The shim was made (selected). The engineering note was make. The shim was installed and the polish was completed. Then the whole thing went into storage for a long time. (awaiting a launch ride)

So when they got the Hubbell out of storage to go for the ride, Some one thought that it needed an inspection. Never mine we will never look through the telescope to see if it works, but we will jiggle all the bolts nuts and screws.

Some one took the shim out. Why is this corner different?

Some one lost the shim.

Some one found out.

Some one pointed to the drawing and said put it back.

Some one could not find the shim

Some one said make another one just like it.

Some one got close oops.

They installed it.

Never looked through the scope

It was not as expected.

Some decided it would be easier for a guy in a space suit to change almost every thing except the shim to fix the problem. Some said lets bring it home and look at it. The bean counting insurance fellows said no way in hell will we do any thing that may inflict liability on any one.

Now, did the guys mess up the mirror and then mess up the shim fix. Or did some thing else get assembled wrong? Roger.

From rbethman@comcast.net Fri Feb 22 17:16:29 2002  
Subject: [R-390] TUBES

The best yet! The backup mirror that is still in storage was ground PROPERLY. Go figure. Bob - N0DGN

From tbigelow@pop.state.vt.us Fri Feb 22 17:57:04 2002  
Subject: [R-390] FA Cabinet for R390(A)s

Thanks, but no thanks - I'm perfectly capable of surfing epay without seeing their ads posted here, too. Please do us a favor and refrain next time? de Todd/'Boomer' KA1KAQ

From KirkT@BUCKSLIB.ORG Fri Feb 22 18:09:22 2002  
Subject: [R-390] TUBES

As I understood it, t'was an error is the test setup to check the grinding. this Link <http://www.cs.unc.edu/~stotts/COMP204/notes/hubble.html> links to 6 reports on the trouble. Tom - KA2VAD

From rlruszkowski@west.raytheon.com Fri Feb 22 17:38:27 2002  
Subject: [R-390] receiver inquiry

Wait a minute, My Dx 100 and chain link fence did not have any thing to do with that, I am in fact only about 8 miles and in line of sight from the antenna on the silver strand.

There were are a lot of Heathkit Dx 100's out there making QRM. None of the "fused" problems have been firmly linked to a Dx 100.

IF any evidence linked the Dx 100's to that problem, the MIB would have gotten my specimen a long time ago.

As I get good signal reports for my Dx 100, The fellows on the receive end must not own R390's or are just being kind to me. I key with a KAM and a computer so most comment on my machine like fist. Roger.

From cbscott@ingr.com Fri Feb 22 20:09:58 2002  
Subject: [R-390] FA Cabinet for R390(A)s

Was my earlier post today for the R390A for sale on another website offensive as well? I didn't get any flak for it and I assume it was okay, but maybe not? Barry(III) - N4BUQ

From tbigelow@pop.state.vt.us Fri Feb 22 21:08:32 2002

Subject: [R-390] FA Cabinet for R390(A)s

I can't speak for all, but classified ads don't bother me since the seller has set a price and is willing to sell the item to you, for that price. It wasn't an attempt by you to use the list to inflate the auction price of your item which you chose to offer there instead of to the group. It's too bad that we're not good enough for Mr Hugg to sell to here, but we're certainly good enough to ask to add to the bid price when the strangers out there apparently aren't willing to pay a high enough amount to please him. Yours was (to me) an attempt to help the list members. Ol' Charlie's was merely an attempt to help himself. Just my view, mind you - "Scott, Barry (Clyde B)" wrote:

From vze2gmp4@verizon.net Thu Feb 21 21:32:51 2002  
Subject: [R-390] FA Cabinet for R390(A)s

According to the list "rules" private postings of sales, wanted or swaps are ok. Commercial are not. Seems to put ebay announcements in a gray area (my opinion.) There are of course commercial concerns here that monitor this list and when someone needs an item or such get all sorts nonsense email bartering there unwanted goods.

A response from the list owner or co-administrators might be in order. I do believe they just about allow anything on this list. The general rule around here is anything goes. One just has to look though the archives. Flaming of course goes on behind the lines in the form of private emails. Regards, Helm.  
WB2ADT

From rlruszkowski@west.raytheon.com Fri Feb 22 21:33:10 2002  
Subject: [R-390] Danger to Children E word used in body of text.

Scott, Any thing happening to any R390 is worthy of post. I don't care if it does happen on E-Pay or else where. All the big kids know how to operate the delete key. Roger. KC6TRU

From rlruszkowski@west.raytheon.com Fri Feb 22 21:50:16 2002  
Subject: [R-390] Danger E word again.

Helmut, Where do you draw the line, I needed, Microsoft, E-Pay, Lotus Qth Netscape, Just to see the message.

If you post it on Qth for sale, ain't that more than a private person to person sale. this network is not free and it is commercial. You may not get a bill for your connection. But it is not free.

If I send you a Bank of Mine check to cover the cost ain't that involving a commercial firm.

If you elect to ship it to me via Dare I say it?? Commercial carrier, ain't that more than a private person to person sale.

Its a one of one time sale. And as I am looking for another R390/A in my price range. I was happy to read that one is being offered (gold plated but offered) for sale.

We have no lock on the subject here. Why do we believe every R390 owner even knows this site exist? Why do we think a seller has to offer it to us first at some "reasonable" price?

From gunsrus@optonline.net Fri Feb 22 23:58:26 2002  
Subject: [R-390] CE Sideband Slicer

Mike, Had one for years and sorely do regret selling it. It worked fine for me. Sounded great! Tom Nicholson

From wy6k@yahoo.com Sat Feb 23 00:13:03 2002  
Subject: [R-390] Danger E word used in body of text.

I concur. I appreciate having some interesting things pointed out. There are too many things on my "could be interested" list for me to constantly surf epay etc. looking for them all.

From w5kp@swbell.net Sat Feb 23 02:21:20 2002  
Subject: [R-390] Danger E word again.

I don't mind for sale or even auction alerts where R-390 stuff is concerned, after all this is the R-390 list, and my delete key works just fine. However, I have personally made the mistake of putting R-390 stuff up for sale on this list at what I thought at the time was a reasonable price. After the bleeding stopped and I healed up from the price police and semi-hate mail that resulted, I put it on the E place, where it all automatically goes from now on. It all sold easily at auction for about what I was asking for it here to start with, and I didn't have to electronically fist fight anybody to defend my pricing. In all fairness, that stuff is not exclusive to this list. I had the exact same experience, only worse, on the Collins list. I think much of it stems from the relative anonymity of email. Probably like everybody, I've had folks say things to me in emails that they damned sure would not have said to me in person, or at least would not have said twice. Likely another sad reflection on our deteriorating society in general. "I did NOT have sex with that woman." Sigh. Sorry, soap box mode now turned off. 73, Jerry W5KP

From tbigelow@pop.state.vt.us Sat Feb 23 00:45:17 2002  
Subject: [R-390] Danger E word again.

I agree with most of what you say, Jerry - and I didn't mean to imply that anyone \*had\* to list it here first, only hoped that they would. The 'reasonable price' part relates to the fact that it's obviously not bringing as much as the seller would like, in the place known for high priced gear. Many of us have had good luck selling or finding items here, Robert Nickels sold his R-392 quite quickly and could've sold several more. It's not up to me or anyone else to decide for you where or what to sell and item for. Freedom is a great thing, and so is capitalism.

My gripe is the fact that epay is a multi-billion dollar business who gives nothing back to this or any other list for the free advertising. To me, at least, its a bit offensive to have someone list an item on there for days, then after it doesn't bring the price they want, come here and try to get list members to pay what the high-paying dealers and collectors apparently won't. I just find that a bit inconsiderate, but again - that's just me. It's not even an item specific to R-390s, merely one you can use with an R-390. Does this mean coffee makers or corner tables should be listed here too?

I'm in favor of Roger's repeated message about the delete key, as well - I've used that myself, recently in fact. But when it comes to advertising for a commercial firm on here, I'd say that if we're capable of

deleting messages, we should be equally capable of not posting them here. I also like to know what's available that pertains to R-390s - I just don't mind getting off my butt and doing the legwork in the obvious places as opposed to dealing with ads as a trade off for having it brought to me. I'd much rather go look myself than have the list end up cluttered. We may go off-topic, but it's nothing to seeing constant ads, rest assured.

I've had good luck here as well as epay - I'm not the most intelligent man in the world by any stretch, but if I can surf the 'net and that site looking for items, it seems others must be doing the same? Do we \*really\* want it dumped here for the sake of convenience?

To me, there's a huge difference between a site like QTH.com where people buy, sell, and swap gear, and a huge online business like epay. I don't recall QTH charging for the service, only accepting donations if you're happy with the results. Seems like a good thing, to me. If you're more concerned with the money aspects, epay fits the bill.

Enjoy the weekend - sorry for getting this silly-ass thread running again. de Todd/'Boomer' KA1KAQ

From ba.williams@charter.net Sat Feb 23 00:51:03 2002  
Subject: [R-390] FA Cabinet for R390(A)s

Todd, I have to agree with you. I don't think I've seen anyone say that they have something on e-pay, and would you go bid on it please....until now. Much different situation than announcing to the list that you are selling something before giving up and hauling it to a hamfest or putting it up for auction.

I wrote ebay about those black beauties up for auction. I told them they were fire hazards and should be pulled from auctions because of liability concerns. Haven't heard from them in 3 days now. I read where epay has a big team of screeners and lawyers going thru the auctions every day to weed out the sex and body parts ads. Barry

From ba.williams@charter.net Sat Feb 23 00:53:42 2002  
Subject: [R-390] Danger E word again.

It all depends on what the meaning of "is" is.

From frledda@attbi.com Sat Feb 23 00:57:53 2002  
Subject: [R-390] Danger E word again.

Agree with you 100%. Regards, Francesco Ledda

From hankarn@pacbell.net Sat Feb 23 01:09:49 2002  
Subject: [R-390] Danger E word again.

Jerry, I agree with you 10000000% I put a query out about making some new KC/MC knobs like I did before. You can not believe the BS about ripping people off on the price. The first go around I had a little better deal. That machine shop closed down and moved out of state along with the program going to some unknown place with the old CNC and the guy that did it is history. So the new price to me is about 300% more plus the powder coating and the clamp with the screw, nut, washer and then all of the

processing of the orders. If lucky I might make \$3.00 on a set. That makes my time worth about .00001 mil..

Why don't the price police go get off of there fat you know what and make and market some of the stuff that is so badly needed at the price they want to pay and watch their bank account go south.

The el cheapo's Pee me off to no end. Most of them would cry if they had to pay for the electricity to run a fully restored R-390A that was given to them by any of the qualified restorers for free. Then bitch because it was heavy.

Not withstanding I have dealt with close to a 1000 guys on the reflectors with no problems and in all cases they are happy as far as I know. OOPS! slipping off of the soap box, Hank KN6DI

From hankarn@pacbell.net Sat Feb 23 01:17:00 2002  
Subject: [R-390] Danger E word again.

Todd, You also hit a spot. The el cheapo's that use all of the QTH list that never send anything to Al to help maintain it. The percentage of users that donate is very small, Makes the State of RI look bigger than AK. I will bet they Bitch the loudest. Hank KN6DI Yes I donate every year, even when I got thrown in the box for a couple of months.

From n8blb@hotmail.com Sat Feb 23 02:20:26 2002  
Subject: [R-390] Danger E word again.

They would gripe if you hung them with a brand new rope. John John Page K4KWM

From greg\_werstiuk@msn.com Sat Feb 23 05:30:38 2002  
Subject: [R-390] Danger E word again.

I'm sorry to hear you are getting grief on your offer.

The quality of the products you supplied was outstanding. The powder coated knobs are an excellent replacement solution for those of us who want knobs matching the originals but which always look good and don't require periodic re-painting.

The free market economy works fairly well. People set a price for an item they want to sell. If the price is higher than the value perceived by potential buyers, it won't sell.

A seller can't "over charge" a buyer unless the seller can force the buyer to buy the product. It's a simple, self correcting process. Nobody is putting a gun to any R39x owners and forcing them to buy the knobs, etc. which you made available previously and are attempting to offer again.

Price police are pitiful, attention starved human beings. They have nothing better to do than trying to inflate their egos by pretending to be price "blue books" and trying to "save the world" from "paying more than they should". - greg

From rbethman@comcast.net Sat Feb 23 15:45:30 2002

Subject: [R-390] Perhaps Dumb question...Now have answer

The module isolation found two cripsied resistors. Replaced same, recapped module. Popped fuse again, FINALLY tested tubes. One each 6AK6 in AF module shorted. Now back up and running just great! Thanks All!

From w7itc@hotmail.com Sat Feb 23 16:06:19 2002

Subject: [R-390] check this out

Check out this: <http://home1.gte.net/nq5t/Classics.htm#backside> note the CE Side-Band slicer.  
Kenneth Crips

From wy6k@yahoo.com Sun Feb 24 04:35:12 2002

Subject: [R-390] How to clean up the chassis?

Ok, I give. I've tried washing with soap and water and WD40. Then I've been polishing until my dremel and my fingers are shot using Mother's Aluminum polish and Semi-Chrome Aluminum polish. There must be a better way! The old 75A4 that I had Howard restore came back with the chassis looking like it was made yesterday. Using the aluminum polish like I've been doing you also cannot get to all the areas - like up close to a transformer can. And it looks all splotchy and terrible! The radio that Howard restored didn't have any of those splotchy "can't get to them" areas. How do these guys who really know what they are doing get ALL of the aluminum to look like it's new? It looks like they hosed it off with some magic chemical aluminum restorer and then hosed it off with water. But what chemical and what do you do about plastic dial scaels etc? Help! Micheal

From tbigelow@pop.state.vt.us Mon Feb 25 16:04:20 2002

Subject: [R-390] Danger E word again.

You are *\*so\** right, Dan - same mentality as the ones who want you to make knobs for \$5 each, delivered.

In fact, I was at a hamfest this past weekend and gave a BA talk with Mr. Mike, W1RC. This was one of the topics that came up, the availability of gear at hamfests, pricing, online buying, etc. My response to one question was "You can't expect people to keep hauling these beautiful but heavy radios all over the place and then have buyers try to steal them by offering \$25 or \$50 for a \$200-\$500 radio. All you need to do is look online and you can see that they'll have no trouble selling them for that price or more, and we'll be out the opportunity."

I like a deal as well as the next guy, but I don't *\*expect\** it as some still do. Obviously the gear is out there and the deals do still exist if you have the time to search them out or go everywhere. But the mass exodus of BA gear from the shack that we saw in the 70s-80s just isn't happening anymore, and it's not as free or cheap as it was then. Big reason to be glad that I was at least as crazy back then as I am now in the eyes of the sandbox users - I hauled home a LOT of heavy stuff.

Those of us out here who appreciate a good deal also appreciate what goes into finding, restoring, or remanufacturing parts that are no longer available. It's true that the 'squeaky wheel gets the oil' or that the obnoxious, rude, inconsiderate users will leave a deeper impression, but my experience has been that the vast majority are really good folk. It's just that the jerks are very good at what they do. Like you Hank, I've had excellent results dealing with folks on here, save for one exception out your way. I'd

much rather deal with folks whom I have some knowledge of instead of complete strangers, whenever possible.

Best thing we can do about these whiners and crybabies is just block their damned email addresses so when you offer something, they can't respond with a complaint because you won't give it to them for free. I had some nice mil surplus gear a while back that I took to 'fest after 'fest trying to sell. I was asking \$50 for 5 or 6 pieces, all stock. Two guys who I actually \*know\*, wanted them for less. I offered them the package for \$40. They wanted it all for \$25. Stuck in online and got \$100 without batting an eye, and it was still a good deal. Some people just don't get it.

Like anything else, we'll get out of this hobby what we put into it. If you beat the bushes for gear, you'll find a lot over time. If you wait for it to come to you, it'll cost more for the convenience. If we try to nickel and dime sellers constantly, then we can't complain when they take the gear elsewhere and sell it. I'm not willing to pay \$2K for an SX-88, but I don't expect someone to sell me one for \$200, either. There are others out there willing to pay, so they end up with what they're willing to pay for. I'd just like sellers to be courteous enough to offer gear that they believe is R-390 related to the list first if they're going to offer it here at all, instead of as the last resort, after no one on the highest-priced online site is willing to pay what they want. Chances are good that if the bids there didn't meet the reserve, the item is either not desirable or the reserve is not reasonable/realistic.

Keep up the good work, Hank - and everyone else who contributes to this interest we share. You need to make your efforts at least worthwhile without worrying what the whiners are going to think. You'll never please them until you pay them for the privilege of bringing them what they need or want anyhow.  
73 de Todd/'Boomer' KA1KAQ

From chg111@hotmail.com Mon Feb 25 16:28:53 2002  
Subject: [R-390] Danger E word again.

Hello- I wish to second what Greg said- I got a set of R391 "keys" from Hank & they were gorgeous. I also got an EK-07 from him,& I really don't think that it could have been in better shape when it left the factory back in 1958. Sure, it was expensive, but at least on this deal, "you get what you pay for" - and more. My EK -07 is simply astounding. Personally, I think we should be glad somebody is willing to stick his neck out & try to address a need some of us have. I don't anticipate needing a set of knobs, but may get a set anyway, "just in case" - Sandy G. C.H.(Sandy)Geiger III

From s-biddle@ti.com Mon Feb 25 19:54:19 2002  
Subject: [R-390] Danger E word again

I only had one problem with Dan's knobs - They embarrassed the OEM knobs on the radio:) I'm trying to find someone to powder coat the other knobs and the meter bezels. My paint job just doesn't look as good. 73 de Richard, KB5WLH

From eengineer@erols.com Mon Feb 25 08:23:11 2002  
Subject: [R-390] Old dogs and new tricks

Good evening all, As many of you know, I'm a collector and fan of R390A's and Collins gear, but am

unlicensed. Well, I broke down and passed my Technician tonight. (Since I already paid my ten bucks, I also took the next exam, so I ALSO passed my General (written) tonight) Guess I need to break down and finish the code now. Anyone have a suggestion on where to start? Are the tapes/CD any good? Cheers, Jeff

From rstetrault@attbi.com Tue Feb 26 06:09:48 2002  
Subject: [R-390] Old dogs and new tricks

Congrats Jeff! When I was learning code I was 12, riding around in the car I VERY rapidly grew proficient by sending every thing I saw: billboards, street signs, you-name-it. I passed Novice at my junior high school then two months later I had a chance to go downtown (LA) and dropped in (!) and passed the General before the Novice ticket had arrived! There were many much older guys who dropped out after the code exam who probably would have passed had they developed the habit of sending every thing they saw. It's a habit I can still fall into almost forty years later. (forget the dopes who stare at you just because you're sounding funny...) Best Wishes, Bob Tetrault, ex WB6NOG General, 1964, ex WB6BXU Advanced, 1974

From mc@sover.net Tue Feb 26 12:24:51 2002  
Subject: [R-390] Boatanchor Storage - Some questions???

Hi Gang: I've been lurking in the shadows for quite some time now and have enjoyed reading much of the traffic on here. I'd like to pose a question to the group that may become an interesting thread for all.

My family and I recently moved into a house here in the Upper Valley region of Vermont/New Hampshire. We have a nice two-car garage which has new electric doors that lock and a cement floor, basement (with cement floor) and an attic. All three places are unheated.

My question is about equipment storage. I would like to know what is the best place to store my "Boatanchors" and manuals collection that are not being used at this time. I have kept them in a temperature and humidity controlled storage facility for the past three and a half years (don't ask what it has cost me!) but now is the time to move them.

My concerns are the heat of the attic in the summer and the potential of high humidity and of flooding of the basement. I would also like to know the best way to test the basement for humidity and what is an acceptable level. If this is relevant the house is heated by forced air from an oil-burning furnace less than a year old. The house itself is about 85 years old and is located at the top of a 100 foot embankment. My manuals are boxed in USPS Priority Mail boxes (the older ones with the non-sticky flaps) which serve as a filing system as well as keeping them flat and on order.

So basically I'm asking about the best place to store vacuum tube-based electronic equipment and paper manuals in an 85 year-old house with an attic, basement and two-car garage in Central Vermont. 73 all, Michael Crestohl W1RC

From jbrannig@optonline.net Tue Feb 26 13:58:17 2002  
Subject: [R-390] Boatanchor Storage - Some questions???

I don't know what the environment is like in Vermont. Here on Long Island we have dry cold winters and damp hot summers. I store most of my radios in the basement, on open shelves, at least a foot off

the floor. (if I get more than a foot of water in the basement, I have bigger problems than wet radios)  
The basement is heated, humidified in the winter and a dehumidifier or Air conditioning is used during the warmer months. The space is also used for radio station, home office and playroom. Other radios, parts, etc. are stored in the attic of the garage. They are subject to drastic changes in temperature and humidity and don't fare as well. hope this helps. Jim

From w9wis@charter.net Tue Feb 26 15:01:21 2002  
Subject: [R-390] [OT] Hard to Find Tubes (HP-410B)

Sorry for the off topic post but I thought some may find this interesting with all the tube talk going on here lately.

I replaced my HP-410B a while ago with a much later one.... I had a spare 2-01C probe for the ood one but my newer one needed a EA53. I about died when I looked in all the usual places for a spare EA53 and found that "if" you could find one they were selling nos for up to \$100 each ! Heck my spare 2-01C is selling for between \$30 and \$60 it seems.....

I finally found a web page of a tube dealer in Sweden. He had a nos EA53 listed in Swedish currency and for kicks I sent an email asking what it converted to in US Dollars. Get this..... \$8 US Dollars ! Total with shipping was \$13.80 including a \$3.50 fee for an order under \$30 Euros! Amazing..... sure must be more EA53's over there then here <grin>. Now I'm checking to see if they have or can get a spare probe tube for my favorite VTVM.... a 1970 General Radio 1806-A, an amazing instrument but with the very small 7266 ceramic diode in the probe. And.... I checked ... he didn't have any 3TF7's or 26Z5W's <grin> but lots of nos European and other military types. Owner's name is Ralf.... fast email, fast shipping, nice guy. YMMV...

RBN Trading HB  
Karvagen 5  
SE-976 31 Lulea  
Sweden  
<http://go.to/radiotubeshop>

Mike, W9WIS

From Barry Hauser <barry@hausernet.com> Tue Feb 26 15:19:57 2002  
Subject: [R-390] Boatanchor Storage - Some questions???

Hi Mike, list ... I'm also on Long Island and the climate should be similar to Vermont, though probably gets a bit warmer and humid in summer here and our winters aren't as extreme. (We get a few inches of snow when you get a foot or more).

I'd think a lot would depend on how you use the garage and basement. My basement is finished, but the electric heating is never used or needed as the oil burner and hot water heater keep it warm during the winter. The fact that your oil burner is new is important -- there was always a thin layer of soot with the old one. But be sure to have it checked regularly -- if it "bangs" when it goes on, may need adjustment to avoid a blow-back, which you don't want to know about. I have a hot water/radiator system. Yours might benefit from the air ducting keeping air circulating down there. Is it air conditioned? Mine isn't, but the cold air from the wall units tends to fall downstairs and keeps the basement reasonably cool.

My garage is a single, but very deep. Have a snowblower, but not used so far this year, no lawnmower. It is unheated, but part of the house with two flights -- bedrooms and attic over it. It is not used for cars, has an old wooden rollup door with a good seal at the bottom but not the sides or top. I suppose it would be better with a modern insulated door. Things hold up well toward the middle and back, not as good at the front, near the door. A lot would depend on whether the garage is attached and how you use it. Cars generate gasses on startup, frequent opening, etc.; stored lawnmowers with grass, etc. would not be good, or bringing in a wet snowblower, etc.

I have a big attic with high roof. The floor has been toughened up with a layer of 3/4" plywood screwed down, not nailed, to help support it. However, the floors of attics -- at least on this 50 year old house -- are done with 2 X 6's, not the 2 X 8's or better used for load bearing floors. OK to walk, but not run or jump and probably not OK to stack tons of boatanchors. If the floor of your attic is really more simply the ceiling of the rooms downstairs, there may not be sufficient load bearing in the wall setup. In mine, there are extreme temperature swings and periodic visits of birds and squirrels. I do have a couple of BA's up there -- a BC-312 and a Hallicrafters S-29 -- haven't checked up on 'em lately.

On a 100 ft. ridge, sounds like the basement is the best bet -- unlikely to flood. Barry

From bill@iaxs.net Tue Feb 26 15:20:50 2002  
Subject: [R-390] Boatanchor Storage - Some questions???

As far as I'm concerned, the biggest problem is mold. This happens long before something gets rusty. When you are sensitive to mold, you get to learn about dewpoint. This is the temperature where moisture just begins to condense from the air, like the moisture on the outside of a cold drink in summertime. You can calculate dewpoint from %RH (relative humidity) and vice versa if you know the air temperature. Radio Shack and others sell \$20 digital meters for temperature and relative humidity. Weather stations, like Oregon Scientific, will calculate dew point for you.

The trick is to store paper and easily rusted gear in an area where the temperature never gets below the dewpoint. With no condensed water, there is no mildew and no rust. If you have other allergies, dust mites go dormant when the RH is below 50%. You need to know that dewpoint remains pretty much the same in an area with air circulation, but that RH increases in the vicinity of cold surfaces like concrete or glass that has cold temperatures on the other side of it.

If water floods the floor, dewpoint will rise to at least the temperature of the water. I don't have anything expensive less than a foot off the floor.

Here in Minneapolis (dewpoint range -20 to 80) I finally got the basement under control by installing heating air intakes near floor level in the basement and blocking off the ones upstairs. The circulating air fan is on all of the time. Those with radiant heat would need to circulate air between basement main floors.

I also installed an UltraAire dehumidifier developed for use in dairy barns. It cost \$3000, but it maintains 35% at 72 degrees spring and fall. Two \$300 standard dehumidifiers could not hold 60% some days. The basement never smells moldy, so it can be used all year around. I think it was worth it. All of my good stuff and >1000 books are in the basement. Nothing is in the vented attic. Paper stuff in the garage is in sealed plastic containers.

In summer, the basement will not be a high temperature problem. Forget the attic. The garage will also get hot, but military gear can handle it. Wax capacitors and liquid electrolyte era stuff is best kept in the basement (or living room :-).

With an older house, you should make an effort to seal major outdoor air leaks, especially through the attic. When we bought this house 20 years ago, the unfinished walkout basement had neither insulation nor vapor barrier on the outside wooden wall. The attic runs 50% RH when it is 10 degrees out, attic 23 deg. BTW, dewpoint is never higher than air temperature. When it tries to be, you get rain (or snow).  
Regards, Bill Hawkins

From roy.morgan@nist.gov Tue Feb 26 16:33:21 2002  
Subject: [R-390] Old dogs and new tricks

you wrote: > >Well, I broke down and passed my Technician tonight...I ALSO passed my >General (written) tonight)

Congratulations, and welcome to the "fraternity"...

> need to break down and finish the code now. Are the tapes/CD any good?

I have recently found a code practice method that flies in the face of "start slow and work up" philosophy. The program is freeware. The method is well thought out and documented.

See the following links: SO YOU WANT TO LEARN MORSE CODE  
<<http://www.sdc.org/~finley/finley.morse.html>>

The Morse Trainer by G4FON is at: <<http://www.qsl.net/g4fon/>> (last week he added chirp to the signal if you want it. glowbuggers will be delighted.)

For a long article on how to learn code (one megabyte document in .PDF): The Art & Skill of Radio Telegraphy 3rd Edition by William G. Pierpont N0HFF <<http://www.faradic.net/~gsraven/links.html>> specifically, under "Online Books:" (oops. link broken just now.)

On another nice page: <<http://ca.geocities.com/jimcwca/radio/morse.html>> I find it in HTML form not .PDF form <<http://www.geocities.com/gm0rse/n0hff/index.htm>>

And Finally I located it in MANY formats digitally at: <<http://www.qsl.net/n9bor/n0hff.htm>>

Here is a brief quote from Finley's pages:

"The pressure to reduce the code-speed requirements came from the widespread perception that getting to 13 or 20 wpm is a nearly insurmountable barrier. That perception is wrong. For little more investment of time than it takes to pass the 5-wpm test, you can gain real, higher-speed code proficiency that will enhance your enjoyment of the hobby.

Most of what you've been told about learning Morse Code is wrong -- dead wrong. Amateur radio operators traditionally have used the slowest, most frustrating, most painful and least effective techniques possible for gaining code proficiency.

You can gain real code proficiency. You can do it in a reasonable amount of time and with a minimum of frustration and pain. In order to do so, you must approach code training from a different perspective and use different techniques from those common among amateurs for the past half century."

From vze2gmp4@verizon.net Mon Feb 25 16:54:15 2002  
Subject: [R-390] storage

Keep in cool, dry, dark place. I've never been able to find one those places in my house. The closest I've come is the refrigerator.(not the freezer). I keep film and some of my tubes in there, boxed and wrapped in aluminium foil.

I store larger radios and stuff in my garage which is attached to the house so in the winter it never freezes. Do not place items on a cement floor!

Place radio on a layer of plastic. Then use two pieces of wood to raise radio off the plastic. Cover with a cotton cloth completely. I use an old bed sheet. Do NOT cover with plastic. Regards, Helm.  
WB2ADT www.whatthe\$%#\*@!amidoinghere.com

From jbrannig@optonline.net Tue Feb 26 18:08:50 2002  
Subject: [R-390] Old dogs and new tricks

Congratulations on your new license. W1AW has regular code practice sessions see [www.arrl.org](http://www.arrl.org) for schedule. Put all those receivers to good use!!! Jim

From jimamos@cisco.com Tue Feb 26 18:22:10 2002  
Subject: [R-390] storage

What does the cement floor do to the radios? I know it will ruin a car battery as well, but would like to know what the failure mode is. Does it cause additoinal corrosion? Also, if the radio is setting on rubber feet, is it OK?

My Drakes have rubber feet under them, but of course the 390's don't (and some of the parts sitting next to it). Jim N8CAH

From s-biddle@ti.com Tue Feb 26 21:52:53 2002  
Subject: [R-390] Boatanchor Storage - Some questions???

The military guys use something known as prime pack to keep things forever. I recently bought a set of 1960 vintage headphones that came in the prime pack bag. Thirty plus years old and the rubber cord was as flexible as the day it was made and the cloth headband cover was perfect. (From Antique Electronics)

When we prime pack military/JAN integrated circuits, we put the parts and a desiccant (to getter residual moisture) in a special aluminized plastic bag and evacuate as much air as possible with a vacuum pump, then heat seal the bag while holding vacuum.

I recently opened an R-390A RF deck that I had stored about five years ago. I used an industrial heavy duty trash bag, some desiccant I picked up from the gun store, and a vacuum cleaner. I made sure the bag was well sealed by rolling the end over and securely taped. It was then put in a cardboard box that was stored in a non-environmentally controlled storage unit we rented. Came out looking fine.

I have seen TV adds for some bags that are used to store clothes. These appear to have a check valve to

make the vacuum cleaner part a little easier.

My large gun safe keeps things pretty dry and rust free. I use a BIG can of desiccant but you can get electric dryers. With the prices boatanchor stuff is fetching at auction, maybe that is the right place to keep them anyway :) 73 de Richard, KB5WLH.

From howard@cconnect.net Tue Feb 26 22:26:51 2002

Subject: [R-390] Old dogs and new tricks

Congratulations, Jeff!!! Way to go!!! The other fellows have given you some really good advice. I also believe that copying W1AW code practice sessions is one of the best methods to improve code speed. This gives you a chance to copy through QRM which makes the "clear" exam test seem easier. /// If you are using a straight key for sending practice, keep it adjusted quite loose. If it's about to fly apart, it is just right ;-). A straight key should have 1/16" or more clearance on the contacts and the same amount of side play. The side play is VERY important!!! It is the side play that keeps you from developing a "glass arm". And you should hold the paddle between your thumb and 2nd finger with the 1st finger resting on top. Welcome to the fraternity! Have a ball! Howard, AA4HR

From jordana@nucleus.com Tue Feb 26 22:37:09 2002

Subject: [R-390] Old dogs and new tricks

In as much as code tapes etc, will help you pick up the code, nothing beats actually listening to the signals you will hear with QRM QRN etc... soon after you pick up the characters, and the 5 figure groups, try copying the same thing with random noise, either off the air, or while the vacuum, or TV etc is operating... it really helps once you're on the air... 73 de Jordan...

From pha@pdq.com Wed Feb 27 00:34:11 2002

Subject: [R-390] R-391 restoration update

Howdy folks, Last I wrote, I think I was asking about motor bearings and brushes for my R-391's autotune.

Since then, I was able to buy standard bearings, cobble up some worthwhile brushes, install the motor, figure out the autotune, get it aligned and working, and move on to the electrical part of the radio. The mechanical autotune is quite a piece of work - simply amazing the engineering that went into it.

I did take a lot of notes, and with any luck will be able to write an article about it for Hollow State News.

The manual is an interesting combination of amazingly simple, plain language, and also a lot of wrong information.

This evening, while studying the 1ST IF Amplifier circuit diagram, I finally realized that the 391 manual (preliminary one) has bad circuit diagrams! The schematic circuit around the V501 tube is all wrong. Fortunately, the R-390 manual has the right diagrams, so tracking my IF deck problems should be easier now.

Are there other known problems with the schematics? I've also come across resistance values in the voltage/resistance charts that just can't be possible, given the circuit diagram. Boy, that keeps me on my

toes.

Oh - this weekend and last night, I was able to trace the RF signal all the way through the radio - I spent the longest time in the AF deck, replacing and repairing all the heat related damage there. I'm still not done - I think at least two or three of the .01 uF caps are leaking (grid caps for the local and line amplifier tubes).

Knowing what I know (or think I know) now, I do believe I'd just replace every cap and resistor in the AF deck before worrying about trying to use it. Even resistors on the board near the 6082 tubes were fried to a crisp. I don't think I'd apply this same strategy to the IF deck, but if I start replacing capacitors there, I'm gonna do all the resistors, too - they just drift too much from heat, like from the soldering iron. Paul

From w7itc@hotmail.com Wed Feb 27 00:55:42 2002

Subject: [R-390] Old dogs and new tricks

For Morse code My hands down favorite method of learning is the Ziliack code tapes. I don't like using a computer, and so many of the other tapes you can memorize. The Ziliack tapes always keys the individual character at a 23 word per minute rate spaced for what ever speed you are working on. So you don't get flustered when you take the code test at five WPM. What is interesting is the way Ziliack prevents easy memorization of the code runs, everything is sent backwards, (gnihreve si tens sdrawkcabs} go to: <http://www.amateurradioschool.com/> The price is right to. once you get going with the tapes use your R390 to copy code off of the air. This gets you used to hearing CW in many different ways. Kenneth Crips

From ba.williams@charter.net Wed Feb 27 00:53:30 2002

Subject: [R-390] How to clean up the chassis?

Did you ever get any answers? If so, please pass them on to me. I guess I need to consider the dishwasher too but I don't have a compressor yet. Barry

From w5kp@swbell.net Wed Feb 27 02:56:02 2002

Subject: [R-390] Boatanchor Storage - Some questions???

Brownell's Gunsmithing supplies sells some specially treated vapor type paper for long term packing of guns called Gun Wrap that works like a champ. It's actually not a "wrap" per se, because you only need to enclose it with the item, not fully wrap it in the stuff. Info is at <http://www.brownells.com/Product/index.asp> I used this stuff to store several long guns for as long as 6 years in a non-controlled warehouse environment, and it worked perfectly. I'd not be afraid to use it on radios, but have no info on that application. Maybe Brownell's could provide more details. 73, Jerry W5KP

From w5kp@swbell.net Wed Feb 27 03:01:40 2002

Subject: [R-390] Boatanchor Storage

A closer look at Gun Wrap revealed warnings about brass/aluminum, etc., I presume from tarnishing. This IS a chemical product, and not a dessicant. Maybe not such a good idea for old radios. I'd hate to see somebody's prize BA ruined. :-)

From w7itc@hotmail.com Wed Feb 27 02:21:28 2002  
Subject: [R-390] Boatanchor Storage - Some questions???

hands down the best way of storing documents is by vacuum sealing them into storage bags. go to <http://www.foodsaverforless.com/> for an example of what I mean. Once a TM, Op Manual, or magazine is sealed into one of these vacuum sealed bag they are absolutely water proof. If I am not mistaken doesn't the Manual have a section on how to package and store such equipment. Kenneth Crips

From vze2gmp4@verizon.net Mon Feb 25 15:16:40 2002  
Subject: [R-390] storage

-- Original Message -- > What does the cement floor do to the radios?

Cement never really dries and moisture evaporating from the floor cause a corrosion problem. Which is why I place the equipment on a sheet or two of plastic

I know it will ruin a car > battery as well, but would like to know what the failure mode is. Does it > cause additional corrosion?

Also, if the radio is setting on rubber feet, > is it OK?

probably

From chg111@hotmail.com Wed Feb 27 13:46:05 2002  
Subject: [R-390] Antique Radio Classified

Dear Fellow Non-A Aficionados- Got my ARC last night and found an ad from a fellow advertising; JAN6082WB tubes for 2 bucks apiece. His name is Jon Andreasen ,in New Jersey, and his phone is 973-579-6261 email jda @nac.net. I dunno if he has 1 or 1000, new or used. Right above this ad was another guy w/a whole bunch of Collins gear for sale,and I also found a 75A2 serial number 10 for sale for 750 bucks. ARC is always interesting-there's gold in them thar hills !!

The Radiola/Catalin/5-tube-special crowd that ARC caters to may have a lot of stuff we need-they just don't know it.-Sandy G. C.H.(Sandy)Geiger III

From Barry Hauser <barry@hausernet.com> Wed Feb 27 14:59:27 2002  
Subject: [R-390] R-391 restoration update

Paul wrote: > Last I wrote, I think I was asking about motor bearings and brushes for my > R-391's autotune. > Since then, I was able to buy standard bearings, cobble up some worthwhile > brushes, install the motor, figure out the autotune, get it aligned and > working, and move on the the electrical part of the radio.

Were those the bearings for the motor or the worm drive? Hope you took down names 'n numbers, part numbers, that is... ;-)

The mechanical autotune is quite a piece of work - simply amazing the engineering that > went into it.

And a good deal of combination-locksmithery. I think one of the consulting engineers was R. Goldberg.

>> I did take a lot of notes, and with any luck will be able to write an > article about it for Hollow State News.

I have you penned in - with ink, actually carved in .... heh heh.

> The manual is an interesting combination of amazingly simple, plain > language, and also a lot of wrong information.

That wrong information stuff is what triggered the development of the Y2K manual.

>

> This evening, while studying the 1ST IF Amplifier circuit diagram, I > finally realized that the 391 manual (preliminary one) has bad circuit > diagrams! The schematic circuit around the V501 tube is all wrong. > Fortunately, the R-390 manual has the right diagrams, so tracking my IF > deck problems should be easier now.

I don't know if they ever came out with anything after the preliminary. The '391 should be electronically the same as the non-A. Only electrical difference would be in the wiring harness, but I think you mentioned that this appears to be an add-on to support the autotune electricals. So, it's probably safer to use a non-A manual for the electronics, although the '391 book warns that some units may vary (ancient YMMV message), but I thought they were referring to the autotune mechanics.

As you discovered earlier, the manual also has the worm drive access for autotune resynch on the wrong side of the rado -- unless they meant from the radio's point of view.

>> Are there other known problems with the schematics? I've also come across > resistance values in the voltage/resistance charts that just can't be > possible, given the circuit diagram. Boy, that keeps me on my toes.

Yup -- you're into boatanchor archeology and forensics now. I find that kind of stuff all the time - tube voltages and resistance specified for pins with no connection, crazy resistances vs. the schematic, and so on. I get the sense that some of this resulted from arbitrary production line switcharoos -- like using a different unused tube socket terminal as a tie-point than originally assumed. Of course, many of these were serviced and then re-MFP'ed. However, if your radio agrees with the non-A manual, that's a 2/3rds majority vote. ;-)

>

> Oh - this weekend and last night, I was able to trace the RF signal all > the way through the radio - I spent the longest time in the AF deck, > replacing and repairing all the heat related damage there. I'm still not > done - I think at least two or three of the .01 uF caps are leaking (grid > caps for the local and line amplifier tubes).

That's why solid stating out the 6082's may be in the best interests of preserving these. The deck is upside down so the heat from them rise into the module wiring. If you run the 6082's, it's recommended to add a small muffin fan alongside the chassis lined up on the portholes, set to exhaust air out. Or, you can run the rig upside down so the heat rises up and out.

> Knowing what I know (or think I know) now, I do believe I'd just replace > every cap and resistor in

the AF deck before worrying about trying to use > it. Even resistors on the board near the 6082 tubes were fried to a > crisp.

Dave Medley recommends replacing all the 47 ohm resistors (2 watt, I think) with 5 watt "sandohm" types -- the squared off wirewounds.

I don't think I'd apply this same strategy to the IF deck, but if > I start replacing capacitors there, I'm gonna do all the resistors, too - > they just drift too much from heat, like from the soldering iron.

Keep up the good work ... Need that article AND some good guidance to do my own '391's. While you're at it, would be a good idea to document the apparent errors in the manual - might be the beginning of a Y2.002K edition. Barry

From NE7X@aol.com Wed Feb 27 16:48:46 2002  
Subject: [R-390] Best way to mount rack rails

I have both a R-390A and SP-600 receivers which I would like to mount into a 6 ft tall x 19" wide standard rack cabinet. I have ball-bearing slide rails, however the rail mounting holes (standard 19" rack item) do not match up to the screws/holes on either side of the radios. Matter of fact, the R-390A doesn't even look like there are any threaded holes at all for mounting rack rails.

How were these receivers mounted into racks when used in the military? I don't believe all the weight of these very heavy receivers was all placed entirely on just the front panel. Was it???? One alternative is to use rack shelving, however this will cause blockage within the cabinet and not allow a "flush" front mount to the rack cabinet due to the front shelving mounting screws which will protrude behind the receivers front panels. Any rack rail mounting suggestions would be appreciated. Thanks and 73s, Tom NE7X...

From beral@videotron.ca Wed Feb 27 17:56:51 2002  
Subject: [R-390] R-391 restoration update

Hi Paul, Thanks for the update. Very interesting comments and observations. I will keep this info in mind when I get to the "Power On" phase in the restoration of my R-390.

"Paul H. Anderson" wrote: > Knowing what I know (or think I know) now, I do believe I'd just replace every cap and resistor in the AF deck before worrying about trying to use it. Even resistors on the board near the 6082 tubes were fried to a crisp. I don't think I'd apply this same strategy to the IF deck, but if I start replacing capacitors there, I'm gonna do all the resistors, too - they just drift too much from heat, like from the soldering iron. > Paul

I completed an R-390A about a year ago. I did not apply power to this radio until out of spec resistors, paper/black beauty caps, visual defects and cleaning and lubrication was completed. At power on there were no electrical problems except for two mechanical alignment problems. I mention this because of the cumulative effects of the out of spec resistors and the known problems with the caps in the R-390A contribute to the initial electrical problems in restoration.

The R-390 I am working has 36 out of spec resistor, 20 in the IF module. I will not replace any caps because it is not necessary in the none A because of the better quality caps used. This is not my observation but that of others who have made this recommendation on this reflector. All cleaning is complete. Waiting for spring so that the front panel can be stripped and painted. My paint shop is the

balcony of the my apartment.

The experts recommend replacing all the 47 Ohm resistor. I replaced them in the 6082 cathodes although they were in spec. The ones in the 26Z5s were burnt completely open, charred to a crisp. I am using the white sand 5 watt resistors. They fit nicely in the original 47 Ohm location.

BTW Barry Hauser mentions replacing the 6082s with a solid state device in his response to this post. I have made an agreement with Barry to build a solid state replacement for the 6082s and write an article on the construction for Hollow State News. The circuit is detailed by Dr. Gerald N. Johnson, K0CQ, in Hollow State News, Issue #52, Spring 2001. The article will be completed in the late summer after all testing is completed.

Barry if you read this everything is going well with the module. A PWB has been made, a heat sink selected. I have all components except for the 180 and 200 Volt Zeners. They are on order and should be here next week. The module will plug into the two 6082 sockets. No fan is contemplated at this time but I will be contacting Dr. Jerry with a couple of related technical questions. I am not an engineer but an aging tech with a bit of experience. Need good engineering input so that no mistakes are made.

Sorry Paul but I digress from the original topic. A final comment and I am sure that you are aware of it. Use heat sinks on good components when removing components that are tied to a common point. This will prevent damage to good components. Those carbon resistors are very susceptible to heat.

Good luck with the R-391. Al

From Richard.McClung@Dielectric.spx.com Wed Feb 27 18:14:34 2002  
Subject: [R-390] Best way to mount rack rails

The only rack slides for the R-390(\*) that I saw/used were in the AN/TSC-26. There was a large cast aluminum plate that had counter bored hole for the screws that mounted the plate to the sides of the receiver and drilled and tapped holes for attaching the rack slides which were heavy duty ones made by General Devices.

At fixed sites we had angle brackets that were bolted to the front and rear vertical rails and each side of the rack to support the receivers.

I have aluminum angle bracket supporting most my equipment here. I got it at the hardware store. It's Reynolds Aluminum standard stock that comes in 10 foot lengths. RICH @B> }

From rlruszkowski@west.raytheon.com Wed Feb 27 19:00:29 2002  
Subject: [R-390] Best way to mount rack rails

I have both a R-390A and SP-600 receivers which I would like to mount into a 6 ft tall x 19" wide standard rack cabinet. I have ball-bearing slide rails, however the rail mounting holes (standard 19" rack item) do not match up to the screws/holes on either side of the rails. Matter of fact, the R-390A doesn't even look like there are any threaded holes at all for mounting rack rails.

How were these receivers mounted into racks when used in the military? I don't believe all the weight of these very heavy receivers was all place entirely on just the front panel. Was it????

Tom, The R390's had angle brackets under them. about 2 1/2 x 2 1/2. These fit the RETMA rail pattern. When bolted to the sides, the rails held a receiver just right so the front panel bolt holes all lined up just right.

3/4 pine 22" long and 1 1/2 wide with two holes through the 1 1/2 dimension will let you bolt the wood slat to the side rail with a 2 inch 10 - 32 bolt. Use washers and do install several front panel bolts once you get the receiver into the rack.

Angle iron from the salvage yard can be drilled and works well. Larger wood slats (2 x 2) and 1U (1 3/4) blank panels work well. There is room for the slides between the rail and the radio. You can bolt an angle to the slide rail and set the radio on the angles this will make slide out drawers.

You can install U pans between the rails or slides. This causes a ventilation problem. So a hole saw to open up some air flow in the pans is in order.

An angle rail that is wide enough so that when the receiver is moved all the way over to one side, the other side will not drop off the rail is normal. You can mark and drill the angle to fit the rack pattern. Blots and washers will hold the rail in place with oversize (slotted) adjustment holes. Roger KC6TRU.

From twleiper@juno.com Wed Feb 27 20:01:35 2002  
Subject: [R-390] How to clean up the chassis?

blw <ba.williams@charter.net> writes: ... > I guess I need to consider the dishwasher too but I don't have a compressor yet.

Use a hair dryer. The dishwasher works great, especially on the 390's, since you can put the modules in. The only thing I don't put in is the RF deck coils. The dish detergent will etch the aluminum slightly and brighten it up. What I do is pick up a couple gallons of distilled water and run the last rinse cycle over again, filling up with the distilled water first so that it doesn't use the tap water to fill. Do not use the heated dry, just take the parts out and blow them off with a hair dryer if you don't have a compressor.

Whew. I finally was able to send an e-mail without mentioning the word Hammarlund.

Tom Twit Of The Year - 2002

From twleiper@juno.com Wed Feb 27 20:04:29 2002  
Subject: [R-390] Antique Radio Classified

"Sandy Geiger" <chg111@hotmail.com> writes: ... > and I also found a 75A2 serial number 10 for sale for 750 bucks.

I'll sell you a nice one for \$500 bucks... Tom

From twleiper@juno.com Wed Feb 27 20:10:28 2002  
Subject: [R-390] Best way to mount rack rails

Richard.McClung@Dielectric.spx.com writes: > At fixed sites we had angle brackets that were bolted to the front > and > rear vertical rails and each side of the rack to support the > receivers.

I may be able to pick up a couple dozen more of these...I got brand new ones (gold annodized!) at a local scap yard, and I think I saw a couple more packs the other day, so I'll check it out... Twit

From pha@pdq.com Wed Feb 27 20:16:56 2002  
Subject: [R-390] R-391 restoration update

wrote:> wrote: Last I wrote, I think I was asking about motor bearings and brushes for my R-391's autotune. Since then, I was able to buy standard bearings, cobble up some worthwhile brushes, install the motor, figure out the autotune, get it aligned and working, and move on the the electrical part of the radio. Were those the bearings for the motor or the worm drive? Hope you took down names 'n numbers, part numbers, that is... ;-)

The motor bearings. I haven't yet tackled the oillite bearings in the aluminum frame for the line shaft. Doing this requires more bench space than I had at the time.

> I don't know if they ever came out with anything after the preliminary. The > '391 should be electronically the same as the non-A. Only electrical > difference would be in the wiring harness, but I think you mentioned that > this appears to be an add-on to support the autotune electricals. So, it's > probably safer to use a non-A manual for the electronics, although the '391 > book warns that some units may vary (ancient YMMV message), but I thought > they were referring to the autotune mechanics.

I think I will be able to write out a list of specific parts added or changed for the R-391 (over the 390). I think there are very few parts that were changed (as opposed to added), although they were large physically (front panel, autotune frame, and wiring harness overlay).

> Yup -- you're into boatanchor archeology and forensics now. I find that > kind of stuff all the time - tube voltages and resistance specified for > pins with no connection, crazy resistances vs. the schematic, and so on. I > get the sense that some of this resulted from arbitrary production line > switcharoos -- like using a different unused tube socket terminal as a > tie-point than originally assumed. Of course, many of these were serviced > and then re-MFP'ed. However, if your radio agrees with the non-A manual, > that's a 2/3rds majority vote. ;-)

Funny that you mention that - last night, I was also surprised to see that the physical layout of the wiring of two R-390 AF decks were different. Collins had done a slightly more complex thing, and Motorola had simplified it to make it easier to build, and required one fewer posts.

> That's why solid stating out the 6082's may be in the best interests of > preserving these. The deck is upside down so the heat from them rise into > the module wiring. If you run the 6082's, it's recommended to add a small > muffin fan alongside the chassis lined up on the portholes, set to exhaust > air out. Or, you can run the rig upside down so the heat rises up and out.

Agreed - the 6082's get hot enough to discolor newspaper - I had the AF deck out of the radio, but hooked up. The tubes laying against newspaper cooked it (over a 30 minute period or so). I doubt they'd burst into flame, but I wouldn't want to put anything flammable next to them just the same.

> > Knowing what I know (or think I know) now, I do believe I'd just replace every cap and resistor in the AF deck before worrrying about trying to use it. Even resistors on the board near the 6082 tubes were fried to a crisp. Dave Medley recommends replacing all the 47 ohm resistors (2 watt, I think) with 5 watt "sandohm" types -- the squared off wirewounds.

Oh yeah - at the very least. I think as preventative maintenance, the other 1W and 2W carbon comp resistors should be replaced. The 330K to the hum control pot and a few 82K ohm ones come to mind. One AF deck had at least 8 BBQed resistors, the other one was better, but still pretty bad.

> I don't think I'd apply this same strategy to the IF deck, but if I start replacing capacitors there, I'm gonna do all the resistors, too - they just drift too much from heat, like from the soldering iron. > Keep up the good work ... Need that article AND some good guidance to do my own '391's. While you're at it, would be a good idea to document the apparent errors in the manual - might be the beginning of a Y2.002K edition.

Since as you say, the 391 manual never made it to a next revision, maybe it would be worth doing an R-390 manual with a chapter covering the autotune specific parts of the 391 manual, so it would cover both radios. I can't really think of anything wrong with that, since the core electrical circuits are identical.

Does anyone offhand know what documentation production system was used to generate the Y2K R-390A manual? Specifically, what text and graphic page layout program? Thanks, Paul

From pha@pdq.com Wed Feb 27 20:24:44 2002  
Subject: [R-390] R-391 restoration update

Al Solway wrote: >> Paul >> I completed an R-390A about a year ago. I did not apply power to this radio until out of spec resistors, paper/black beauty caps, visual defects and cleaning and lubrication was completed. At power on there were no electrical problems except for two mechanical alignment problems. I mention this because of the cumulative effects of the out of spec resistors and the known problems with the caps in the R-390A contribute to the initial electrical problems in restoration. >> The R-390 I am working has 36 out of spec resistor, 20 in the IF module. I will not replace any caps because it is not necessary in the none A because of the better quality caps used.

Hmm... I may need to beg to differ. At the least, in the AF deck, there perhaps 4 caps that get toasted enough to cause problems, and between the AF and IF deck, there are a number of electrolytic caps, some of which have been replaced in earlier lives, and some of which were leaking when I got them.

One of my 390 IF decks has what looks to be leaking or corroded .01uF tubular caps - only a few, but some nonetheless. If I were replacing resistors down inside there (ow), I think I'd find nice fitting caps and replace them as well.

> This is not my observation but that of others who have made this recommendation on this reflector. > The experts recommend replacing all the 47 Ohm resistor. I replaced them in the 6082 cathodes although they were in spec. The ones in the 26Z5s were burnt completely open, charred to a crisp. I am using the white sand 5 watt resistors. They fit nicely in the original 47 Ohm location.

Oops, I think I used 2W flame proof ones. They look to be holding up, but I haven't used it a lot yet, either. At any rate, yes, they get toasted everywhere I've seen (2 PS, 2 AF decks).

> Sorry Paul but I digress from the original topic. A final comment and I am sure that you are aware of it. Use heat sinks on good components when removing components that are tied to a common point. This will prevent damage to good components. Those carbon resistors are very susceptible to heat.

A welcome diversion, don't worry!

This is a technique I haven't tried much of yet. I've been aware of it, and the need to do it, but the times when it was an issue, I felt I didn't even have enough dexterity to get another piece of metal down there in the morass of wires.

> Good luck with the R-391.

Thanks, and likewise for your fine 390! Paul

From chg111@hotmail.com Wed Feb 27 20:36:18 2002  
Subject: [R-390] Antique Radio Classified

Gents- Not having any experience w/75 series radios, I didn't know whether that price was good, bad, indifferent...Sounds like it is too high by half. I DID get my R-389 out of ARC, & amp; paid way less than half what they're supposedly currently bringing. But that was several years ago, too. -Sandy G. C.H.(Sandy)Geiger III

From billsmith@ispwest.com Wed Feb 27 23:31:28 2002  
Subject: [R-390] How to clean up the chassis?

I use a Hoover "Porta-power" vacuume hooked up to blow air. It is small and powerful and is almost as good as a full compressed air setup (and much more portable!). I don't use it for anything else. If they are still made, they are probably much more expensive today, but when I bought mine, they were selling for \$60-\$70. Well worth the investment. 73 de Bill, AB6MT billsmith@ispwest.com

From billsmith@ispwest.com Wed Feb 27 23:45:47 2002  
Subject: [R-390] Re: R-391 restoration update

Stating the obvious... use a temperature controlled soldering iron such as a number of Weller models. Tips can be obtained for a range of temperatures. This is especially true when working with printed circuit boards, but holds as well for point-to-point wiring.

Another hint, get a "Solder-Pullit" solder-sucker. You can heat a connection, remove the solder, then unwrap component leads and dress the new parts as the set was originally constructed. I have seen Chinese knock-off's for \$5.00, though I am sure they are products suffering patent infringement. Small versions are available at Radio Shack, but I prefer the full sized devices. 73 de Bill, AB6MT billsmith@ispwest.com

From root@al.tirevold.name Thu Feb 28 00:04:50 2002  
Subject: [R-390] R-391 restoration update

> Does anyone offhand know what documentation production system was used to generate the Y2K R-390A manual? Specifically, what text and graphic page layout program?

The manual was OCR scanned by Barry. Pete Wokoun did up most of the drawings in Visio. I then loaded and proofed the combined material in Microsoft Word. Once it was 'good enough' - I generated .PDF files using Adobe Acrobat.

The Y2K Version 2 manual is in process. I'm up to chapter 5 with corrections, revisions and better drawings. It'll be released when it's 'good enough'. The plan is to have it available in smaller "chunks" for downloading and to install better indexing.

If you have information that you think belongs in the version 2 manual, send it along - we want it to be the most accurate and useful R-390A manual available. Al

From rstetrault@attbi.com Thu Feb 28 04:51:57 2002  
Subject: [R-390] storage

I've gotta chime in here about putting batteries on a concrete floor. Think about it...How can there be a failure mechanism? Admittedly, concrete floors are usually colder and consequently, for the boys in Minnesota or Vermont (what say, Todd?) where it gets really cold, that can slow down the chemical reaction that produces electricity. But otherwise, since it IS a chemical reaction, where is the valence trail (for lack of a better word) across the concrete floor/battery case interface? This is, IMHO, unadulterated voodoo-grade yogurt. One of those myths propagated across generations from when Volta was first sticking pins in frog legs and Babylonians were stacking galvanically active metals for the tingle in their mouths.

Call me stupid, but tell me why, and be "scientific." Bob

From pha@pdq.com Thu Feb 28 05:32:22 2002  
Subject: [R-390] Re: R-391 restoration update

Bill Smith wrote: > Stating the obvious... use a temperature controlled soldering iron such as a >  
Another hint, get a "Solder-Pullit" solder-sucker. You can heat a

Both are great inventions! Thankfully, I have been using them. I can't always get a mil-spec soldering connection to replace the ones that were there, but I can usually do ok - better than the military repairs I see.

I was checking signals in the radio, when it went dead silent on me tonight - a bit of checking showed that the VFO tube went belly up. Replacing that, and tweaking alignment a little bit, and the radio is actually working pretty good, now! Fairly quiet, fairly selective, and so on. It needs a full alignment, of course, and some further repair work, but I'm happy to see all my effort pay off!

16-32 MC is very silent, so I get to check that problem, out, too.

So far, I have to say that I'm impressed with how it sounds. I'm hard of hearing, so I'm sure this must be incredibly subjective, but still, I seem able to understand speech on it fairly well. Time to get an A/B switch for my antenna and headphones... (\*: Paul

From w7itc@hotmail.com Thu Feb 28 06:25:32 2002  
Subject: [R-390] How to clean up the chassis?

You can pick up something like the Hoover Scorpion which is a very powerful little portable about the size of a football (American football that is) mine cost 20 dollars. Kenneth Crips

From twleiper@juno.com Thu Feb 28 06:27:22 2002  
Subject: [R-390] storage

"Bob Tetrault" <rstetrault@attbi.com> writes: > I've gotta chime in here about putting batteries on a concrete floor. > ...valence trail... > Call me stupid, but tell me why, and be "scientific." > > Bob

The concrete has sand, limestone and Portland cement. The Grand Coulee Dam is near Portland, and because so much power (electrons) is sent from there to other places around the Pacific Northwest, it leaves a "vacuum" of electrons, or negative charge in Portland. The electrons in the Portland cement hear the call for additional troops of electrons to return to defend their Motherland, and they do so via earth path. Since the battery is sitting on the concrete, it was inevitable that successive generations of Portland Cement Stormtroopers would evolve a means of piercing the case, or somehow sublimating the charge of the battery directly into the Portland cement for further dispatch.

The Grand Coulee Dam was finished during WW2, and it took about a decade for the electrons to be drained from the 12 million or so cubic yards of concrete within that structure. It was not until the mid '50s that people started to see the sinister consequences of placing their batteries on concrete floors, but by that time it was too late...legions of garage floors had already infested the burgeoning new suburban developments, and our fate was sealed. Twit

From w7itc@hotmail.com Thu Feb 28 06:33:14 2002  
Subject: [R-390] storage

Remember one of the ingredients in concrete is sodium hydroxide (lye). Lye will eat aluminum fast, in a damp climates where the concrete is holding a lot of water it can be a real problem. Kenneth Crips

From hankarn@pacbell.net Thu Feb 28 11:34:19 2002  
Subject: [R-390] storage

Bob, You are correct for sure. Recently I believe in Popular Science there was an article from the Battery Mfr. Association that stated that there was no requirement to place a battery on wood or any special surface for use or storage. A lot of battery places use wood shelves/pallets etc. due to the corrosion resistance of spilled acid. I have 2 large Gel cells in steel cases on concrete for over 2 years with no reaction action or adverse discharge problems. 2 more in my van for my KW amp in addition to the 2 lead acid batteries all being charged off of the alternator with no problems, all mounted on steel. Hank KN6DI Another old wives tale down the drain.

From w2ec@attglobal.net Thu Feb 28 14:17:54 2002  
Subject: [R-390] R-391 restoration update

Are there any thoughts on an R-390 or even R-391 version?

From cbsscott@ingr.com Thu Feb 28 14:32:33 2002  
Subject: [R-390] storage

Finally. An explanation I can understand! Barry(III) - N4BUQ

From Barry Hauser <barry@hausernet.com> Thu Feb 28 14:56:38 2002  
Subject: [R-390] R-390/R-391 Manual for the New Millenium

Gang: For the Y2K R-390A manual, I used Textbridge OCR software to scan and OCR the text. It was a better deal to buy it S/W as part of "Pagis Pro 3.0" rather than alone. However, it took quite a bit of experimentation and "training" to get reasonable accuracy. Also a team of proofreaders.

I should also point out that I started from the '85 Navlex manual. That one looks like most of the straight text was redone in mainframe or PC word processing to start with by the Navy -- telltales, such as type style and wide single column page layout -- not characteristic of formal typesetting and mil manuals which are usually double column. The unimproved parts list and some other small-type tables were much tougher.

So, there was a starting advantage that may not apply to most other manuals when it comes to OCRing. Doing an OCR job is preferable to bit images -- crystal clear and much smaller file size. (e.g. 4 vs. 40 megs) They print much faster as well. There may be a source for a pre-OCR'ed non-A manual -- I'll check it out. Barry

From Barry Hauser <barry@hausernet.com> Thu Feb 28 15:39:32 2002  
Subject: [R-390] storage

> Finally. An explanation I can understand! >> Barry(III) - N4BUQ

Understandable, but somewhat premature! True, there's a high correlation of weak and dead batteries with concrete floors. This means that dead batteries are either spontaneously generated from concrete slabs, or that dead batteries emanate concrete -- well in excess of their own volume. Results of scientific testing and experimentation are thus far inconclusive. In one experiment, garages with concrete floors were observed over time -- dead batteries appeared after a few years. In another experiment, dead batteries were carefully placed in open fields and in the woods. A half century later, the fields were dotted with houses -- with garages -- with concrete floors -- and one or more dead batteries. The residents could offer no explanation.

So, at this point, some 30 years after we can't put men on the moon anymore, we truly don't know whether concrete gives rise to dead batteries or dead batteries spontaneously generate concrete slabs -- or both. But is a known fact that concrete slabs cause garages, which then give rise to houses, etc. There is one other theory, but it's ridiculous -- the batteries were weak or dead BEFORE they were put on the concrete floors when new batteries were installed in the vehicles, then not recharged and forgotten about. Preposterous, I say! Hogwash!

As for all this "electron" business -- that's all much more theoretical, if they in fact exist at all. I, for one, have never seen any. BTW -- which is winning now -- the wave or particle theories? Barry (I or maybe II -- don't want to jump to any unproven conclusions)

From tbigelow@pop.state.vt.us Thu Feb 28 15:29:56 2002  
Subject: [R-390] storage

Bob & group - I need to be careful when I speak too much about the cold in Vermont, at least this year.

We have had the mildest winter \*ever\* so far. My house is rather large(and old), has a fairly new furnace with 2 of the large oil tanks holding about 550 gal. total. Normally I'd go through 1000 gallons or so (was 2000 when I moved in - no insulation!), this year I'm still working off the original fill up last August. But in the \*normal\* winter, sure - International Falls is in Minnesota is about the coldest place south of Yellowknife and we're not far behind them in temps. Nothing to see -35° as a low in January/February - even a week or more at a time where temps never get above zero during the day. BRRR! Buffalo NY. kicks butt for snow, though. If we get two feet, I think I've been sent for - can't imagine getting 4-7 feet in a storm!

I've heard the same thing about killing a battery by leaving it on a concrete floor. Other than the nasties that take place with copper pipes if you don't isolate them from the concrete when you pour, I'm not aware of anything that could do it. More likely, the battery has sat there for a while, gotten cold, lost charge, someone goes to grab it to use and....no workie. I do know that a cold battery doesn't have as much cranking power as a warmer battery (I've tested this theory in the cold Vermont winters more times than I'd care to admit), so maybe this is the real culprit? Leave a battery on a cold concrete floor even in summer and you can cool it down a fair amount.

Unless there's some invisible force-field action taking place, I just don't see it - especially with the new, 'sealed' batteries. The old batteries had little screw-on caps with a vent that the electrons could use as an escape hatch, but these new ones would have to rely purely on osmosis. I definitely would NOT leave anything sitting over an unheated concrete floor on rubber feet, though - it will most certainly rust and otherwise corrode with time.

Mr. Mike(the guy who asked the original storage question)lives down the road from me about half an hour, now - ESE, right on the border with New Hamster. I'm right in the center of the state, so he's approaching the banana belt where you can walk around in shirtsleeves outside in winter. People probably store things right out in their yard down there. I know I saw a few old pick up trucks and some kitchen appliances... 73 de Todd/'Boomer' KA1KAQ

From cbscott@ingr.com Thu Feb 28 15:40:54 2002  
Subject: [R-390] storage

I don't have empirical evidence for batteries, but I have pretty good evidence that concrete slabs cause automobile engines to leak oil. Of course, this could be contradicted by the logic below. The oil existed below the slabs long before the slabs were there. Perhaps the oil creates the slabs and all I'm seeing is the slightly unused residue. Barry(III) - N4BUQ

From Craig.Anderson@sptc.mnscu.edu Thu Feb 28 15:49:45 2002  
Subject: [R-390] Question about R-392 1961 Dubrow COntact & V201 & V202

After many R-390A's and SP-600's I finally decided to acquire an R-392. I was lucky to find a very nice 1961 Dubrow contract radio with connectors and noticed that V201 and V202 are 26FZ6's instead of the 26A6 listed in my 1954 edition of the tech manual. Does anyone now the reason for the change to the 26FZ6? I have two tube testers and even my Heath TT-1 with the 1976 tube data supplement doesn't list the 26FZ6. Any ideas how to test these? Also, it came equipped with the factory Dubrow solid state audio replacement. but I am getting no audio. Is the schematic listed on "Provero's" website as the "official schematic" of the solid state audio replacement, the correct schematic? Craig W9CLA

From twleiper@juno.com Thu Feb 28 18:19:34 2002  
Subject: [R-390] storage

Barry Hauser <barry@hausernet.com> writes: ... > In one experiment, garages with concrete floors ... > In another experiment, dead batteries were carefully placed ... > The residents could offer no explanation.

ROFL. I really like the "carefully placed" and "residents". And who was asking for an explanation, anyway? That is such a perfect subject for a Monty Python skit...I can just see Eric with sunglasses and TV camera in tow asking housewives in curlers where their garage slabs came from.

I think a little refresher on Heisenberg might be in order here. And, while we're at it, we can figure out why hens are known to spontaneously appear over nests of eggs. Minister of silly walks.

From jstarr@world.std.com Thu Feb 28 19:18:46 2002  
Subject: [R-390] storage

> ROFL. I really like the "carefully placed" and "residents". And who was asking for an explanation, anyway? That is such a perfect subject for a Monty Python skit...I can just see Eric with sunglasses and TV camera in tow asking housewives in curlers where their garage slabs came from.

>

Don't laugh, the Discovery Channel just aired, for the umpteenth time, a very serious show about "Spontaneous Human Combustion." The show was complete with "scientific" explanations that sounded remarkably similar to batteries spontaneously generating from concrete. Barry should contact the Discovery Channel, there may be a future in this.

From s-biddle@ti.com Thu Feb 28 23:15:59 2002  
Subject: [R-390] storage

My trivial knowledge book says this about car batteries.

Depending on the type of battery and temperature, batteries have a natural self-discharge or internal electrochemical "leakage" at a 1% to 25% rate per month. Thus, over time the battery will become sulfated and fully discharged. Higher temperatures accelerate this process. A battery stored at 95F (35C) will self-discharge twice as fast than one stored at 75F (24C). Temperature stratification within large batteries could accelerate the internal "leakage" or self-discharge if the battery is sitting on a cold floor in a warm room (or used in a submarine).

I used two 12V car batteries to run a cherry ART-13 transmitter/dynamotor in my younger days. I charged them individually using two alternators running on two electric motors. Don't laugh, it was free. I seem to remember the batteries would not hold a charge as long in the garage when I had them on the floor. But then again I think I put them up in a wood box because my dad didn't want the floor of the garage ruined:) Of course that was almost 30 years ago. Now I wish I had kept the ART-13 :(

I personally think the problem has to do with gravity being higher when the battery is closer to the center of the earth. Since the terminals are near the top of the battery, the electrons have to work harder to get to top and it runs down the battery quicker. 73 de Richard, KB5WLH

From twleiper@juno.com Thu Feb 28 23:22:33 2002

Subject: [R-390] storage

, Richard" <s-biddle@ti.com> writes: ... > I personally think the problem has to do with gravity being higher when the battery is closer to the center of the earth. Since the terminals are near the top of the battery, the electrons have to work harder to get to top and it runs down the battery quicker.

That's why you can't leave a cable connected and let it drop onto the floor...the electrons will syphon out and pour all over the floor.

I used to tell CBers with their endless "radio checks" that they sounded better after they (at my urging) stretched the mic cord out as straight as possible to allow the electrons an easier path into the radio. Back to monster cable, anybody? Twit