R-390 Reflector January ’06 Edited

From: Flowertime01atwmconnect.com Date: Sat, 31 Dec 2005 17:00:50 EST
Subject: Re: [R-390] Trim Caps only on top of Mechanical Filters

Fellows,

Does any one have an IF deck that only has the trim caps under the can on top of the IF deck? There being no trim caps on the side of the chassis. Roger AI4NI

From: Flowertime01atwmconnect.com Date: Sat, 31 Dec 2005 17:29:30 EST
Subject: Re: [R-390] Re: Part II "What Hardware Do I Need For My390A?"

Fellows,

I think Quig is on to it and some of the ideas that come up in the Christmas wish lists.

Every one who has been reading this reflector for a few years knows we have just about beat every horse at least once. Some we have even kicked once they were down.

The rub is the new guy is just as clue less as ever. Not his fault he is just younger than us and has not been educated. Being young is not wrong. Us old kids just got a head start in life. Having been there and done that does not make us better we just been there and done it.

Back in 84 when I completed my Master Degree in Computer Science the PC was two years old and Al Gore had not yet invented the Internet. We have all been 20 years learning this new paradime shift.

So now we are thinking about searching web pages and getting things we all know out there where the new comers can find it also.

A lot of this is about putting things in text on web pages in a fashion that can be useful.

The trick is to put search words on a page so the search engine can find the idea. Place information on the page that answers the question being searched. Place links on the page that has all the gory PDF details in sleep inducing government text. Place information on the page to explain what you will get for down loading one of those big PDF files.

Enough Management
This is 2005 and the occupation of the year is Internet Web Page Author. Ask not what we need, Ask rather does this fill the need. Page size must get past Yahoo mail box limits. The low limbo pole limit. Pick your subject line for the mail post. Pick your keywords for the search engine to find Write some useful information Put in the request to help fill in the missing parts.

Put that out here on the mail. Let the response come back. Collect the stuff and rework your original stuff. Then put that back out to read.

Once you get a good page together ask Al Tirevold to add the page to http://www.r390a.com

Then a search of the web for R390 and the keyword will bring everyone back the page with the information. We can all work on our web page generation skills with little effort as Al will take care of getting the pages linked (Thank You Al for helping us in several ways.) Plus we get good reviewed subjects onto the web. Plus we get good R390 knowledge shared again. Plus we get the stuff out where we can search for it in today's paradime. Roger AI4NI

From: Rich MC Clung <wa6knwatsbcglobal.net> Date: Sat, 31 Dec 2005 14:29:46 -0800 (PST)
Subject: [R-390] R-390 Digest, Vol 20, Issue 73

Anything is possible as long as we do not have to eat Lutefisk.

Yes,

You have that right. Prefer Swine Haxen and Sauerkruat mit kartofels..... RICH WA6KNW

From: Flowertime01atwmconnect.com Date: Sat, 31 Dec 2005 17:54:03 EST
Subject: Re: [R-390] Scott's Gear Train Rebuild

Barry,

Thanks for getting in touch with Scott. Looking forward to his gear train stuff getting added to the web pages. Roger AI4NI

From: Flowertime01atwmconnect.com Date: Sat, 31 Dec 2005 17:59:45 EST
Subject: Re: [R-390] Trim Caps on Mechanical Filters

Bruce,

Is Lutefisk still served? I have not seen any on a plate since I left Michigan as a kid. What a winter treat that fish is. Roger

From: Barry Hauser <barryathausernet.com> Date: Sat, 31 Dec 2005 18:42:52 -0500
Subject: Re: [R-390] Trim Caps on Mechanical Filters

Curious, I did some research on lutefisk.... Found the
following'http://www.ecst.csuchico.edu/~atman/ic/lutefisk.html'

All things considered, I'll pass on the lutefisk and have an order of the Flaming Yak Kuomintang instead. I don't think I could consume the requisite mass quantities of aquavit.

I dunno, it's possible that lutefisk has been outlawed -- cruelty to dead animals. Beating dead horses is bad enough, but throwing dead codfish into a vat of lye is a bit over the top. And that's to jelly-fy them? Why not eat jellyfish ready made? Ah yesss.... international cuisine.....mystifyin'.

We should have our own '390 cuisine .... maybe a Vegemite sandwich -- call it Ukkumpucky Delight. Brown beauties would be those small breakfast sausages (like Brown 'n Serve) with some colorful

stripes made of red & green pepper, etc. If you cook 'em real fast and hot, they might split.

Of course, that might be good application for kielbasa -- for Jumbo Brown Beauties.

The main course could be blue and yellow stripers (bass). Suitable spirits with some grenadine and cubes -- DeOxit on the Rocks. Dessert anyone? We don' need no steenking desert! Give me another DeOxit Rocks. Happy New Year again .. Barry

From: "Ed Zeranski" <ezeranatezeran.cnc.net> Date: Sat, 31 Dec 2005 16:25:35 -0800
Subject: RE: [R-390] Trim Caps on Mechanical Filters

Curious, I did some research on lutefisk....

My wife is Norwegian/Cree and for some reason liked Lutefisk the first time she tried it `8^)

maybe a Vegemite sandwich ...

Ooooh, she likes that too, we have it in the fridge. I'm OK on the aquavit as long as there is a cold beer chaser and some pickled herring or laks. Being a Polack I consider that a 'multicultural' experience. EdZ

From: Tom Norris <r390aatbellsouth.net> Date: Thu, 29 Dec 2005 13:32:06 -0600
Subject: [R-390] What are the odds?

A while back I posted about a few radios I received from an SK estate some time back, here's an update along with a story. The part about the odds are for those

Lets say there were 2 R-390s and a '390A in semi regular use [wild guess about two decades ago] by an older ham, then were put into storage - along with a semi-gutted "parts" R-390A - when the fellow became too ill to use them.

If these radios were to come out of storage --

What are the odds that 3 out of 4 would have a problem of some sort? What are the odds that 3 out of 4 would have a problem in the *same* deck? What are the odds of that problem being of the sort that would require the radio to be pretty much completely disassembled?

Question --
Which radio is working, worked off the bat with no major module repair needed, and is working to this day? Murphy's laws of infinite probability apply. Tom NU4G

It's a boring afternoon and I wanted to post something.

From: ToddRoberts2001ataol.com Date: Sun, 1 Jan 2006 06:34:18 EST
Subject: Re: [R-390] What are the odds?

writes: If these radios were to come out of storage --

A lot depends on how the radios were stored. If they were wrapped up in blankets and stored in an indoor closet odds are good they will work right off the bat. If they were stored outside in a barn or semi-outside with no cover in a garage odds are they will have problems with intermittent switches and bandswitch contacts, noisy pots, dried-out grease and dirt in the RF Deck gears that will require disassembly and cleaning and there could be corrosion in the various chassis that could affect grounding points throughout the receiver. Proper storage is extremely important to the proper working of these receivers. The Blue-Stripers are a good example of bad storage practices! 73 and Happy New Year to all! Todd WD4NGG

From: "Cecil Acuff" <chacuffatcableone.net> Date: Sun, 1 Jan 2006 10:09:06 -0600
Subject: Re: [R-390] What are the odds?

Well first off the math didn't work out for me....3 working radio's stored and one non-functional parts unit. Twenty years later out come the 4 radio's and we are taking odds on how many of the 4 would have problems.

My guess is that the parts unit would still be a parts unit and out of the remaining three the best odds of a working radio will come from the R-390/URR units. Storage will have a lot to do with the odds on the all the radio's. Humidity saturation on carbon comp resistors is a problem as well as corrosion. I think given reasonable storage...say in a closet in the house...odds are all three previously working radios will still work fine. Stored in the garage in the desert southwest probably the same. Stored in the garage in the deep south along the Gulf Coast or maybe any coastal region for that matter my money would be on the R-390/URR's....with the "A" being a close second as long as they were protected from the varmints but expect them not to be as pretty with some corrosion possible and poorer performance.

Hey my Blue Stripe radio worked when I received it from Fair Radio (received WWV on 10 Mhz)....it was a complete but un-checked unit. Cecil....

From: "Francesco Ledda" <frleddaatverizon.net> Date: Sun, 01 Jan 2006 10:27:14 -0600
Subject: RE: [R-390] What are the odds?

I had a working FRR-59B stored in my garage for about 15 years. When powered again, it worked like a champ!

From: Tom Norris <r390aatbellsouth.net> Date: Sun, 1 Jan 2006 16:47:32 -0600
Subject: Re: [R-390] What are the odds?

That was more of a "lets make fun of Murphy" post. :-)

All were stored in a dry area of a basement. Supposedly heated. From the amount of dust they were at least partially covered or in a cabinet.

How did the radios turn out?

The two R-390s are full enough of intermittents and flakiness in the RF decks that I will need to pull them. (eventually)

The intact R-390A I only recently got around to looking over. Before I got a chance to see if it was really working completely, as I was checking to see if the mechanics worked smoothly - and was randomly changing bands - the clamp an the small gear that engages the Geneva gear decided it wanted to loosen. It was fine before that. Since I have no idea just when it loosened, I need resynch the bandswitch. Eventually.

The parts radio. Looked at it a few months ago with the '390s. It was without a PTO, IF amp, meters, some knobs, a few slugs, crystal oven, and, I think a gear clamp or two. Antenna relay was TU as well. I had just gone over the R-390s and was fairly annoyed and thought "what the heck" Without retelling the earlier B+ Troubleshooting Adventure Of All Time, all it needed after parts replacement and that troubleshooting was a realignment. It was tagged as not repairable. One of the problems I didn't catch but was later found was a shift of about 30 to 50 cps in the first osc when receiving very strong signals. It was only noticed when listening to CW.

Just thought I'd share a story about Murphy. 73 Tom

From: Larry WA9VRH <wa9vrhatmtco.com> Date: Mon, 2 Jan 2006 07:00:09 -0600
Subject: [R-390] Collins Collectors Assoc. First Wed. AM Night Jan 4th!

Happy New Year to all!

FIRST WEDNESDAY AM NIGHT!!! Sponsored by the Collins Collectors Association.

Wednesday January 4th on 3880 kcs at 7:00 PM local East Coast time marks the start of the latest chapter of First Wednesday AM Night, drawing hundreds of vintage stations from across the country.

The event is anchored by a "tall ship" AM station in each time zone. The East Coast and Central sections will now run for 90 minutes in response to the tremendous participation in those time zones. The remaining time zones will be an hour. We encourage stations to check-in on AM using Collins and other AM transmitters, new and old. It's an opportunity to revel in this nostalgic mode, enjoy giving vintage equipment a "run," and sharing some storytelling about classic vacuum tube homebrew and commercial designs. Typically more than a hundred stations take part in the evening's coast-to-coast AM event; by thetime it concludes at 10:00 PM Local PST.

LISTEN for the following anchors and stop by to say hello, won't you? You don't have to be running Collins or vintage gear to be welcomed into the group.

7:00 PM-8:30 PM Local East Coast Time Anchor: Bob W0YVA

7:30 PM-9:00 PM Local Central Time Anchor: Jim W0NKL

8:00 PM-9:00 PM Local Mountain Time Anchor: Jim WA0LSB

8:00 PM-9:00 PM Local West Coast Time Anchor: Bill N6PY comments please to wa9vrhatmtco.com

From: "Drew Papanek" <drewmaster813athotmail.com> Date: Mon, 02 Jan 2006 13:28:33 -0500
Subject: [R-390] Re: Trim Caps Science Experiment

wrote: >I do not have a sweep generator and would like someone to conduct a science>experiment for us using said test equipment.

>Selecting an IF deck with filter trim caps. Applying the sweep generator to>the IF at 455Khz plus and minus 16 Khz. Monitoring the output of the IF deck with suitable scope to go with sweep generator.

>While sweeping a mechanical filter and observing the output band pass,>slowly vary the trim caps. Repeat this procedure for each mechanical filter>and adjust both top and bottom cap for each filter.

<snip>

The same could be done without a sweep generator although much more laboriously.

The test would reveal something about the relative Q of the mechanical filter drive and pickup coil circuits. If the Q were quite low then the peak from adjustment would be quite broad and adjustment would have little effect.

>If the filters do not shift frequency or bandpass width, then any other>change in filter response from adjusting the trimmer caps can be "faked" by>making other adjustments else where (IF gain adjust) in the receiver.

That would be true in the low Q case. If the Q were higher yes, we might still be able to compensate using the IF gain adjustment but then there would be excessive gain ahead of the filters. The total gain of the IF strip would meet spec but the higher gain before the filters would make the receiver more susceptible to intermod from close-in signals. (Perusing the "Cost Reduction" Engineering Report" revealed that most of the intermod came from the first IF amp stage, ahead of the filters.)

Would that really matter? How many of us use our R-390a's in close proximity to multi-kilowatt transmitters?

>Thus rendering the trim caps nice things to have and diddle with but not>required to make the minimum passing receiver.

Fiddling with the adjustments is part of the joy of having one of these radios. The joy would be compounded if the adjustments were done as part of a modification that YOU did.

There are risks involved in adding the caps to a non-cap deck. The foam innards of our aging mechanical filters likely have deteriorated, making the filters very susceptible to damage from mechanical shock. So, during the drilling and blasting that cap installation would entail, it might be best if the filters were removed. Would the benefit exceed the effort?

How about selecting fixed caps to resonate the filters just as it was done at the factory? That would be simpler and safer.

How about soldering small ceramic trimmers across the filter terminals?

Mouser and others carry some very compact units which look like they could be used here. Likely one would have to add some fixed capacitance in parallel, but the end result would still be adjustable. If for convenience, perhaps just the most-used filters could be resonated in that way.

One could procure a deck having the caps but no filters (I think Fair Radio still has decks so un-equipped) and transplant the filters from the functional but capless deck.

>Thanks for taking on the project and reporting your results. Just what do>them caps really do for us?

I am an armchair "engineer" and leave that exercise to someone else less "motivationally challenged" than I am. Drew

From: "Tom M." <courir26atyahoo.com> Date: Mon, 2 Jan 2006 11:18:59 -0800 (PST)
Subject: [R-390] More Sham Collins on ebay

This seems to be getting more common . . .listing as "genuine Collins" when it is no such thing. Not that it makes much difference in performance, but I think some less informed get scammed.

I think these sellers need a little more "exposure." This one is sellabay with item no. 5846801040Tom

From: Perry Sandeen <sandeenpaatyahoo.com> Date: Mon, 2 Jan 2006 12:30:45 -0800 (PST)
Subject: [R-390] Additional Y2K Manual update info

Happy New Year to the List,

Here's an update on the Y2K manual Project.

I have the entire manual done except for the adding of pictures. Al is sending me the files on a CD and I will get them installed hopefully by Jan. 15th.

The tentative title is Y2K-R3 Beta. It will be posted on Al's web site for all to peruse, make suggestions and corrections. One new chapter will be Scott Scheickel's gear rebuilding pictures and data. Some other chapters may be added as feedback is received. One change is that this is not going to be a searchable PDF manual unless someone else does it. My reasons are that it makes for larger files, is IMHO of marginal value, and I don't know how to do it. Many forget Edison's comment: It is 1 percent inspiration and 99 percent perspiration. There is considerable heavy lifting involved.

When the vast majority of errors are corrected (it's never "finished") It will be re-posted on Al's site. It will be both in Word 95 and Acrobat 5 PDF as one large file.

I will also break it down into as many 10 Mbyte files for those of us who have dial-up. I will mail a CD with all the finished files, plus the entire 5 year mailing list edited files, and other miscellaneous R390A downloaded data that I can fit on the CD for $5 including postage. I will print the manual ONLY on a duplex B/W laser printer and mail for $10. Get both for $12. DO NOT SEND ME ANY MONEY UNTIL REQUESTED!!.

I have all the previous e-mail requests saved and will contact everyone off list. Regards, Perrier

From: Barry Hauser <barryathausernet.com> Date: Mon, 02 Jan 2006 16:43:35 -0500
Subject: Re: [R-390] Additional Y2K Manual update info

Hi Perry

wrote:> The tentative title is Y2K-R3 Beta. It will be posted on Al's web site for all to peruse, make suggestions and corrections. One new chapter> will be Scott Scheickel's gear rebuilding pictures and data.

The gear train rebuild could use some additional annotations.

<snipped>>One change is that this is not going to be a searchable PDF manual unless someone else does it. My reasons are that it makes for larger files, is IMHO of marginal value, and I don't know how to do it.

I don't understand. The first stage of the whole Y2K project five years ago was to go to the trouble of OCRing it so it would be true text --searchable, edit-able and more compact. 200-300 pages of bit imaged pages pulled into Acrobat would be no improvement over the other (mostly Army)manuals that had already been done. Not edit-able and not searchable in that form. Some of those are around 43 megs due to the inefficiency of capturing and storing text pages as bit images.

Both original and first revision of the Y2K manual are searchable as-is. Most of the text that are part of illustrations and the whole parts list is searchable as well. For example, I just searched on "C553" and acrobat found six instances within a few seconds. It works well in the text body and parts list, however seems to highlight too many elements of the annotations in the drawings. If somehow you're coming up with an unsearchable version, sounds like a problem and potential giant leap backward.

(Is the text still text? Did you start with the RTF files and inputs supplied by Al Tirevold?)

The entire Y2K Rev 2 is about 17 megs. There is a placeholder for the improved gear train illustrations on existing page 6-91. I think that's the best place for Scott's photo sequence to be inserted. I did a test compile into acrobat and figured it would add about 2-3 megs. That would bring the whole file to about 20 megs -- maybe one or two more with other edits.

> Many forget Edison's comment: It is 1 percent inspiration and 99 percent perspiration. There is considerable heavy lifting involved.

Yup, been there, done that.

> When the vast majority of errors are corrected (it's never "finished") It> will be re-posted on Al's site. It will be both in Word 95 and Acrobat 5 PDF as one large file.

> I will also break it down into as many 10 Mbyte files for those of us who have dial-up.

Shouldn't be more than 2 files that way. 10 meg files may not be small enough. The existing Rev2 is available by chapter.

>I will mail a CD with all the finished files, plus the entire 5 year>mailing list edited files, and other miscellaneous R390A downloaded data>that I can fit on the CD for $5 including postage. I will print the manual>ONLY on a duplex B/W laser printer and mail for $10. Get both for $12. DO>NOT > SEND ME ANY MONEY UNTIL REQUESTED!!.

I suggest you double check your arithmetic including media mail (rates increasing) for the likely weight. Paper may be cheap but it's generally2-3 cents per page in toner for a high capacity/loose toner copier at 5-15%coverage. If using a laser printer with toner cartridge, the cost can run much higher per page -- and counts per side, not per sheet. Might be OK, or you might be shortchanging yourself. Anyway. you're right -- it's way premature for anyone to get involved printing or burning CD's for others.

Another factor -- much of the Y2K is in color. Not sure how some of the photos come out in b&w.

Hope some of this helps. Barry

From: Flowertime01atwmconnect.com Date: Mon, 2 Jan 2006 18:42:42 EST
Subject: Re: [R-390] Re: Trim Caps Science Experiment

Drew,

Its the old adage a picture is worth a 1000 words. I was hoping someone has the equipment to do the test.

A nice bandpass sweep on the scope to look at as one varies a cap. We do not need exact values from the test.

What was in mind was a short afternoon test and a paragraph report.

Then we would all have some idea of what happens when you twist those capsaround.

Are we shifting bandpass, bandwidth, depth of filter (signal to noise floor)(peak).

Or even none of the above and something else.

I thought it would make a nice short explanation for a web page. Roger.

From: "Dave Maples" <dsmaplesatcomcast.net> Date: Mon, 2 Jan 2006 18:49:58 -0500

Subject: RE: [R-390] Surplus Recalls! (was: Is this the beginning of the end?)
To: "Tom Norris" <r390aatbellsouth.net>, <r-390atmailman.qth.net>

All: I'd like to offer another way to look at this. It's just food for thought, and all replies are welcome.

1. I was slated to obtain a diesel generator through MARS back in late 2003. After doing the entire paperwork deal the generator was whisked back into government service. Apparently someone decided that maybe it made sense to pull the generator back into government service, even though they had already concluded that it was surplus. Why would they do that?

2. The older-style green gear (PRC-25, etc.) that gets handed down to National Guard types runs 15 kHz deviation and nothing else, whereas all commercial gear has been at 5 kHz deviation for years and years, and 2.5 kHz deviation is on the way. The commercial gear won't do 15 kHz deviation. If the Feds need more equipment that can actually do 15 kHz, there's no alternative other than purchasing new (at large $$$$$) or reclaiming the old. Replacing the old green gear with new commecial gear at 5 kHz deviation

really isn't an option unless the Feds want to replace ALL of the old gear at one time (good luck getting budget for that). Further, whatever they replace it with has to be able to be deployed the same way they deploy the old green gear (else they have to retrain the troops, at much additional expense) AND work with the encryption devices and other hardware that they already have. If you total up the budget to replace vs. the budget to go reclaim stuff that was surplused and reactivate it, there's no way that replacement can beat out reclamation. The real question: Do the Feds need more 15 kHz green gear all of a sudden? If so, why?

3. There's one more thing to consider. When I worked as a Fed contractor the Feds treated money for new capital assets much differently than they treated money for maintenance. It may well be that they have a "color-of-money" issue that is preventing them from purchasing NEW equipment, even though it may serve their needs better, but they can get money to REPAIR OLD equipment without difficulty.

What this thread suggests to me is that (a) there may be some strain in the radio assets within DoD (including the Nat Guard units), and (b) due to budget, time, logistics, and legal (e.g. the color-of-money issue I just commented on) constraints they aren't able to just go purchase new stuff right out of the chute and put it into service. As a result they are recalling old gear.

Rather than evidence of some conspiracy, this could actually be someone within the Federal government actually thinking through a problem and coming up with a solution that doesn't automatically require more deficit spending. If so, that's actually a GOOD thing, even if it means that the mil-surplus aspect of the hobby will suffer for a time. 73, Dave WB4FUR

From: "Cecil Acuff" <chacuffatcableone.net> Date: Mon, 2 Jan 2006 18:57:04 -0600
Subject: Re: [R-390] Surplus Recalls! (was: Is this the beginning of the end?)

My understanding is that they don't necessarily want to reclaim the gear to put it back into service but to further de-mil it...as in render it totally inop buy removing some critical component or assembly that can't be acquired to put the radio gear back into service.

The genset I can understand but 20+ year old radio gear especially with all the commercial gear that is available for cheap that will do as good a job and is much easier to carry....don't make good sense! Just my opinion... Cecil....

From: Perry Sandeen <sandeenpaatyahoo.com> Date: Mon, 2 Jan 2006 18:18:20 -0800 (PST)
Subject: [R-390] Ultimate heresy answered

Wrote: The ultimate heresy? Has anyone attempted to completely rebuild the modules or (entire?) R390 A radio with new low noise resistors, modern caps, wiring, etc.

Wrote: I to would like to know if anyone has done this, also add to the list the trusty R388/URR.

Mike & Ken; the short answer is kind of.

I've been "hotroding" receivers for 50 years. I started with a S20R. I've done a ARR-15, several SP-600's as well as some R390's back in '65-'66 at Karamursel Air Station in Turkey.

It is good science to replace all resistors and caps. The low noise metal film units are far quieter that any carbon comp type ever was, could be, or will be. Modern insulation materials make the same true for capacitors. Teflon sub-miniature co-ax is manna from heaven if you need to fix any receiver co-ax problems. The 6DC6 can be replaced with a 7788 if you want to put in a 9pin socket, re-bias and fiddle with the AGC. This was the front end tube that we used at Hallicrafters in the late 60's in special OTH receivers.

All BA's receivers will benefit from inrush current protected electronically regulated power supplies. This especially true of the R-388 and SP-600 which use PS's to develop negative bias voltages and were designed for a lower nominal line voltage than most of have today. The noise filters on both the SP-600 and R-390 should both be replace with modern low leakage units to avoid shock hazards. R-338's can have much better audio. 0A2 regulator tubes can be replaced with a six stack of TL431's for lower noise, better stability and at less expense than using the 0A2.

Sadly, your post will probably show the schizophrenic traits of a few developmentally limited PC self-appointed ludites (from the Guardians of Art Society) who only write to complain. They will "allow" the idea of a resistor instead of a ballast tube, a new blocking capacitor for the mechanical filters, the Langford AGC mod, accepting "GASP" solid state rectifiers! After that, it is almost total denial that R-390's can have major improvements other than a product detector. And God help you if you propose mods with any new holes: torches will be lighted.

Unfortunately, these vocal few have driven off the list Dr. Jerry and Dallas Langford who have contributed to vast improvements for the R390 and R390A in particular and other BA equipment in general. Between them, they may have forgotten more about BA's than most of us now

As soon as I can I can get to them, my three R390A's, my three SP 600's and three R388's will all work much better than when the rolled off the assembly line due to replaced components and reworked circuits. I have a Fluke 6080 signal generator, 200 MHz scope, audio distortion analyze, audio power meter, and VTVM's to calibrate and verify what I have improved.

After stage one it's off to dual gate fet's for the IF, SS temp regulated ovens and LMxxx series solid state audio outputs.

Bon Voyage, Perrier

From: "tfrobase" <tfrobaseatkitparts.com> Date: Mon, 2 Jan 2006 20:13:37 -0600
Subject: RE: [R-390] More Sham Collins on ebay

Collins or not, it served someone well, the paint is clean worn off the panel. I like the one that say's that it was "not" restored one of the masters ... tom

Fro <sandeenpaatyahoo.com> Date: Mon, 2 Jan 2006 18:20:59 -0800 (PST)
Subject: [R-390] Ultimate heresy answered

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Unfortunately, these vocal few have driven off the list Dr. Jerry and Dallas Langford who have contributed to vast improvements for the R390 and R390A in particular and other BA equipment in general. Between them, they may have forgotten more about BA's than most of us now

As soon as I can I can get to them, my three R390A's, my three SP 600's and three R388's will all work much better than when the rolled off the assembly line due to replaced components and reworked circuits. I have a Fluke 6080 signal generator, 200 MHz scope, audio distortion analyze, audio power meter, and VTVM's to calibrate and verify what I have improved.

After stage one it's off to dual gate fet's for the IF, SS temp regulated ovens and LMxxx series solid state audio outputs. Bon Voyage, Perrier

<leslocklearatcableone.net> Date: Mon, 2 Jan 2006 20:22:32 -0600
Subject: Re: [R-390] Ultimate heresy answered

If you were so worried about Dallas Lankford, perhaps you could have spelled his name correctly.

Les Locklear Gulfport, Ms. Professional Curmudgeon & Equal Opportunity Annoyer

From: Barry Hauser <barryathausernet.com> Date: Mon, 02 Jan 2006 21:38:35 -0500

Subject: Re: [R-390] Surplus Recalls! (was: Is this the beginning of the end?)

Cecil wrote:

> My understanding is that they don't necessarily want to reclaim the gear > to put it back into service but to further de-mil it...as in render it > totally inop buy removing some critical component or assembly that can't > be >acquired to put the radio gear back into service.

OK -- better re-paint all the front panels hot pink and install Helena Rubenstein tags. Either that or woodgrain "contact paper".

What about those Harris do-all manpacks? I see them offered from time to time -- always without the board/module that does the frequency hopping (and/or digital encryption?). Did some get sold complete? Barry

From: John Lawson <jpl15atpanix.com> Date: Mon, 2 Jan 2006 21:42:58 -0500 (EST)
Subject: RE: [R-390] More Sham Collins on ebay

wrote: > Collins or not, it served someone well, the paint is clean worn off the > panel. I like the one that say's that it was "not" restored one of the > masters ... tom

I set this one up as a Watched Item when it first appeared. At the time I thought the previous owner most likely was in dire need of a set of nail-clippers, and the instructions for using same. (Or maybe it was Howard Hughes' during his 'recluse' years.)

As I commented to someone - this particular radio looks like it's been "rode hard and put away wet..."

Be interesting to see what it goes for - "Reserve Not Met" at $306. Also I'm watching (out of sheer morbid curiosity) the R-388 that's at $670, 14 more hours - also "Reserve Not Met".... though that may be just one of those eBay aberrations, like the $600+ Johnson Ranger a couple of weeks ago.

While I'm verging on a rant here - I seem to be unduly irked by those folks who seem compelled to "pad" their listings with disengenuous bits of 'sparkle' - fr'instance: "LatatK RARE 1967 Volkswagen Mercedes Buggati Ferrari Karman-Ghia 1600!!"

Must be a bunch of failed Real Estate Agents out there.... ;}

Happy New Year y'all! I've just cleared off one of my benches and hauled my non-A out to start the long process of wakin' 'er up. John KB6SCO

From: "Thomas L. Chirhart" <sparksatcodepoets.com> Date: Mon, 2 Jan 2006 22:01:11 -0500
Subject: RE: [R-390] More Sham Collins on ebay

Oh but what you guys don't know is that the ugly dogs without pretty paint were the hottest receivers in Radio. My guess it may have had a home at a Naval Security Group and was extensively used. The pretty ones were a. new, b. fresh out of the Depot, c. a dawg, or d. were too tight to QSY fast when chasing traffic or shifting freqs. I would not be surprised if it still is a hot RX. I once owned a beauty, so pristine I thought it was out of the box. It was a plain dawg from day one... pretty on the outside, ugly on

the inside... something a sailor would go after... hihi Just .02 from an old Retired Chief Radioman... 73 Tom K4NCG

From: Barry Hauser <barryathausernet.com> Date: Mon, 02 Jan 2006 22:19:56 -0500
Subject: Re: [R-390] Ultimate heresy answered

Perry wrote: > Unfortunately, these vocal few have driven off the list Dr. Jerry and > Dallas Langford who > have contributed to vast improvements for the R390 and R390A in particular > and other BA equipment > in general. Between them, they may have forgotten more about BA's than > most of us now

Yup -- unfortunate all right, but that's not the reason Dr. Jerry left -- I was in touch with him afterwards. Didn't care for the foolishness that sometimes erupted on the list and some other disagreeables, but wasn't necessarily about solid state mods or the like.

You're about 180 degrees out of phase on Dallas (Lankford with a "k" that is). The last time he stormed off it was due to conflict over recapping. He asserted that he never found a bad molded cap (i.e. black or brown beauty) and went as far as to assert that those who claimed finding leaky ones were (paraphrasing, but not by much) misinformed, delusional or outright liars. Some list members even posted links to photos of physically split caps. I attempted to smooth ruffled feathers privately, pointing out that many of the list members' experience reflected St. Julien's Creek Massacre victims -- blue and yellow stripers -- that had been outside for over a year. (Of course, those caps can fail on the shelf or in a radio cozy on the shelf -- I was just trying to be diplomatic.) No good. He accused me of being "an apologist for the recappers." Your post would have been enough to make him go ballistic all by itself.

As I learned later on from another list member, Dallas had suffered a stroke sometime before, and that probably has more to do with it all than anything. Dr. Jerry is active on the Collins reflector. I imagine there are plenty of Collins collectors on that list who are traditionalists who would rather keep the gear as original as possible and true to its design of the times, and probably more so than on this reflector. He seems to be getting along there just fine, though he is missed here. Barry

From: Tom Norris <r390aatbellsouth.net> Date: Mon, 2 Jan 2006 21:24:33 -0600
Subject: Re: [R-390] More Sham Collins on ebay

Things like this are shameful.

There was a fellow that got away with selling a pair of H-251 headphones - new from Fair Radio, $12 -- for nearly $225 simply by wording the ad to say they were the correct headphone for the "Collins R-390A" as they replaced the models listed in the manuals. Technically he was correct. Morally probably not so.

It's listings like that that make me want to email links to places that show what the real price should be.

ALSO There's another fellow selling fresh new mil 4 pin AC cables as "Collins" cables -- 5847047297 To his credit, "Collins" is only used in the subject line, for folks looking for 390/390A/etc items. It's not being represented anywhere else as such. Still....

Genuine Collins tubes! Genuine Collins Power Cables! All atRAREat!! But the fellow who had the

joke auction for the "Genuine Collins Enema" got kicked off Ebay over it. His listing was disclaimered to Timbuktu and back, but copyright bit him.

Meanwhile the folks who know The Way To Write Ads That Sell keep on selling, while nice guys finish last and make less money on their listings.

But Tom'M's Idea of an Idiot's List sounds good to me. It's been brought up a lot of time, and we seem to bring up ludicrous auctions here many times until they become beaten and bloodied. Think I post more than half. I do so on the Glowbugs list as well. The Other Tom

From: Tom Norris <r390aatbellsouth.net> Date: Mon, 2 Jan 2006 21:41:40 -0600
Subject: [R-390] And another thing - $99 headphones? Not a scam.

On the other hand, here is something that I *don't* see as a sham.

There is another fellow that routinely sells H-251A headsets for $99 He does it for collectors that don't have technical wherewithal to do it for themselves or that have no one else to do it for them. He supplies a new H-251, replaces the connector with a switchcraft heavy brass phone plug and provides a pair of extension cords so the user can operate them with "normal" radios with 1/4 plugs or with older mil radios that take U-77 plugs.

I hate tinsel wire. Years ago I made a few up with phone plugs and sold to local folks and charged them a bit less than half that without any extension cords. They hated tinsel wire too. Several couldn't solder and one or two couldn't see how any longer - but they could listen to their receivers with decent 'phones again. At the time they were cheap, new, and could be had by the case.

Think of the time put in the make the cables/cords. $25 per unit for headphones, new plugs and cable, and the rest for labor. I would have only a small amount of guilt charging that price. For $99 I'd be able to add a reasonable warranty of some sort as well 90 days, maybe?

I'm not going to start doing it, but when I first saw this I thought it was a scam. Then I spoke with him, saw what he was doing and why. 73 Tom N

From: "Jim M." <jmiller1706atcfl.rr.com> Date: Mon, 2 Jan 2006 22:52:21 -0500
Subject: [R-390] Pics/Stories of R-390x's In Service?

No Y2K or other manual upgrade would be complete without photos and stories of R-390s in use at monitoring sites. For example: (scroll down) to Frank Courtney USS Greenling 1970

http://spookgroup.tripod.com/id6.html

and

http://www.operator-98.com/usafsslite/

Maybe some retired cold-war warriors out there have photos and stories to share (involving the 390s)? http://www.comnetgroup.net/linksofinteresttospooks/ ? http://www.chicksands.com/ ? Jim N4BE

From: Mark Huss <mhuss1atbellatlantic.net> Date: Mon, 02 Jan 2006 23:17:51 -0500
Subject: Re: [R-390] And another thing - $99 headphones? Not a scam.

That's nice, but what is his contact info?

More women than men believe in ghosts, while more men than women believe in UFOs. This proves that men will believe almost anything if it comes with really great gadgetry.-- Captain Ed --

Date: Mon, 2 Jan 2006 22:18:59 -0600
From: "Cecil Acuff" <chacuffatcableone.net>

Hey folks

Dallas' work, for those who are interested, is being posted on the Kongsfjord DX site. Seems he's been subjecting molded caps to extremes of temperature to try and simulate the SJC environment to back his argument. He doesn't have much nice to say about this list and it's membership. (no surprise)

His irrational behavior got him bounced from the list...nobody to blame but himself. Sorry to hear of his medical problems if in fact that is what has happened. (same has been said of Nolan but I think there is more to that story as well)

Dallas contributed much in the past to the work on the R-390A but most of the difficult work being done today on the R-390A is by those brave souls that will take the time and make the effort to bring back to life the abused of the series....those left out in the weather at SJC. Dallas admitted he had never seen one...nor would he ever own one...but spoke with great authority about all the problems they have and why they were not restorable. Not so....as can be attested to by many on this list. More work...yes! More rewarding.....I think so!

The days of the cherry surplus R-390A is near it's end.....just ask Mish and Rippel. A lot of the stuff they are seeing now days to restore are for the most part a mess.

Walter Wilson's web site has pictures of what can be done if one will take the time and make the effort. www.r-390a.us It can be done! It has been done! Cecil.....

From: "Jim M." <jmiller1706atcfl.rr.com> Date: Mon, 2 Jan 2006 23:37:59 -0500
Subject: Re: [R-390] Ultimate heresy answered

Notes on capacitor and resistor failures:
http://freespace.virgin.net/paul.zimmermann/Electronic/fault3.htm

http://www.aviationtoday.com/cgi/av/show_mag.cgi?pub=av&mon=1100&file=column2.htm and from:
http://www.dilabs.com/about/faqs.aspx "Why do some capacitors age?
Some of the higher dielectric ceramic formulations, ferroelectric ceramics, display a crystalline change that causes a decrease in capacitance with time. This is a consequence of the basic chemical formulation, the microstructure of the ceramic, and the relaxation of the strain energy within the crystalline lattice.

The reference time, t = 0, for the aging phenomenon is the time which the ceramic was last exposed to the Curie temperature. Curie temperatures vary with ceramic formulations and can range from room temperature to 150 oC. Thermal influences due to the external environment and manufacturing processes can reset the aging clock.

This variation in capacitance is predictable and repeatable. It should be considered during the design phase to insure selected capacitance values will be adequate for the anticipated life of the application. Operating temperatures should not exceed the maximum specified component temperatures."

And:

http://my.execpc.com/~endlr/aging.html

"Class 2 ceramic capacitors go through a logarithmic loss of capacitance (ageing) after manufacture because of the slow realignment of the crystals of barium titanate after baking. In general, the higher the K, the faster the ageing. Because of this, electrical measurements are typically taken no less than 24 hours later (some people recommend 1000 hours). Baking the capacitors for several hours at 130-150C restores the capacitance to it´s original value (should you want to), and the ageing starts all over again. High voltage also tends to turn back the clock somewhat, and some test procedures take this into account." It happens. Jim M.

From: Perry Sandeen <sandeenpaatyahoo.com> Date: Mon, 2 Jan 2006 21:57:10 -0800 (PST)
Subject: [R-390] Ultimat heresy Mea Culpa

I apologize for my apparent inaccuracies about the leavings of Dr. J and Dallas Lankford with a "K". (Your right, in a way Les)

Although Barry is right about Dallas' being extremely adamant, some who were corresponding at the time IMHO should have been more gracious and backed off.

Berry Les and List,

Although the examples that I listed were far from perfect, I stand by my statements of list members being denigrated and ridiculed for wanting/promoting to do major upgrades to the R390A.

A posting to the list said that there is an almost infinite supply of tubes available. Perhaps. But how many are useful in the BA receivers and at what cost? Look at the price increase lately for our beloved black tube shields. Food for thought, not for a fight.

Regards, Perrier (A nickname given to me by a friend as my first name is Perry and my middle initial is A.) (Also a charter member of the typing and spelling challenged.) I use it among friends which I believe I have here.

From: Tom Norris <r390aatbellsouth.net> Date: Tue, 3 Jan 2006 00:05:07 -0600
Subject: [R-390] Re: 3 Toms??? (was re:More Sham Collins on ebay)

It appears to be the "mate" to one of mine. Under that modern nylon tag you can see where it used to

have one of the big aluminum Navy tags. My Imperial has that same "receiver 1" placard under the KC knob. With the wear around the knobs, makes me want to think the tuning is as smooth as silk. Wonder what it did before it got out of the Navy?

The Other Tom *wait, with Tom M. posting more, there are THREE of us now* Are there now more of us than there are Barrys?????

From: Perry Sandeen <sandeenpaatyahoo.com> Date: Mon, 2 Jan 2006 22:10:45 -0800 (PST)
Subject: [R-390] Sub-minature co-ax

Wrote: Would like to know more about the "Teflon sub-miniature co-ax" that you mentioned. Where can I buy it? What is its designation and so forth.

Hi Tom,

The stuff I got is RG-158 I think and I scored a lot off of ebay. It is about 1/2 the size of RG-72 and the dielectric doesn't melt when soldered in close quarters. There are other surplus dealers that have it. If you get it new it is a fortune. Since the receiver lengths are so short, the exact impedance doesn't really matter. Also it is silver plated which I find easier to solder. Regards, Perrier

From: Perry Sandeen <sandeenpaatyahoo.com> Date: Mon, 2 Jan 2006 22:31:05 -0800 (PST)
Subject: [R-390] Re: TL431 question

Wrote: Looked up the TL431 and found it to be a 0 to 36 volt regulator. How is that used in a "six - stack" to replace a 0A2?

The TL431 is a 3 terminal "buried zenar" adjustable CURRENT sink regulator as opposed to a pass type voltage regulator. Using the data sheet formula one can trim them to say 25 volts using just two resistors. Then they can be stacked in series like a two terminal zenar. Got the idea from Dr. Jerry. Haven't had the time to do it myself yet. Regards, Perrier

From: "Craig Anderson " <Craig.Andersonatsaintpaul.edu> Date: Tue, 3 Jan 2006 07:15:37 -0600
Subject: [R-390] RE: R-390 Digest, Vol 20, Issue 69

Hardware kits

You can get all the stainless hardware for the front panel including the correct conical washers from McMaster Carr on the web. Craig W9CLA

From: shoppa_r390aattrailing-edge.com (Tim Shoppa) Date: Fri, 30 Dec 2005 08:39:34 -0500
Subject: Re: [R-390] Trim Caps on Mechanical Filters

wrote: > I think if we look at decks with and without trimmers on the bottom side, we > will see that the decks have a lot of differences to allow the caps to be > inserted. There was just not a big blank chassis wall space there waiting for > additional caps.

Actually, there was a big blank chassis wall space. I've got right in front of me an early no-trimmer Collins IF deck and a with-trimmer EAC IF deck. I do see some changes in components (they were built more than a decade apart after all) and wiring between the two, and a significant improvement in sheet metal in the EAC (which has bossed in nut threads on the shield between the last two IF switch wafers, while the Collins has a nut and a washer). But if the holes were put in the outer wall and the little trimmer board were added, there are absolutely no physical constraints to putting them into the old Collins.

Overall the much later EAC has sheet metal work that looks spiffier and done with fewer pieces and joints and nuts and bolts. Mounting of grounding lugs etc. differs in a few ways from the Collins as a result but I can see that the EAC layout is more highly evolved.

I do feel that the trimmer tree at the top of a trimmer-cap IF filter box looks ungainly and fragile, but they did it anyway... On one of my trimmer IF decks it looks like a trimmer cap broke off the tree and was glyptol'ed back on. Tim.

From: "Cecil Acuff" <chacuffatcableone.net> Date: Fri, 30 Dec 2005 09:48:28 -0600
Subject: Re: [R-390] Another glaringly obvious 390A question for the hypothetical newbie

I'd give him Walter Wilsons Email address and have him order a hardware kit. It comes with all the stainless hardware you see on the front panel. I don't think you can go just anywhere and buy the conical lock washers. Elsewhere in the radio standard stainless hardware available at any good hardware store should be fine...a lot of it is stuff like 6-32 or 8-32 sizes if I remember correctly... Cecil....

From: "Don Reaves" <donatreatek.com> Date: Fri, 30 Dec 2005 09:57:54 -0600
Subject: [R-390] Straight Key Night

If this year's Straight Key Night is like last, here is a chance to exercise your R-390A narrow CW filters. Lots of crowded, slow speed signals bunched up in the bottom half of the 80,40,20 meter ham bands. Many of the signals you hear will be rarely used vintage transmitters, so there is a challenge to twist knobs and track the chirpers and drifters and weak sigs. Just what
R-390 receivers were born to do...

New Year's Eve 7pm EST to New Year's Day 7pm EST. Details at
http://www.arrl.org/contests/rules/2006/skn.html Hope to work some of you. Happy New Year W5OR
donatreatek.com w5oratcomcast.net

From: shoppa_r390aattrailing-edge.com (Tim Shoppa) Date: Fri, 30 Dec 2005 15:38:21 -0500
Subject: Re: [R-390] Another glaringly obvious 390A question for the hypothetical newbie

wrote: > I don't think you can go just anywhere and buy the conical lock washers.

I've had very good luck with flat external tooth lockwashers. Just screw them down until they become conical...!

> Elsewhere in the radio standard stainless hardware available at any good hardware store should be fine...a lot of it is stuff like 6-32 or 8-32 sizes if I remember correctly...

And a certain amount of 4-40's and 2-56's as well if you're getting down to the component level (as opposed to simply removing subassemblies).

I've heard rumor that the spline set screws are 8-36, but I've never run across that thread elsewhere to check! Tim.

From: "Barry" <N4BUQataol.com> Date: Fri, 30 Dec 2005 17:37:48 -0600
Subject: Re: [R-390] Another glaringly obvious 390A question for the hypothetical newbie

Yes, they're #8-36 threads. I have a tap I use to clean the threads out after coating the knobs. Barry - N4BUQ

From: Tom Norris <r390aatbellsouth.net> Date: Fri, 30 Dec 2005 18:06:40 -0600
Subject: [R-390] Y2K CD? No Jeff Adams CD? Yes (Was "Index for Drawings Files on Y2K CD")

For reasons unknown I had gotten the Y2K manual mixed in with my directory containing Jeff Adam's Big CD o' Manuals and Drawings that was published a while back.

I had also backed them up as one volume, so that is where the confusion began....

The mechanical drawings to which I was referring are on Jeff's CD. That CD contained a dos/windows based reader with a file indexer that was - to me - a fairly clunky affair. Now it's not usable, not sure how many others are having the same problem, it may just be me. In my previous post I indicated I can read the files with no problem, but I'm limited to reading them randomly at the moment. Tom NU4G

Thanks for an earlier reply regarding the possibility of an Excel index.

From: Tom Norris <r390aatbellsouth.net> Date: Fri, 30 Dec 2005 19:27:52 -0600
Subject: Re: [R-390] Another glaringly obvious 390A question for the hypothetical newbie

Well, if we're going to get that detailed, let's not forget the roll- pins that the ends of the cam shafts on!! I didn't measure than at the time, and I can't find the drivers I used so I dunno the size. It's a possible repair.

#2-56? Where are those? They're nearly the size of those pins I had to drive out! heehee I know there 4-40's in there. Tom

From: Flowertime01atwmconnect.com Date: Fri, 30 Dec 2005 20:44:32 EST
Subject: Re: [R-390] Trim Caps on Mechanical Filters

Tim,

OK so now you have looked under the two different types of IF decks and find ample space to place four trimmer caps.

Before the end of 2006 as a new year resolution please provide the R390 reflector here a very concise write up equal to a field modification procedure. Exactly detail how to modify the non cap chassis to a cap chassis. Please provide a detail list of parts. Please provide mechanical drawings such that the mechanical mounting parts can be fabricated from the drawing to provide some of the parts to make up the complete parts kit. Please include in the field kit installation, a template for drilling the side of the receiver frame. You get the parts list and detailed instructions and I know we can find the parts to do kits.

I write that prior to 1975 the military looked at the problem a couple times and chose not to spend the money on it. Your response is there is room on the deck to do it. If that was the only item I am sure the military would have done it. Because I said there was not room on the chassis and you think there is room every thing else I posted is mostly not credible. You rate eight good years of my life as fiction. I try to write this really boring trivia with some humor. Some Fellows today wonder what the engineers in the past were thinking and why they made the choices that were made. I call these choices compromises.

I find most are motivated by return on investment. How much bang do we get for the buck? There is value to be taken away from these questions and answers.

>From these questions and answers I take way a lot of humor and get much practice with my typing and writeing skills. I am sorry it falls on you to grade my work. A boring job but some one has to do it. I do try to keep it on the R390 subject while varied. While most days I do enjoy taking a cut at providing some insight and sharing what I saw go down in my life, I am sorry my post are not up to your exacting critical reading expectations. I believe if I had more writing skills, I could have been a good author and would not have had to make a living prior to my retirement at age 55, assembling auto engines, repairing radios, being an electrician, and a computer scientist. I will continue to share my response to questions here on the R390 reflector and try not to worry as much.

Here's your chance. I bet lots of fellows own R390/A decks without the variable caps and would like to have the write up to make the modification. It sure would be a very nice addition to the R390 resources.

I am looking forward to your work and the chance to modify one of my decks from your wonderful work. While the military considered and rejected the idea having the IF decks field modified, that would not stop some R390/A owners from taking on the task and doing it very successfully. Many Fellows have many more resources today for doing the task than were available back it the old days.

How about the can on top, Will it need to change size or can we squeeze every thing in the original can?

How much improvement will we get in the signal to noise ratio? How will the band pass be effected? What gain will one get for the pain? Just because one can make the change should we make the change? Roger

From: shoppa_r390aattrailing-edge.com (Tim Shoppa) Date: Fri, 30 Dec 2005 21:04:46 -0500
Subject: Re: [R-390] Trim Caps on Mechanical Filters

wrote: > OK so now you have looked under the two different types of IF decks and find > ample space to place four trimmer caps. > > Before the end of 2006 as a new year resolution please provide the R390 > reflector here a very concise write up equal to a field modification procedure. > Exactly detail how to modify the non cap chassis to a cap chassis. Please provide > a detail list of parts. Please provide mechanical drawings such that the > mechanical mounting parts can be fabricated from the drawing to

provide some of > the parts to make up the complete parts kit. Please include in the field kit > installation, a template for drilling the side of the receiver frame. You get the > parts list and detailed instructions and I know we can find the parts to do > kits. > Just because one can make the change should we make the change?

Wow, Roger, didn't mean to tick you off.

I enjoy questions that are easily answered by looking under the covers, poking around with ohmmeters and voltmeters and signal generators, and comparing/contrasting small technical details.

So if you say "it wasn't done for reason X", I read what you write with enough interest to go look and see reason X for myself. Don't take that as a mistrust of your facts, but take it as me being interested in what you write about.

If I misinterpret your intended-to-be-factually-incorrect-for-humorous- intent statements as being actual mistakes, I apologize.

I do seem to have rubbed you the wrong way a couple times in the past couple of weeks, putting me in the "bad guy" column way more than anyone else on this list. Who knows, maybe I'll get kicked off the list the next time I look under the covers of my R-390A instead of trusting the word of a respected poster. Tim.

From: "Bob Young" <youngbob53atmsn.com> Date: Tue, 3 Jan 2006 08:29:12 -0500
Subject: [R-390] question on R390A

I asked a guy on ebay if the endpoints were off and this is what he replied: "I just checked it with the internal cal... and I didn't warm it up.

3 MHz (not that matters, it's mixed) and 4k IF, I set the zero on 3.00 and ran up to 4.00, I saw around 9 kc total difference from one end to the other."

it's for this radio:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5849372507&rd=1&sspagename=STRK%3AM
EWA%3AIT&rd=1

Should I be concerned with this? I intend on having it done over eventually when I buy one anyway, I think they may be a little too complicated for me to tackle myself, thanks much, Bob Young

From: "Tom M." <courir26atyahoo.com> Date: Tue, 3 Jan 2006 05:54:58 -0800 (PST)
Subject: [R-390] PTO question on R390A

Bob,

9 kcs is not abnormal for a radio that has not be aligned in a long time.

This can be adjusted out, either by plan a) the endpoint adjustment screw, or plan 2) removing one turn from the endpoint adjusting coil. This should not prevent you from buying the radio.73 Tom N5OFF

From: Roy Morgan <roy.morganatnist.gov> Date: Tue, 03 Jan 2006 09:09:58 -0500
Subject: Re: [R-390] Sub-minature co-ax

wrote: > The stuff I got is RG-158 I think

It's called RG-178/U actually

You most likely can get it at RF Connections: http://users.erols.com/rfc/index1.htm (301) 840-5477 or send mail to <mailto:rfcattherfc.com>rfcattherfc.com While you are at it, ask them about MB connectors. Roy

From: "Cecil Acuff" <chacuffatcableone.net> Date: Tue, 3 Jan 2006 08:14:31 -0600
Subject: Re: [R-390] question on R390A

That's a fair amount off but not more than expected for an unrestored radio. It should adjust out. Depending on the PTO brand it may need a bit more work Cecil...

From: "SAM LETZRING" <sletzatmsn.com> Date: Tue, 3 Jan 2006 07:18:01 -0700
Subject: Re: [R-390] Sub-minature co-ax

I use RG-188- same stuff- silver plated Teflon dielectric- I have a bunch if anyone would like some- Sam

From: Roy Morgan <roy.morganatnist.gov> Date: Tue, 03 Jan 2006 09:37:36 -0500
Subject: Re: [R-390] Resistors

wrote: >Guys I don't want to be PICKY but WHAT is a LOW NOISE RESISTOR???????????

Bernie,

A perfectly good question!

It turns out that anything that is not very very very cold makes electrical noise. (That means near absolute zero - minus 273 degrees Centigrade or some such.) The phenomenon is based on the fact that molecules move about if they are at any temperature above absolute zero. This does not matter much to R-390A/URR users, though it does to folks doing radio astronomy and folks building detectors to sense submerged submarines from bumps in the earth's magnetic they produce. But I digress.

If you put some current through a resistor, the material makes additional electrical noise. Some resistor materials make more than others, current and voltages being equal. It appears that folks who build phonograph cartridge amplifiers and low noise VHF receivers can tell the difference between such resistors.

Almost all the noise from a properly aligned R-390A/URR receiver is generated in the first RF amplifier tube. It's quite possible that if the resistors around that tube are particularly noisy, they will contribute a

noticeable amount to the receiver noise. If the IF gain is set very much too high, the IF amplifier will make noticeable noise. This is bad. Any IF amplfier makes measurable noise, and Roger has been telling us how to measure that, and to select tubes to reduce that noise.

Additional noise is generated in the mixer tubes. Some tube substitutions suggested in modification articles make less noise than the ones normally used in the R-390A. I have not tried these changes, but I hope to one day. I have a spare RF deck for the purpose.

It's the opinion of experienced radio users that very very few of us live in places where the received noise level is low enough so that the noise generated in a receiver is of much matter at all. On HF, that is. Above 30 mc it's a different matter.

Faulty (that is leaky) RF and IF bypass caps definitely make noise. After you have found this going on, and fixed it a number of times, the noise from this source is quite distinguishable from other noise. It's sort of like telling the difference between an oboe and a clarinet.

As I understand it, carbon composition resistors are favored by the high fi builders for low noise and for other differences they hear in the sound. And they also report that some other resistors are better for noise.

I would be glad to hear about any perceived or measured differences in noise in the R-390 receivers due to resistor changes.. Roy

From: DW Holtman <future212atcomcast.net> Date: Tue, 03 Jan 2006 07:55:34 -0700
Subject: [R-390] Interesting Posts Today

The posts were very interesting and informative today. Especially the ones from Paul and Roy. Keep up the informative stuff. 73's DW Holtman WB7SSN

From: DW Holtman <future212atcomcast.net> Date: Tue, 03 Jan 2006 07:58:50 -0700
Subject: [R-390] Central Electronics

Hello,

Has anyone used Central Electronics Slicers on R-390 series of receivers? How good do they work? What is the difference between the "A" and "B" slicer?

Thank you in advance for any information on these two items. 73's DW Holtman WB7SSN

From: "Tom M." <courir26atyahoo.com> Date: Tue, 3 Jan 2006 07:13:06 -0800 (PST)
Subject: [R-390] Rectified: Was Sham Collins

To be fair I have to let you know that the ebay seller has recognized the error of listing an EAC radio as Collins, and will relist it as EAC. 73 Tom

From: "Bruce Hagen" <b_hagenatsbcglobal.net> Date: Tue, 3 Jan 2006 10:21:02 -0500

Subject: RE: [R-390] Central Electronics

Good morning:

You may want to try the CE site on Yahoo. Bruce

From: Barry Hauser <barryathausernet.com> Date: Tue, 03 Jan 2006 10:39:43 -0500
Subject: Re: [R-390] Resistors

Hi Roy

Thanks for the explanation. Of course, now I'll be listening for oboes and clarinets ;-).

It's difficult to say what the audio builders think as a lot of that stuff is now mixed with lore, urban legend, and maybe a large dose of hype (as in monster cables, oxygen, etc.)

I think part of the reason for favoring carbon comps is avoidance of inductance or capacitance introduced by metal or carbon film resistors -- whether real or imagined.

Some audiophile restorers seem to be looking to preserve whatever component characteristics inherent in the old tube designs -- good, bad or indifferent -- to maintain that warm, fuzzy 50's feeling or whatever. This ranges into the fringe area where used Black Beauties fetch high prices.

This is not to poke fun -- I really don't know -- but merely suggest that the reasons for favoring this or that type of component do not necessarily fall along familiar parametric lines, known elements of the laws of physics and chemistry, electricity, etc. I suppose if your objective is to retain authentic performance, including distortion and noise, it would make sense to stay with components of identical or similar construction -- providing functional components of the type can be found today.

As I recall, there was a thread some years ago about whether or not a modern carbon film resistor might cause a problem somewhere in the R-390A if used as a replacement for a carbon comp. I think the conclusion -- at least the one I drew from the thread -- was that it might affect one or two areas, but generally no problem and not worth worrying about.. Barry

From: JMILLER1706atcfl.rr.com Date: Tue, 03 Jan 2006 10:53:39 -0500
Subject: [R-390] Test for SORBS

This is a SORBS test. Just tried to post and got booted by SORBS (the so called spam filter) - the list manager really needs to dump that service.

From: "Kenneth G. Gordon" <kgordonatmoscow.com> Date: Tue, 03 Jan 2006 08:04:35 -0800
Subject: Re: [R-390] Resistors, noise, etc.

wrote: <Among other things...> > It's the opinion of experienced radio users that very very few of us live in > places where the received noise level is low enough so that the noise > generated in a receiver is of much matter at all. On HF, that is. Above 30 > mc it's a different matter.

Actually, there are TIMES, even on 160 meters, when the external noise level IS low enough to hear receiver noise. However, external noise levels ARE getting worse. Back in the late 1960s, I found that receiver noise was definitely an important factor at 14 Mhz and above.

> As I understand it, carbon composition resistors are favored by the high fi builders for low noise and for other differences they hear in the sound. And they also report that some other resistors are better for noise.

A recent article in ER magazine by Ray Osterwald on the restoration and enhancement of the SX-101A covered resistor noise in quite good detail. HE says that carbon comp resistors are the noisiest, and has data to prove it.

He also discussed capacitors in the same article. This is one of 4 or 5 articles on the SX-101, and is well worth the read for the information it contains which apply to our R-390s. Ken Gordon W7EKB

From: Roy Morgan <roy.morganatnist.gov> Date: Tue, 03 Jan 2006 12:49:40 -0500
Subject: Re: [R-390] Resistors

wrote: >Hi Roy Thanks for the explanation. Of course, now I'll be listening for oboes >and clarinets ;-).

Tweet! SkRONK! Blaaat... (that's what I sounded like on a clarinet way back then.)

>I think part of the reason for favoring carbon comps is avoidance of >inductance or capacitance introduced by metal or carbon film resistors >-- whether real or imagined.

I don't remember the details from the tests one fellow did on metal film resistors, but my conclusion from the data was: Just Don't Worry About It. The fact is, very very few resistors in the R-390 are actually used with RF or IF on them. The rest are bypassed thoroughly. Does the R-390A/URR use IF coil snubber resitors? I think the R-390/URR does, and it was a mistake to snip them out to get narrower passband and higher gain.)

>Some audiophile restorers seem to be looking to preserve whatever >component characteristics inherent in the old tube designs -- good, bad or >indifferent --

Yes, that makes sense. I have not yet had the chance to compare sounds of capacitors, or resistors. Maybe one day.

>... I suppose if your objective is to retain authentic performance, >including distortion and noise, it would make sense to stay with >components of identical or similar construction -- providing functional >components of the type can be found today.

I have a few period resistors around. I often find they have drifted up in value, even if unused.

>As I recall, there was a thread some years ago about whether or not a >modern carbon film resistor might cause a problem somewhere in the R-390A >if used as a replacement for a carbon comp.

I don't remember that, but then there are a lot of things I don't remember. heheh I think what I'll do is use modern parts and see if they cause any trouble. I expect they won't. Roy

From: "Barry" <n4buqataol.com> Date: Tue, 3 Jan 2006 11:54:37 -0600
Subject: [R-390] SS VR replacement for 3TF7

Any else tried this? If so, any problems, improvements, etc.? http://www.kongsfjord.no/dl/R-390A/R-390A%203TF7%20Substitutes%20(wm).pdf Barry - N4BUQ

From: Roy Morgan <roy.morganatnist.gov> Date: Tue, 03 Jan 2006 12:56:32 -0500
Subject: Re: [R-390] Resistors, noise, etc.

wrote: wrote: >...very very few of us live in places where the received noise level is low enough so that the noise generated in a receiver is of much matter at all. ... Actually, there are TIMES, even on 160 meters, when the external noise level IS low enough to hear receiver noise.

I appreciate Ken's observation. I live in a very built-up area, and though the power lines in my neighborhood are underground, it is a very short distance to some medium and high power lines. Maybe it's the cell phones, computers and TV's that make such a racket around me. Of course, the lights on dimmers that our older daughter cannot ever turn OFF are the worst offender.

There is a hope in our family that we can move out to a much more rural area. The horses that will be around us won't make any electrical interference that I know of.

> > As I understand it, carbon composition resistors are favored by the high fi > > builders for low noise and for other differences they hear in the > sound. ... >A recent article in ER magazine by Ray Osterwald on the restoration >and enhancement of the SX-101A covered resistor noise in quite good >detail.

I need to renew my lapsed subscription, and I look forward to Ray's articles. I have an SX-101A here to restore, also.

> HE says that carbon comp resistors are the noisiest, and has data to prove it.

Wonderful. His having tried some experiments or gathered data will help us all decide what to use. Thanks, Roy

From: "Cecil Acuff" <chacuffatcableone.net> Date: Tue, 3 Jan 2006 12:17:22 -0600
Subject: Re: [R-390] Test for SORBS

In defense of our list manager this is imposed on him by the QTH.net owner. Cecil....

From: Tom Norris <r390aatbellsouth.net> Date: Tue, 3 Jan 2006 13:19:07 -0600
Subject: Re: [R-390] Test for SORBS

The problem is now an easy fix. Not sure if it had to do with my being such a pain about it or not....

Just email Don and he'll contact the person that takes care of such things at qth.net and you'll be added

to the whitelist.

Jim, that is. Or anyone else having the same problem with the "sorbs conspiracy." Tom

From: Buzz <muttmanatcharter.net> Date: Tue, 03 Jan 2006 11:21:10 -0800
Subject: Re: [R-390] Resistors

Back in the early 60's I worked for a company that tried to build R390's. Every radio was taken into a screen room then tested for noise. I don't remember what the spec. was, but most all the radios passed on the first time. Buzz

From: Tom Norris <r390aatbellsouth.net> Date: Tue, 3 Jan 2006 13:41:37 -0600
Subject: Re: [R-390] SS VR replacement for 3TF7

Where's the Kielbasa? The Lutefisk? The Damp Sheep??

But seriously... I've heard this discussed in and among the Dead Horse Graveyard, and since I have a radio apart, now is as good a time as any to try it. Just need to pick up the parts in a few days. And I need to set up the GPS standard that I've been meaning to for the past two years that sits on the shelf pointing and laughing. I've got a serious roundtuit deficiency.

Who else has tried the simple DC regulator method and written down what the results were versus that of a current regulator? I'd hate to think a team of experienced engineers screwed up something as simple as a ballast arrangement. Maybe if we stepped into our TARDIS and took them a boxful of 7812's we could have nipped the whole ballast problem in the bud, as Barney Fife would have said? 73 Tom NU4G "Better Living Through Lutefisk"

From: "Barry" <n4buqataol.com> Date: Tue, 3 Jan 2006 14:19:26 -0600
Subject: Re: [R-390] SS VR replacement for 3TF7

The only reason I might try it is lack of a ballast tube for one of my R390A's. It doesn't seem to be that much more difficult than a simple resistor and if it gives better regulation, then why not give it a try.

One thing I don't understand about this is I thought solid-state voltage regulators worked on either a positive or negative voltage, not AC. Does this arrangement still regulate both positive and negative half cycles?

Also, wasn't there an issue with solid-state noise? Barry - N4BUQ (kicking more dead horses than you)

From: Flowertime01atwmconnect.com Date: Tue, 3 Jan 2006 16:54:09 EST
Subject: Re: [R-390] Surplus Recalls! (was: Is this the beginning of the end?)

Dave,

I see all three of your points and see some merit in each of them.

Like you say the military and commercial items may not work and play well on frequency. Someone may be trying to expand and grow some second world military assets as well. The cost to buy and refurbish used gear is still less than the cost to buy all new gear.

Someone would kick the low cost maintenance can ahead another year rather than start down a new path to buy all new gear. Can you even get new gear?

So fine, today twenty some rice box makers are ready to wave solder any board you want this year and get it into the plastic box of your design choice. Nice.

Now what do you do for spare parts for the next 50 plus years. How do you deploy the new asset? How do you train the old operators on the new asset? How do you get the new asset maintained?

So few people have an appreciation of the cost of getting change into the military system.

A GI any where on earth just cannot pick up his cell phone, call radio shack and get a new set of batteries delivered via UPS in three days. It is a nice theory but there are places here in the United States that still do not have cell phone service and there are GI's in those locations who need support.

Just like Wal Mart the Military has a distribution system. If you cannot get it delivered to a Wal Mart store through the Wal Mart trucking fleet then you cannot get it sold in a Wal Mart store. Likewise if you cannot get items delivered through the military logistics services, then the items are not military spare parts.

What ever you have may be exactly the same thing. But its the supply logistics and payment for items from the logistics source that detail many purchase decisions. If you cannot sign up to deliver the same part any time any amount on any schedule for the next decade, then you are not in the military supply source business.

It is not the product, it the way the business of military support is done.

Few people understand what it really cost to change military models. Be it coffee grounds, rifles, trucks or radios. Roger.

From: DW Holtman <future212atcomcast.net> Date: Tue, 03 Jan 2006 15:29:01 -0700
Subject: Re: [R-390] SS VR replacement for 3TF7

You would have to put in a rectifier and filter caps. Ths whole 78XX series regulators only work on DC.

I have never heard of them causing noise. Most newer solid state low noise amps, VFO's etc use the low power series of these reguators in the TO-92 packages. This type of circuit could not deal with noise.

This mod is very simple and straight forward. The voltage regulation will be excellent. 73's DW Holtman WB7SSN

From: Flowertime01atwmconnect.com Date: Tue, 3 Jan 2006 17:45:55 EST
Subject: Re: [R-390] Resistors

Bernie,

Just like the name says. However it is said with a lot less cheek than when talking about some low noise oxygen free audio stuff.

Guys WHAT is a LOW NOISE RESISTOR?

If you are dragging .000001 micro amps across 2 ohms a low noise resistor is not going to have a lot of value.

If you are dragging .1 amps across 1K ohm dropping a 100 volts and spilling 10 watts of heat into the air, then a low noise resistor may be in order.

Two extreme examples. Good low noise resistors have uses. Just because you can do it should you do it?

All resistors do not have the same noise. Noise is how much variation you get in current across a resistor when a constant voltage is applied.

We like to think all resistors are rock solid constant state devices that never vary one atom in conduction. Problem is this just is not how it works in the real world.

Over ten minutes you get a fair average. Over a second you get a fair average. At any instance you can get a good variation that amounts to noise.

So better resistors than the old carbon resistors have been developed and put into production.

If you put one into a circuit some where will it make a difference you can hear? YMMV. depends on where you are putting it.

>From the extreme examples, it looks like high current circuits would benefit most from a low noise resistor.

RF front ends, Oscillator and mixer circuits being the noise determine circuits in a receiver would be candidates for low noise resistors.

Some new caps are also lower in noise than some older model caps. The new smaller size and lower leakage get more selling points than cap noise. Leakage in a cap is not constant. The variation is not large. but variation in leakage amounts to change in the circuit. This change is defined as noise. So many caps get changed not because they do not hold a charge and perform the filter function we expect from them. They get changed because they leak at a not constant and varying rate which can be measured as varying noise at the receivers output. Roger AI4NI

From: "Kenneth" <crips01atmsn.com> Date: Tue, 3 Jan 2006 15:48:21 -0700
Subject: RE: [R-390] Sub-minature co-ax

This is the man when it comes to anything to do with coax. http://thewireman.com/index.shtml Ken de W7ITC

From: "Kenneth G. Gordon" <kgordonatmoscow.com> Date: Tue, 03 Jan 2006 15:26:16 -0800
Subject: [R-390] SS replacment for 3TF7 - back-to-back Zeners.

The RCA modification to the power supply in the SRR-11/12/13 receivers did away with the ballast tube which was being used to regulate the oscillator filament voltage, and substituted a resistor and a pair of back-to-back Zeners. The output waveform is a clipped sine-wave and regulation is very good, the amount of clipping varying with input voltage to the Zeners. Ken W7EKB

From: Flowertime01atwmconnect.com Date: Tue, 3 Jan 2006 18:29:31 EST
Subject: Re: [R-390] Mechanical Filter Band Pass Pictures.

Norman J McSweyn, One big bear hug to you from Roger AI4NI

I was able to down load the attachments. I popped them open and run a min and max one behind the other on my screen. It was nice to toggle between the two screen shots and watch the response line change. Very nice job. exactly what I had in mind for the experiment.

I read your word file and see all the detail you put into the testing. Worry not about the calibration of the equipment. Every R390/A is going to act a little different and doing the couple decks like you did with some equipment that was "more calibrated" would not bring more exactness or understanding to the table. The screen shot files do a very nice job to show what happens to the mechanical filter response as you vary the trim caps. This was exactly what I wanted to know and share with every one.

You put these in a direct mail to me. Can I share them with every one? I think I can mail them to Al and we can ask him to put them on the web page for every one to view. We can wait for you to get home again and respond to you mail. Understand you are on the road again for a few days. This is your work and when it hits the web you need to get your credit for it. Thank You again. Roger AI4NI

From: "Jim M." <jmiller1706atcfl.rr.com> Date: Tue, 3 Jan 2006 19:24:46 -0500
Subject: Re: [R-390] Resistors

Quoted From: http://www.dataforth.com/catalog/doc_1065.html

Resistor Thermal Noise

Quote: "There are ... subtle sources of noise that often go unrecognized. Electrons within a conducting media or a semiconductor device that are available to move are responsible for current flow (charge per second) when excited by external voltages. With no externally applied voltages, electrons are still in motion randomly interacting with other electrons and with the material's lattice sites and/or impurities; however, their average velocity in any direction remains zero (i.e. no current flows). This statistically random electron motion creates noise voltages whether there is an applied external voltage or not. Consequently, conducting media generates internal noise without current flow.

Additional types of noise occur when current flows. The random statistical nature of trillions of electrons traveling with an average velocity in the same direction traversing random paths and interacting with material lattice sites will create several types of noise. In many instances, these noise voltages will seriously affect instrumentation. The laws of material physics and quantum mechanics

which govern electron motion are random and, therefore, behavior models must be treated with statistical methods. This means that noise voltages are typically expressed as a "mean square" value.

One common noise category is resistor thermal noise, which is the noise developed in a resistor in the absence of current flow. Thermal noise was modeled by Nyquest in 1928 and experimentally measured by Johnson. This noise, often referred to as "Johnson" noise, is generated in a resistor independent of any current flow and has a mean-square voltage value of 4*k*T*R*(BW). In this expression "k" is Boltzman's constant, "T" is temperature in degrees Kelvin, "R" is resistance in ohms, and "BW" is bandwidth, in Hz.. For example, at 100 degrees C, the noise voltage measured with an ideal true RMS 1 Meg Hz bandwidth voltmeter within a 500k ohm resistor is approximately 100 micro-volts. Clearly, this can cause serious errors when measuring low level voltages with high gain signal conditioning modules. ..."

See also http://www.tutorialsweb.com/rf-measurements/noise-figure/noise-in-electronic-components.htm

Also from http://www.physics.ucdavis.edu/Classes/Physics122/Phys122_Johnson_Noise.pdf you will need some math Jim M. N4BE

From: Flowertime01atwmconnect.com Date: Tue, 3 Jan 2006 19:29:06 EST
Subject: Re: [R-390] SS VR replacement for 3TF7

DW Holtman,

An idea back when was to just stuff a silicon diode rated at 1amp and 100volts into pins 2 and 7 of the 3TF7 socket.

This blocks the 25.2 volts 1/2 of the time. The net effect is 12.6 volts of DC. No 3.6 watts of heat to radiate. The transformer gets a 1/2 cycle rest.

As long as you are poking stuff in the socket add a filter cap. We will get yada yada yada all week for my use of the S word.

Yes, a regulator may offer better performance if the power line shifts.

I live with real weather and when my lights blink, I do not set and wonder why my receiver is drifting off frequency. As I am not an OP trying to get a copy these days. When my receiver drifts I get the head sets off and look out my window. There is more to life than my receiver and I would like to continue to enjoy life. My QTH is not a bunker these days. Power line shift is my first clue to bad weather.

Tubes are getting costly. So some do not want to run them on DC filaments because some 1920 - 1950 text books suggest DC filaments tend to burn open at one end and thus give tubes a short life. We will likely toss the tube for noise before we burn its filaments open operating it on DC.

DC filaments with no filter are more noisy than AC filaments. This could be. But some filter caps would go a long ways. Maybe DC filaments are better for noise if the source is filtered.

Any way the idea has been presented before. It does work. Is it better? I do not know. Is 31 flavors of ice cream enough? What flavor is best?

Why have we not heard about this approach before? Read some of the other mail from today. Roger AI4NI

From: "tfrobase" <tfrobaseatkitparts.com> Date: Tue, 3 Jan 2006 18:57:37 -0600
Subject: RE: [R-390] More Sham Collins on ebay

Good point, my experience is: the pretty ones always had at least two Odham clamps broken !! ... Tom F

From: "Cecil Acuff" <chacuffatcableone.net> Date: Tue, 3 Jan 2006 19:39:44 -0600
Subject: Re: [R-390] SS VR replacement for 3TF7

My Favorite is a piece of Teflon coated aircraft wire with a couple of Mil spec RS-232 male crimp pins installed, shoved into the socket in the appropriate place and a pair of very common (read cheap) 12BA6's in place of the 6V versions. It don't regulate but neither does the resistor....not in the same way as the ballast tube. The ballast tube absorbs voltage changes by varying it's resistance and corresponding voltage drop....something a resistor can't do. In fact I would think the tubes are ballasting the resistor in that method of substitution....but it does work acceptably....as does the jumper and 12V tubes. Cecil....

From: shoppa_r390aattrailing-edge.com (Tim Shoppa) Date: Tue, 03 Jan 2006 20:40:27 -0500
Subject: Re: [R-390] SS VR replacement for 3TF7

wrote: An idea back when was to just stuff a silicon diode rated at 1amp and 100volts into pins 2 and 7 of the 3TF7 socket. > > This blocks the 25.2 volts 1/2 of the time. The net effect is 12.6 volts of > DC. > No 3.6 watts of heat to radiate. > The transformer gets a 1/2 cycle rest.

Not exactly. Look up "RMS". Sqrt((25.2**2)/2) is not the same as Sqrt(12.6**2). Putting the diode in series gives you effectively 17.8V worth of heating (ignoring diode drop...)

We've been through this at least three times before on the list in the past couple of years...

Or did I again fall for the purposely-mistaken-fact-to-make-a-point? I'm always falling in that trap!

> I live with real weather and when my lights blink, I do not set and wonder > why my receiver is drifting off frequency.

For fun, pull the ballast tube and count how many seconds until you start hearing the beat note drift. My ears may not be as sensitive as when I was young but it's many seconds until I hear the drift from zero filament current!

> Why have we not heard about this approach before? > Read some of the other mail from today.

I've seen it before many times over the past couple of years... again I think I fell for the trap! Tim.

From: "Les Locklear" <leslocklearatcableone.net> Date: Tue, 3 Jan 2006 20:17:40 -0600
Subject: Re: [R-390] SS VR replacement for 3TF7

Uh Oh.....do I smell another Dead Horse moldering in the background?????

Maybe the infamous Keilballast, or the <gasp> 12BH7 or even worse.....Ta Da.....Shades of the Salem Witch Hunt, "TOTALLY" solid state Chuck Rippel's adjustable "Ballst Tube Eliminator." Who knows what eveil lurks behind closed doors.
.MUAHAHAHAHAHAHAHAHAHAHAHAHAHAHAHA!!!!!!!!!!!!!

The Shadow Knows.....

From: "Dave Maples" <dsmaplesatcomcast.net> Date: Tue, 3 Jan 2006 21:37:11 -0500
Subject: RE: [R-390] And another thing - $99 headphones? Not a scam.

All: The best solution I ever found for that nasty wire was to peel off the outer insulation of the conductor, wrap the copper leaves with a piece of stripped 30 AWG wirewrap wire, and then solder the whole mess to the lug in question. I suppose you could put a crimp-on lug on it, but I never did. I agree that it's a pain in the neck, and really unnecessary any more. Dave WB4FUR

From: 2002tii <bmw2002tiiatnerdshack.com> Date: Tue, 3 Jan 2006 21:42:13 -0500
Subject: Re: [R-390] Re: Trim Caps Science Experiment

> Its the old adage a picture is worth a 1000 words. > I was hoping someone has the equipment to do the test.
>
> A nice bandpass sweep on the scope to look at as one varies a cap. > We do not need exact values from the test.

I have swept mechanical filters many times in the past to select termination caps, though never in an R-390A. The caps adjust the transition region of the filter -- how much amplitude ripple there is near the passband edge and how much of a peak before descending the skirt. Unfortunately (to these ears, anyway), Collins went for maximum skirt steepness at the expense of peaks and group delay errors, so mechanical filters always sound strident to me. You can calm them down with additional resistive loading, but that destroys the passband shape. As many folks have commented, the R-390 sounds better than the -A by virtue of its LC IF filters, but you *really* need sweep equipment to get them set up properly if someone's been playing with them. (If they've never been touched since the day they left the factory, they're probably fine.) Plug-in mechanical, crystal, and ceramic filters basically work or they don't -- any adjustments are just for fine-tuning the passband edges.

IMHO, the best sounding plug-in IF filters are the Murata ceramic filters. If anybody knows of a source for Murata Series CFS, CFR, CFK, CFX, or CFZM filters in hobbyist quantities, I'd be very grateful to know about it. Best regards, Don

From: "Barry" <N4BUQataol.com> Date: Tue, 3 Jan 2006 21:08:34 -0600
Subject: Re: [R-390] SS VR replacement for 3TF7

So, using the VR this way, it functions as a half-wave rectifier and regulates the positive half-wave? Sorry, but I'm not that versed in SS VRs.

Thanks, Barry - N4BUQ (not really meaning to kick a dead horse, but apparently I have...)

From: John Lawson <jpl15atpanix.com> Date: Tue, 3 Jan 2006 22:07:02 -0500 (EST)
Subject: [R-390] 'sellabay' R-390A withdrawn

A previous thread discussed this radio: eBay item # 5846801040 the R-390A with the very worn front panel and the (surmised) "velvet mechnical action".

I notice that the Auction is terminated with the following reason: "The seller ended this listing early because of an error in the listing."

Also of note is the highest bidder - [$306.50; res. not met] is an individual with three (count 'em: 3) total feedbacks, of which one is negative for non-pay...

I'd have taken the damn thing down, too... Be curious to see where it ends up next.

I'm just now starting to work my non-A back to a condition of receiveness (receivetude? receiviousity? never mind....) and once it's hitting evenly on all 30 bands, I'll take the R-390A down for a much-needed refurb. By that time I oughta have the R-388 panel refinished and the radio re-tubed and aligned - not to mention bringing it's dead PTO back to life... Good thing there's 36 hours in a day... Cheers John KB6SCO

From: "Barry" <N4BUQataol.com> Date: Tue, 3 Jan 2006 21:30:30 -0600
Subject: [R-390] Another ballast question

Some have suggested using a 12V tube's filament as a "ballast". I can't seem to locate a 12V tube, but I do have a dual 6V tube (a 6201). Measuring the filaments in series, the resistance is 15 ohms (7.5 ohms for each heater).

If a 12V tube drops the same voltage as a 45-ohm (or approximately that value) resistor, then why does the filament only measure 15 ohms? Does the filament resistance increase as it heats? It would make sense as I *think* resistance increases with thermal activity, but not sure about that.

Can someone enlighten me? Thanks, Barry - N4BUQ

From: DQ <greybeard5150atsbcglobal.net> Date: Tue, 3 Jan 2006 19:47:00 -0800 (PST)
Subject: [R-390] Re: 'sellabay' R-390A withdrawn

FYI on Item number #5846801040. I had been in communication with the sellers trying to extract more info and photos of the radio. This was their verbatim response to me:

"We will be canceling the auction and relisting this; it is an EAC unit and we'll take more pictures and modify the listing. The gentleman who brought these in had several and we assumed they were all Collins. These are GREAT RECEIVERS and the last EAC sold (reconditioned) brought over $1300.

Our reserve is considerably less than half of that; the seller (specifically his wife) just wants it sold." ~ Quig ~

From: "bernie nicholson" <vk2abn@bigpond.net.au> Date: Wed, 4 Jan 2006 15:08:31 +1100
Subject: [R-390] Resistor Noise

Thank you Barry Mat Roy & Sam For your thoughts on Noise, Tongue In Cheek & otherwise, My thoughts , Boltzmanns constant is Just THAT we are stuck with it , Sam I read your Treatise on noise in resistors and am cognizant of the fact that , there is more thermal agitation in a 1 meg resistor than a 10k and that wire wounds generate less noise again , all understood , But a cracked carbon as opposed to a metal Film , Perry talks about good science ect ect, BUT I would like to see references to support this view, So our Collins Engineers who designed these circuits Have optimized all the resistor values for the tubes in use PRESUMABLY, Its easy to Arbitrarily pick out a more modern tube with a better equivalent noise resistance to replace the 6dc6 But HOW Do we optimize the tuned circuits that have been designed for the original tube ??? also allowing that it will have a different input /output capacitance ,HOW do we make the circuit track ??? I am a great believer in NOT trying to reinvent the wheel , I have a lot of time & admiration for the likes of SABIN , SHOENIKE ,PAPENFUS , and BRUENE and " WHO " am "I" to try and second guess their designs 60 years On , and somebody mentioned Ray Osterwald ,Frankly I think he got well and truly OUT OF HIS DEPTH in the ELECTRIC RADIO ARTICLE , " A COMPETITION GRADE 390A. "

This receiver is the ultimate compromise between sensitivity, selectivity, dynamic range act act, I have three of them and with a bit of tweaking they achieve 0.15 Uv for 10db signal to noise + noise, in a 2KHZ bandwidth and a Dynamic range of over 80 db This even today outperforms lots of modern high end radios !!! GUYS this is about as good as it gets , The latest HF technology doesn't do any better , There is no point is there? NOW about caps across filters , In A production environment SELECT ON TEST COMPONENT TWEAKING is time consuming and COSTLY , the reasons for the substitution of variable caps to me would be self evident, Also there appears to be NO difference in performance between the brands , They all conform to a Gov. Specification , BUT I can See that There is SNOB value in owning a COLLINS produced radio, But no practical advantage , Overall the 390A is a very quiet receiver after the ultimate in tweaking and the correct adjustment of the IF Gain pot. you can turn up the audio and RF gain and all you hear if correctly aligned is a hiss , connecting an antenna just about blows you out of the room , The final test I perform after realignment is to establish the input impedance on the frequency that you are interested in, I use a GR916a across the ant input and then I substitute a carbon resistor of the same value whilst looking at an audio O/P meter , If you have done everything right you will see a perceptible inc rease in output, YOU ARE LOOKING AT THE NOISE VOLTAGE IN THE RESISTOR !!! Very few radios will show this the first I experienced was with an Collins ARC58, Which obviously evolved from the 390 series , I think the Genesis of the ganged Slug rack Idea first appears in the ART13 transmitter with the 20 turn vfo mechanically connected to the slug rack for the next multiplier stages Circa 1937, Finally please excuse the long post ,I hope your collective attention spans have held up ok ,regards From Oz

From: "Greg Werstiuk" <greg_werstiuk@msn.com> Date: Tue, 3 Jan 2006 20:11:27 -0800
Subject: RE: [R-390] Re: 'sellabay' R-390A withdrawn

I had the same discussion with them after asking them to provide the manufacturer name from the front panel nameplate. I couldn't read it well enough to know the manufacturer but it clearly wasn't Collins. - Greg

From: 2002tii <bmw2002tii@nerdshack.com> Date: Tue, 3 Jan 2006 23:15:19 -0500
Subject: Re: [R-390] SS VR replacement for 3TF7

Tom wrote: > Who else has tried the simple DC regulator method and written down> what the results were versus that of a current regulator?

I have kludged both SS voltage and current regulators into my 390A to experiment. A good current regulator works better than the ballast tube, but the voltage regulator wins hands down. Still, I run it with a ballast tube because that's good enough.

> I'd hate > to think a team of experienced engineers screwed up something as > simple as a ballast arrangement.

I don't think it's so much a matter of screwing up as not having an easy way to stiffly regulate low DC (or worse, AC) voltages at significant current back in "the day." Remember, they didn't have gain-of-a-million op amps then, or even zener diodes -- who'd want a seven-tube voltage regulator there, and what would they have used for a voltage reference? A voltage divider from one of the glow tubes? But those aren't really very good voltage regulators. Voltage regulated heaters were not an easy design problem in the vacuum era. Best regards, Don

From: roy.morgan@nist.gov Date: Tue, 3 Jan 2006 23:51:43 -0500
Subject: Re: [R-390] Another ballast question

Quoting Barry <N4BUQ@aol.com>:

> Some have suggested using a 12V tube's filament as a "ballast". I can't seem to locate a 12V tube, but I do have a dual 6V tube (a 6201).

If the rated current for the 6201 (run on 12 volts) is the same as the tubes in the PTO and Crystal Oscillator, then use it. (Sorry, I did not take time to look it up.)

> Measuring the filaments in series, the resistance is 15 ohms (7.5 ohms for each heater).

Don't DO that!

> If a 12V tube drops the same voltage as a 45-ohm (or approximately that > value) resistor, then why does the filament only measure 15 ohms? Does the > filament resistance increase as it heats?

YESSSS! From 2 to 5 times, depending on the tube. Regular incandescent lamps do the same thing. Measure a 100 watt lamp cold and figure the starting current at 120 volts. Halogen lamps run the filament at higher temperatures than normal everyday light bulbs, and likely have a greater increase in resistance. Large transmitting tubes had to be started on low filament current and ramped up very slowly, or the very large inrush current could destroy the filament.

It would make sense as I *think* > resistance increases with thermal activity, but not sure about that.

You may now be sure. Roy

From: "bernie nicholson" <vk2abn@bigpond.net.au> Date: Wed, 4 Jan 2006 18:53:10 +1100
Subject: [R-390] 390A versus 390

Hello Bob my preference is for the 390A for the Following reasons : the 390 is in concept a much earlier design ,It uses older noisier tubes ie. 6aj5 , 6Bj6 ect it has 2 rf stages and an extra IF. stage to achieve the same result as a 390A the 6082 regulator tubes are very difficult to source and VERY expensive it uses more power and gets quiet HOT ,on the plus side it has lovely audio if you are into AM listening , The 390A was initially a money saving exercise But coming later a NEW generation of tubes had arrived on the scene NOT to mention Mechanical Filters , I am into SSB and the combination of stopband attenuation and Shape factor of the 2KHZ filter are second to none as far as the Signal to noise on ssb are concerned , I have product detectors in all my receivers Fitted where the 3tf7 used to be, If you are running either of these receivers from a stable mains supply the current regulator is totally unnecessary , and the resistor substitution or in my case the use of 12BA6 tubes in the bfo & vfo is fine after the set has been on for about 40 mins. it is very very stable , on the subject of Vfo s the best one By far is the COSMOS as you can linearize it every 25KHZ and WITHOUT DISASSEMBLY , My experience with Progesteron /Collins /Motorola , Have been successful But at enormous cost in time and Effort , making a Ten Turn Jig and using reams of Graph paper , the COSMOS took less than an hour and maintains its Cal within 200Hz across the 10 turns , Regarding the 391 This Rx is electrically the same as a 390 But can be remotely controlled with the 10 position Autotune mechanism that's the only difference , On one of my receivers I have replaced the 2&4 KHZ filters with separate USB&LSB filters and using a 455KHZ crystal in place of the bfo Stolen from inside Z5 coil can , It works superbly , SSB signals just demodulate beautifully , I obtained my first 390A in 1978 so my experience with these radios goes back a way !! But I am still learning .

From: Francesco Cilea <k0ire@yahoo.it> Date: Wed, 4 Jan 2006 08:48:08 +0100 (CET)
Subject: [R-390] Tubes Sale

Sale All Tubes for Collins R-390 and R-390A Disponible Amperite 3TF7 and 3B28/866 For Info k0ire@yahoo.it

From: "Craig Anderson " <Craig.Anderson@saintpaul.edu> Date: Wed, 4 Jan 2006 07:25:54 -0600

Subject: [R-390] R-392 Power Connector Needed

I know this is a little off topic but does anyone know of a source for the 9 pin R-392 power connector, I need one. Craig W9CLA

From: "Bruce Ussery" <twc9198764412@earthlink.net> Date: Wed, 4 Jan 2006 09:06:42 -0500
Subject: Re: [R-390] R-392 Power Connector Needed

Sounds right on topic to me Craig; I need one too... :-(Bruce WA4ZLK

From: "Barry" <n4buq@aol.com> Date: Wed, 4 Jan 2006 08:36:09 -0600
Subject: Re: [R-390] Another ballast question

It occurred to me after I wrote this that different 12V filaments run at different current ratings. Using a 12V tube whose filament current rating is the same of that of the two oscillator tubes combined in series is what is needed to work correctly. I typed before I thought it all out. Sorry.

Just wondering why you say don't measure the DC resistance across the 12V filaments? My ohmmeter uses a 9V supply so there shouldn't be a problem doing this, right? Of course, 9VDC isn't the same as 9V RMS so some conversion must be made to ensure 9VDC isn't too much for 12V RMS, but this shouldn't be an overvoltage situation, should it? Thanks, Barry - N4BUQ

From: Roy Morgan <roy.morgan@nist.gov> Date: Wed, 04 Jan 2006 10:47:15 -0500
Subject: Re: [R-390] Another ballast question

wrote: >... My ohmmeter uses a 9V supply so there shouldn't be a problem >doing this, right? Of course, 9VDC isn't the same as 9V RMS so some >conversion must be made to ensure 9VDC isn't too much for 12V RMS, but >this shouldn't be an overvoltage situation, should it?

Barry,

Ohmmeter circuits are quite simple usually. If this is an old style VOM, such as the Simpson 360, it works like this:

The test leads, the meter, a range resistor and the battery are all in series. With the test leads shorted, the meter reads full scale, calibrated at zero ohms. If a resistor the same value as the range resistor is at the test leads, the thing reads half scale. So the current through the test leads depends on the range resistor - set by the ohms scale selected. The open circuit voltage might well be the 9 volt battery voltage, but will drop when the leads have a resistor connected to them. The current available (max with the leads shorted) depends on the range resistor selected. The range resistors are chosen depending on the sensitivity of the meter movement. In a Simpson 260, I think this is some 50 microamperes. The tubes you test will never light up.

VTVM's and digital DMM's work on similar principles. Roy

From: "Barry" <n4buq@aol.com> Date: Wed, 4 Jan 2006 09:49:01 -0600
Subject: [R-390] Another (perhaps) silly ballast question

I'm not trying to be silly or attempt any cruelty to a dead horse, but I do have another (perhaps weird) question.

What is the effect of running a transformer's primary at less than its rated voltage? If I connect a transformer whose primary is designed to run at 120V to 100V, 75V, 50V, etc, what effect does it have on the secondary? I realize the secondary voltage will drop at the same (or approximately same) ratio as the primary's voltage is dropped, but what about current (or VA) rating?

In other words, if I have a 120V-PRI/60V-SEC transformer and connect the primary to a 60V source, the secondary should now be 30V. Is the transformer's efficiency compromised? If the secondary was capable of 1A when the primary is connected to 120V, does the current rating go down as the primary voltage is decreased?

I assume these aren't simple questions with simple answers, but I'm wondering about this for a specific reason. Thanks! Barry - N4BUQ

From: "Barry" <n4buq@aol.com> Date: Wed, 4 Jan 2006 09:55:07 -0600
Subject: Re: [R-390] Another ballast question

Yes, I realize how an ohmmeter works (at least the simple, old-style ones) and I realize the tube won't light when connecting the VOM this way. From your original reply, it appeared you were warning me not to test the tube's filament this way because it might damage the filament. I assume that as long as it is a 12V tube, it won't damage the filament, right (again, it would depend on the scale selected for an old-style VOM)?

Mine is an auto-ranging DMM and uses a 9V battery as a source so I'm not sure how much voltage is applied when testing like this, but I assume it would not be more than 9VDC. Thanks! Barry - N4BUQ

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Wed, 04 Jan 2006 10:58:07 -0500
Subject: Re: [R-390] Another (perhaps) silly ballast question

wrote: > If the secondary was capable of 1A when the primary is > connected to 120V, does the current rating go down as > the primary voltage is decreased?

No. The current rating may indeed go up to some small extent (but don't count on it) because of less core heating. (I-squared-R heating of the secondary winding will remain the same of course at constant amps).

Older ARRL handbooks had a good section on cannibalizing/ modifying/operating on different voltages of AC transformers, with lots of good seat-of-the-pants estimates as to wire heating vs current and wire size. Tim.

From: <mfisch@kent.edu> Date: Wed, 04 Jan 2006 11:23:08 -0500
Subject: Re: [R-390] R-392 Power Connector Needed

That makes three of us. I took a phenolic plug and ground it down until it fit, but it is nothing great. Michael Fisch

From: "paolo gramigna" <paolo.gramigna@controllo.it> Date: Wed, 4 Jan 2006 18:09:29 +0100
Subject: [R-390] Tuning the IF question

Hi all,

I'm trying to tune up my first R-390A. I have the manuals. When i came to the IF tuning, the manual says that each trsnsformer has two lugs; the primary in the bottom, the secondary in the top. The problem is, how can i reach the bottom one? There is no hole in the IF module chassis; to reach the bottom lug, i have to remove the top one; and so the transformer goes so much out of tune that no reading is possible on the VTVM. Where am I wrong? Looking forward, Paolo from Italy

From: "john d kopke" <jdkopke@cablespeed.com> Date: Wed, 4 Jan 2006 12:16:14 -0500
Subject: Re: [R-390] R-392 Power Connector Needed

Dear Fellow R-390a and non-a owners;

I have just had a very good experience with Amphenol connectors ,that I purchased from The William Perry Co., the amphenols were in new unissued condition, reasonably priced an the owner was a pleasure to deal with.; his address is as follows:

WILLIAM PERRY CO> INC>
702 (rear) Beechwood Road
Louisville, Kentucky. 40207
Fax-502-893-9220
Office-502-893-8724
E-Mail-WMPERRY@COVAD.NET
USCG -john d kopke

From: mikea <> Date: Wed, 4 Jan 2006 11:23:18 -0600
Subject: Re: [R-390] Tuning the IF question

wrote: > I'm trying to tune up my first R-390A. I have the manuals. > When i came to the IF tuning, the manual says that each trsnsformer has two > lugs; the primary in the bottom, the secondary in the top. The problem is, > how can i reach the bottom one? There is no hole in the IF module chassis; > to reach the bottom lug, i have to remove the top one; and so the > transformer goes so much out of tune that no reading is possible on the > VTVM. Where am I wrong?

Hi, Paolo.

I think that the way to do this is to reach through the top slug to tune the bottom slug. This, of course, assumes that the slugs are hollow. I seem to remember that they are in fact hollow.

Any other R-390A tweakers care to comment? -- Mike Andrews, W5EGO

From: Roy Morgan <roy.morgan@Nist.gov> Date: Wed, 04 Jan 2006 12:26:13 -0500
Subject: Re: [R-390] Tuning the IF question

wrote: >... the manual says that each trsnsformer has two >lugs; the primary in the bottom, the secondary in the top. The problem is, >how can i reach the bottom one?

Paolo,

Use a tuning tool that is very thin in the middle and has a short hex section on the end. General Cement makes them. You put the tool down through the top slug to reach the bottom one. All from above. Roy

Date: Wed, 04 Jan 2006 12:30:02 -0500

From: JMILLER1706@cfl.rr.com
Subject: Re: [R-390] Tuning the IF question

There is a hole in the top slug that a tuning tool will pass through to get to the bottom slug, but the tool needs to be small enough in diameter to pass through and still mate with the bottom slug. Most IF tuning tools have two sizes at each end. The smaller diameter end will pass through the hole. You do not need to remove the top slug!

From: Mark Huss <mhuss1@bellatlantic.net> Date: Wed, 04 Jan 2006 12:41:11 -0500
Subject: Re: [R-390] Tuning the IF question

Go to Radio Shack and buy the Alignment Tool Set. You will find one of them has a hex head that fits the hex holes in the I.F. Cans. You will also note that the shaft on the tool is narrower than the hex head. To align the top core, insert the tool a little into the core and turn. you will see that the top core turns. Insert the tool farther, and the hex head will go past the top core and into the bottom core. turn the tool and you will note that the top core does not turn, even though you can feel resistance to turning. That is why the shaft is so narrow.

From: "Cecil Acuff" <chacuff@cableone.net> Date: Wed, 4 Jan 2006 12:29:19 -0600
Subject: Re: [R-390] Another (perhaps) silly ballast question

I've been told it will cause the transformer to overheat and possible damage can occur. May have something to do with the magnetic principals of the core etc... Cecil

From: "Cecil Acuff" <chacuff@cableone.net> Date: Wed, 4 Jan 2006 12:32:15 -0600
Subject: Re: [R-390] Another ballast question

I don't think the problem is one of concern for damage to the tube but more the fact that the results is inaccurate because unless you get the tube filaments full up the resistance measurement won't be correct...it will be very much low.

A better way to measure the resistance would be to put a milliamp meter in series and measure the current at the rated voltage of the tube and do the math. Cecil....

From: "Bruce Hagen" <b_hagen@sbcglobal.net> Date: Wed, 4 Jan 2006 13:54:04 -0500
Subject: RE: [R-390] Another ballast question

Rule of thumb: Don't worry about the internal battery voltage unless you are measuring the battery or similar type tubes like the 1N5's, 1S4's, etc. Bruce Hagen

From: DQ <greybeard5150@sbcglobal.net> Date: Wed, 4 Jan 2006 11:05:49 -0800 (PST)
Subject: [R-390] Re: Roy's R-390 resistor explanation

Roy Morgan <roy.morgan@nist.gov> wrote: "A perfectly good question! It turns out that anything that etc., etc., etc...."

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Roy, thank you, thank you, thank you, for a plain English no-nonsense explanation to the resistor noise question. There are those of us here on the list that appreciate such issues being dealt with in a manner that we can relate to, and better understand. Your answer will go into my personal archive for future reference. ~ Quig ~

From: "Barry" <n4buq@aol.com>
Subject: Re: [R-390] Another (perhaps) silly ballast question

Many thanks to all the replies concerning ballasts and transformers. In case it wasn't apparent, my thinking was if I could find a 120V/60V transformer (or some other 2/1 ratio xfmr), then connecting one primary and one secondary lead to ground, connecting the other primary lead to pin 2 of RT501 and the other secondary lead to pin 7 would provide the 12.6VAC necessary for the oscillator tubes. My thinking was that this would be better than a big old resistor out there dissapating all that heat.

I have a much better plan now, though. I'm going to implement it and if it works as I think it will, I'll post the results here. 73 to all, Barry - N4BUQ (okay, little horsey, I'll leave you alone now...)

From: Tom Norris <r390a@bellsouth.net> Date: Wed, 4 Jan 2006 13:47:54 -0600
Subject: [R-390] 'sellabay' and a Capehart

Yea, he seems like a decent fellow, I had emailed him earlier with general questions about the radio.

The fellow with the Capehart '390A 5849372507, W2ENY, seems good about questions and extra photos as well. He lists the radio as being a Capehart in the text of his listing, even though he does do a lot of yelling in the text. He appears on the straight up too, so I shouldn't have fussed earlier.

Just from their not giving any grief over sending extra pics or answering questions would put them on my good guys pre- sale list. YMMV Tom

crow's better with a bit of wasabi and soy, though most folks just salt theirs

From: Roy Morgan <roy.morgan@nist.gov> Date: Wed, 04 Jan 2006 15:15:00 -0500
Subject: Re: [R-390] Another (perhaps) silly ballast question

wrote: >Many thanks to all the replies concerning ballasts and transformers.... my >thinking was if I could find a 120V/60V transformer ... would provide the >12.6VAC necessary for the oscillator tubes. ...better than a big old resistor

Barry,

I would expect any transformer run at below rated voltage to work just fine.

NOTE: a 400 cycle transformer rated at 120 volts can be run at 60/400 x 120 volts, or around 24 volts. Same for 400 cycle variacs, one of which is now for sale on the e-place.

BUT: If you got a 24 volt filament transformer and ran it as an auto transformer, it should work fine. Leave the primary open, run the 24 volts into one end of the secondary and run the 12 volt filaments on the center tap. The power needed is quite small, so the smallest 24 volt filament transformer you can find would work.

Another thought: find a TV picture tube brightener. These are auto transformers which boost the filament voltage of TV picture tubes to get a little more life out of them. I assume that picture tubes ran on 6.3 volts (?), and so you might have to re-wind the thing with four times the number of turns total, but that likely would work just fine, too. Rewinding might not be practical - I have never taken one of these things apart.

>I have a much better plan now, though. I'm going to implement it and if it works as I think it will, I'll post the results here.

Oh? Well TELL us what the plan is! Roy

From: "Barry" <n4buq@aol.com> Date: Wed, 4 Jan 2006 15:13:39 -0600
Subject: Re: [R-390] Another (perhaps) silly ballast question

Well, I was going to wait until I tried it to make sure there weren't any "gotchas", but it appears someone else (Dan?) has mentioned this recently.

I kept trying to think of a clever way to get 12.6VAC to the oscillator tubes -- even to the point of adding a filament transformer somewhere (it would be cheaper than a ballast tube costs these days and last longer) -- when it occurred to me that if the 26.2VAC winding were center-tapped, that voltage could be used. That's when I looked at the schematic (and confirmed on the unit) that the 26.2VAC winding is indeed center-tapped. This tap can be run through unused pins from the PS deck to the IF deck. From the IF deck plug, I plan to run the wire to an unused pin on the ballast tube socket and plug in a jumper from that pin to pin 7. This allows the original oscillator tubes to be used and if someone decides they want to use a ballast tube, all that will be necessary is to unplug the jumper and plug in the ballast tube. Barry - N4BUQ

From: Miles Anderson <k2cby@optonline.net> Date: Wed, 04 Jan 2006 17:21:50 -0500
Subject: Re: [R-390] Resistors, noise, etc.

"Rural area" doesn't help very much. While there is relatively little equine QRM, the power companies in rural areas tend to "let things go." A few cracked insulators, untrimmed trees and the occasional electric fence can be just as noisy as an urban industrial neighborhood. Miles, K2CBY
k2cby@optonline.net

From: Bonddaleena@aol.com Date: Wed, 4 Jan 2006 22:15:36 EST
Subject: Re: [R-390] Resistors, noise, etc.

writes: "Rural area" doesn't help very much. While there is relatively little equine QRM, the power companies in rural areas tend to "let things go." A few cracked insulators, untrimmed trees and the occasional electric fence can be just as noisy as an urban industrial neighborhood. Miles,

Miles, I have to agree with that! I recently moved fron a 'high dollar' neighborhood with underground utilities. Never mind the a--holes in the neighborhood that sued me because my towers 'did not match my house'. (they lost the suit, but the death threats cost me my marriage), I moved about 5 miles into a much more rural (poor) area. Although I am the last house on the power distribution line, I have 2 poles, that at times make any communication impossible. Even trying to assist those that needed help during the recent hurricanes. I have called the Utility 5 times and have been told basically 'too bad'. If this isn't resolved soon, I will persue it through the FCC like I have done quite sucessfully in the past in another state.

The area I live in is a 'depressed non-caucasion' area, and the Utility (FPL) could not care less. I have told them that there are power lines in the middle (!!) of large trees but they continue to groom the power lines in more affluent areas..... ron N4UE

From: John Kolb <jlkolb@jlkolb.cts.com> Date: Wed, 04 Jan 2006 19:18:11 -0800
Subject: Re: [R-390] Another ballast question

Modern DMM's will generally measure resistance by passing a constant current through the unknown R and measuring the voltage drop. Thus with a 1 mA current, a 0.250 V measurement would = 250 ohms. The max voltage presented is usually limited also to prevent turning on semi******* junctions. The diode test position allows a higher voltage so that the junction V drop can be measured. Thus the 9V battery is to danger, even to low voltage tubes (to get back towards on topic. :) John

From: Tom Norris <r390a@bellsouth.net> Date: Thu, 5 Jan 2006 01:41:14 -0600
Subject: [R-390] Beaten Horse Graveyard (was SS VR replacement for 3TF7)

I guess this year it's time to draw a schematic of my servo-driven ballast-replacement/soft-start/line AC regulator system. I only yakked about it last year.... Tom

From: "Paul Galpin" <galpinp@absamail.co.za> Date: Thu, 5 Jan 2006 12:27:52 +0200
Subject: [R-390] PTO heaters

They said..... "Of course, 9VDC isn't the same as 9V RMS ....."

Yes, it is exactly the same! The definition of the RMS value is "That value of an alternating voltage (or current) which gives the same heating effect as a DC voltage (or current) of the same value" For a sine wave, which is what should be coming out of your wall socket or transformer, the RMS voltage is 0.707 of the peak value (For other wave shapes, this value is different)

Even connecting your 9V battery directly across the valve heaters will probably do no harm as the small 9V battery will quickly run down trying to give 300mA! Paul Galpin ZS2PG

From: "Osamu Hazawa" <pomerol@mocha.ocn.ne.jp> Date: Thu, 5 Jan 2006 21:53:13 +0900
Subject: [R-390] My R-392 Starts Singing

Hello All,

After a long period of time (more than a half year), I made a set of power connector (made with a couple of But Splices) for my R-392 and I set the voltage at a little bit higher than 26V.

I was so excited when I turned on the radio. At first, nothing was heard.... But I found RF Gain knob was turned all the way to CCW and rotary switches for Megacycle have bad electrical contacts.

Yes, it started singing on BC bands! But unfortunately, ANT Trimmer doesn't do the justice on all bands and CAL tone was not heard on higher bands.

What do you out there think should I do first? Open up the case first?

Any idea would be appreciated. Osamu Hazawa http://www4.ocn.ne.jp/~pomerol/MyPage/menu0.html

From: <mfisch@kent.edu> Date: Thu, 05 Jan 2006 10:33:48 -0500
Subject: [R-390] Two questions as I put an R-390a back together

Hi:

I have fixed up an R-390a and found I had to do the front panel and knobs. I did not take careful enough notes and the manuals probably have the answer, but so far I've had no luck answering the following:

1) Does the bezel have the lights towards the bottom of the front panel or towards the top? (The panel has the parts labels for the lights below the hole, but the wire for power suggests the top would be better).

2) There are two types of non-megacycle/ kilocycle knobs larger and smaller. Where do the larger ones go? (The pictures and drawings make both look the same size to my eyes.)

Thanks Mike (hopefully again a ham soon, WA8WKK in the late 60's.)

From: "Barry" <n4buq@aol.com> Date: Thu, 5 Jan 2006 09:44:03 -0600
Subject: Re: [R-390] Two questions as I put an R-390a back together

The lights go to the top of the escutcheon.

As for the knobs, it should be fairly obvious which knobs go where based on the lettering. I know the Local Gain, RF Gain, Main Power, BFO Pitch, and Bandwidth use larger knobs. I don't recall offhand what sizes are on the rest of the controls. I don't have my radio in front of me. You might be able to tell from http://members.aol.com/n4buq/r390a

The two knobs without marker lines are for the Dial Lock and Zero Adjust. Hope this helps. Barry - N4BUQ

From: mikea <> Date: Thu, 5 Jan 2006 09:57:18 -0600
Subject: Re: [R-390] Two questions as I put an R-390a back together

wrote: The lights go to the top of the escutcheon. As for the knobs, it should be fairly obvious which

knobs go where based on the lettering. I know the Local Gain, RF Gain, Main Power, BFO Pitch, and Bandwidth use larger knobs. I don't recall offhand what sizes are on the rest of the controls. I don't have my radio in front of me. You might be able to tell from http://members.aol.com/n4buq/r390a The two knobs without marker lines are for the Dial Lock and Zero Adjust.

There's an image of an R-390A with all the knobs in the right places at <http://mikea.ath.cx/R-390A/bigfront.jpg>. It may help. Oddly enough, all the knobs on that R-390A seem to have marker lines. It's ex-MARS for sure, but I don't know its prior history. Mike Andrews, W5EGO

From: Barry Hauser <barry@hausernet.com> Date: Thu, 05 Jan 2006 11:21:49 -0500
Subject: Re: [R-390] Two questions as I put an R-390a back together

> There's an image of an R-390A with all the knobs in the right places at <http://mikea.ath.cx/R-390A/bigfront.jpg

There are two unstriped small knobs, but two are swapped/wrong -- the zero adjust has the striped knob that belongs on the audio response switch.. Looks like the dial lock knob is (properly) unstriped, probably just a reflection of the groove on the side (facing top). Barry

From: DJED1@aol.com Date: Thu, 5 Jan 2006 11:53:32 EST
Subject: Re: [R-390] Two questions as I put an R-390a back together

Good picture to answer the question Mike. When I looked at the picture I see two unlined knobs, one on the dial lock and the other on the audio filter switch- I agree that the other unmarked knob should go on the cal control. Ed

From: Roy Morgan <roy.morgan@nist.gov> Date: Thu, 05 Jan 2006 12:17:21 -0500
Subject: Re: [R-390] Two questions as I put an R-390a back together

wrote: >1) Does the bezel have the lights towards the bottom of the front >panel or towards the top?

Top, I think. Maybe soon you'll have a second radio to compare with :-) I suggest you add a length of much more flexible wire to that lead to avoid damage to the lamp socket or broken wire strands.

>2) There are two types of non-megacycle/ kilocycle knobs larger and >smaller. Where do the larger ones go?

Be very careful. If you have a larger knob than normal, you *may* have an R-389 tuning knob. These are definitely larger, and have a clutch built into them that prevented disastrous damage to the R-389 PTO. If this is in fact what you have, and you have no R-389, I'll be glad to swap knobs with you.

>(The pictures and drawings >make both look the same size to my eyes.)

The MC an KC knobs I have seen on R-390...'s are all the same size. Roy

From: Roy Morgan <roy.morgan@nist.gov> Date: Thu, 05 Jan 2006 12:22:45 -0500

Subject: Re: [R-390] Two questions as I put an R-390a back together

wrote: >>2) There are two types of non-megacycle/ kilocycle knobs larger and >>smaller. Where do the larger ones go? >Be very careful. If you have a larger knob than normal, you *may* have an >R-389 tuning knob.

OOPS. I did not realize he was talking about the NON-megacycle/kilocycle knobs. Sorry. Roy

From: Tom Norris <r390a@bellsouth.net> Date: Thu, 5 Jan 2006 13:35:53 -0600
Subject: Re: [R-390] Beaten Horse Graveyard (Goldberg replacement for3TF7)

Seriously, that would be a very good regulator box. Those sort of things are less noisy than the constant HUMM of a Sola transformer.

Not so seriously, that sort of regulator was what my smart remark was based on. I sampled the current in the PTO-BFP fil circuit so as to drive such a regulator to keep the PTO-BFO filament current value at 300 ma.

Then there's the mechanical Rube Goldberg sort of thing, where a light bulb is used, which changes the resistance of a photocell, which changes the speed of a motor, which runs a fan, which pushes a sailboat across a tub of water, (the sailboat is attached to the near- side with a coil-spring), the sailboat has a string which is connected to a chute which regulates the amount of gerbil chow that feeds a team of gerbils that are on a gerbil wheel. [this is where I've gotten stumped] The gerbil wheel is connected to a small dc generator. When the ballast current is low, the light bulb is dim, the fan turns more slowly, the boat is pulled back by its spring. When it's pulled back, it operates a mechinism that shifts the gerbil chow chute out of the way and replaces it with a mixture of gerbil- chow and laxative. Underneath the gerbil wheel is a "gerbil potty" and as it fills up, it controls a polarity reversal switch and changes the output of the DC generator to the opposite polarity. The plus/minus output of this is used similar to the simple comparator used in my first example. (or since the gerbils are making motion, the haywire thing might be able to directly control a phase- shift circuit of some sort)

I suppose if I drew the Rube Goldberg Apparatus it would be easier to modify. I just came up with it ten minutes ago too, it would have taken longer than that to draw. Mad Tom

From: "Les Locklear" <leslocklear@cableone.net> Date: Thu, 5 Jan 2006 13:42:29 -0600
Subject: Re: [R-390] Beaten Horse Graveyard (Goldberg replacement for 3TF7)

Are you taking orders now? How much is shipping? Warranty? We have questions, do you have answers? Les Locklear

My wife has a slight impediment in her speech. Every now and then she stops to breathe.
- Jimmy Durante

From: Roy Morgan <roy.morgan@nist.gov> Date: Thu, 05 Jan 2006 16:09:51 -0500
Subject: Re: [R-390] Beaten Horse Graveyard (Goldberg replacement for3TF7)

wrote: >light bulb ... changes the resistance of a photocell, >which changes the speed of a motor, which

runs a fan, which pushes a>sailboat across a tub of water,

Egad, Tom! You talked about this on the list??? What will our patent attorney say? Threaten to quit, no doubt. I hope no one notices, or if they do, don't take you seriously.

Pssst!
The Guinea Pig at our house recently transitioned to the Great Radio Room in the Sky, but we do still have the two gerbils. Their 12-year old custodian has not noticed that I've installed the potty-and-switch mechanisms (PSM) below their cage in the top drawer of her dresser (TDD). She never uses the dresser anyway, so we are safe. Of course all wires and such are hidden in the walls (HIW) in accordance with the Evidence Protection Plan (EPP), so I expect a good long test period before we complete the patent application paperwork (PAP). I just hope my soldering at midnight doesn't wake her up again (SNIFF)

I had to redesign the gerbil-motion-to-phase shift circuitry (GMTPS) because of poor lightening and power line noise immunity (LPLNI), but it's working well now. Feedback Loop Dynamics Calculations (FLDC) continue as I optimize the response time, but it's slow because time on the multi-processor parallel computer (MPPC) is hard to get just now. Seems as if the Navy folks at the Naval Undersea Warfare Center Carderock (NUWCC) Hydrotechnology are developing a new Nuclear Submarine Propulsor and the multi-million point hydrodynamic mesh physics equations in their modelling codes have approached computational limits. I *wish* they would keep things simpler.

Further reports will be sent by carrier pigeon with above abbreviations used for the Pidgeon Payload Weight Reduction Effort (PPWRE). I fear some radio nuts might get wind of this and somehow beat us to market. Roy

From: "Bruce Hagen" <b_hagen@sbcglobal.net> Date: Thu, 5 Jan 2006 16:48:42 -0500
Subject: RE: [R-390] Beaten Horse Graveyard (Goldberg replacement for 3TF7)

Oh, boy!

Certain member must be under heavy stress. I'm still working on the TV adapter so we can use the 390 for sound. Bruce

From: Flowertime01@wmconnect.com Date: Thu, 5 Jan 2006 16:50:14 EST
Subject: Re: [R-390] Beaten Horse Graveyard (Goldberg replacement for 3TF7)

Tom,

How are you going to keep the water level constant under the sail boat? Won't it evaporate? Roger AI4NI

From: "Cecil Acuff" <chacuff@cableone.net> Date: Thu, 5 Jan 2006 20:42:47 -0600
Subject: [R-390] OT Hammarlund week

Well it looks like it a good week for Hammarlund SP-600's on the bay. A VLF-31 and a Northern Radio variant. Both at reasonable prices so far! I'd love to have the VLF-31. It ought to be an

interesting auction to watch. The last of those I saw sold there went quite high! Cecil...

From: "Kenneth G. Gordon" <kgordon@moscow.com> Date: Thu, 05 Jan 2006 18:57:39 -0800
Subject: RE: [R-390] SS replacment for 3TF7 - back-to-back Zeners.

wrote: > There's regulation and then there's regulation.

Absolutely!

> The shunt clipper > you describe below is good to, oh I don't know, maybe a few percent, > which is IIRC slightly inferior to a 3TF7 at the top of its game.

Could be, all right. I haven't compared them too closely. BTW, the ballast tube in the SRR-11 isn't a 3TF7, and I can't exactly remember which one it is either.

> Why? Let's say the supply voltage goes up. The zeners continue to > lop off the top of the sine wave, but the part they don't, lasts > longer per cycle and therefore delivers more power to the heaters.

Right. However, in this case, the SUPPLY voltage is 17 VAC.

> An exact answer requires integral calculus. When ballast tubes > went out of the mainstream of new instrument design, RCA judged > the clipper "good enough" for the SRR.

Yup, and it isn't all that stable, either, especially on the upper band which includes 32 Mhz.

> There are heavy-duty approaches that can beat this by several orders > of magnitude. Will you notice? Depends, probably not.

As you say, it depends. With the selectivity set at its narrowest, a little drift IS noticeable.

In the case of the SRR-11 Zener regulator, I think it regulates well down on the more "linear" slope of the sine wave, not at the sharply curved top. None-the-less, it is pretty crude, IMHO.

As I said above, the supply voltage is 17 VAC for a 6.3 VAC filament.

In any case, I have not yet tested the regulation, but will when I can. Ken Gordon W7EKB

From: "Dan Merz" <mdmerz@verizon.net> Date: Thu, 05 Jan 2006 20:47:10 -0800
Subject: RE: [R-390] My R-392 Starts Singing

Hazama, as best I remember, my 392 worked right away like yours after I put the power to it. I then checked all the tubes on a tube tester and replaced a few weak ones, as I recall 26A6's. I never had to do anything else to the radio. It's worked ok since, now about 13 years later. I don't use it very often since I obtained a 390a and then a 390. The 390 gets the nod nowadays. When I do turn on the 392, it never disappoints me. The guy that talked me into buying it told me it would go forever with little service because of the low plate voltages, and he advocated about 24 volts. I have read that low voltage is a disadvantage, and is made up for in the design with more tubes in the i.f. lineup and moreover that 26A6's and 26A7 suffer loss of gain, or tend to be unpredictable in gain, compared to tubes with higher

plate voltages. It sounds like your radio is doing well for no tube checks yet. I run mine at about 23 volts. I suspect it would operate better at somewhat higher voltage but I followed the advice of a veteran military collector and built the unregulated supply that he recommended with so much capacitance that I have to bring it up to power gradually to avoid blowing the appropriate line fuse to the power supply. I finally added a delay relay so I didn't forget, or have to use a variac. It has the biggest cap I've ever used in a power supply, 54000 mfd, 30 volts, mostly chosen because it was there at the swapmeet for $1 and it gets the voltage up with the transformer we found. It's mate still is unused in my storage cabinet. I just went down and tried my 392 on 80 meters at 23 volts and 26 volts using a variac to see if I could tell a difference...yes more gain at 26 volts (about 1/8 turn on the rf gain control) but band noise was high enough and I had enough reserve in rf gain setting that it didn't help on the particular station I was listening to. The 390 was on in the background and was much less noisy on the same station. I've got a Lambda LMD24 supply that I found recently and I think it can be tweaked to up to 25 volts which might be a good replacement for my homebuilt supply to get a little more gain, and maybe I should check my tubes again. I think I have a few spares to exchange in the set. Regards, Dan

From: Barry Hauser <barry@hausernet.com> Date: Fri, 06 Jan 2006 01:26:41 -0500
Subject: Re: [R-390] My R-392 Starts Singing

Dan, Hazama

IMHO the R-392 is probably one of the most neglected receivers in terms of use and maintenance. This, I offer, is due to the fact that (a) they're small, (b) require a DC supply (c) usually operational on delivery or after a bit of tube replacing, (d) are usually unhacked so don't require un-hacking, (e) have sealed cases so no corrosion, weathering, dust inside, and a couple of reasons I'm probably forgetting. Well, one indication is that many of us have them, but they rarely turn up in threads on this reflector -- almost as if they're a member of the family who should not be discussed in mixed company ;-).

I have several. All work. One day I bothered to do a full -- or mostly full -- alignment on one of them. Quite a difference. Decent performance became very good/excellent performance. So do take the time to go through a full alignment. Chances are, the mechanical alignment is good, but the coils etc could benefit from a touchup.

When tuned up with good tubes, performance is very close to an R-390/R-390A. There's something on Josh Rovero's web site about detailed comparisons. One limiting factor is the choice of bandwidths vs. the big ones and the AGC adjustment, but otherwise he found the sensitivity and selectivity to be nearly identical.

As for voltage, nominally these are 28 volts which represents a 24 volt vehicular power source. These normally vary between 24 and 27.6 (27.8?) volts depending on generator/battery/engine RPM's. There are actually two separate pins on the 9 pin connector for filament and B+. The word is that best performance and tube longevity can be obtained by running the filaments at 24 volts and the B+ as high as 32. Of course, that means two separate power supplies, so a happy medium might be the 26 vdc. You could use a beefy 24 volt supply and a lower current bench supply to provide the B+ I guess.

Due to the relative smallness, but sturdyness, R-392's have a tendency to wind up under the bench or in a closet with stuff piled on them, so often have to be dug out before use. The big gray ones can't hide in small spaces that well.

Suggest you check out Josh's R-392 web pages if you haven't found them already at http://www.roveroresearch.com/r392/r392.html

OK, remembered another possible factor. To get audio out of these radios, the easiest and most authentic thing to do is use an LS-166 speaker that already has the UG audio connector, so it's plug 'n play. However, the LS-166 is designed to be concussion-resistent and waterproof. It has inner and outer protective perforated baskets enveloping the speaker cone and the suspension is very stiff. They are, in effect, acoustic suspension enclosures (no ports) but with the opposite of the high compliance driver that hi-fi acoustic suspension speakers typically incorporate. As a result, the sound is fairly crummy. Sound quality can be much better if fed to a normal speaker through a 600-8 ohm transformer. Or, you can tap into the matching transformer inside the LS-166 and run it to another speaker or use an amplified speaker adapted from a computer speaker package right off the 600 ohm output. One of these days I'm going to slightly modify one of my LS-166's -- install a mini phono jack which will cut out the internal speaker when an external one is plugged in. I just need to get a round tuit. Square ones don't seem to work so good. enjoy .. Barry

From: Dave Merrill <r390a.urr@gmail.com> Date: Fri, 6 Jan 2006 05:44:05 -0600
Subject: [R-390] R-390, R-390A and R-392 Fading from LOGSA

No more Operator or Depot Maintenance, these are all that's left:

TM 11-5820-357-20 ORGANIZATIONAL MAINTENANCE MANUAL: RADIO RECEIVER R-390/URR

TM 11-5820-358-34P RADIO RECEIVER, R-390A/URR

TM 11-5820-334-20P RECEIVER RADIO, R-392/URR
TM 11-5820-334-34P RECEIVER, RADIO R-392/URR

https://www.logsa.army.mil/etms/index.cfm

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 6 Jan 2006 07:19:16 -0600
Subject: Re: [R-390] Beaten Horse Graveyard (Goldberg replacement for 3TF7)

wrote: Are you taking orders now? How much is shipping? Warranty? We have questions, do you have answers?

You gotta supply your own gerbils. T

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 6 Jan 2006 07:22:52 -0600
Subject: Re: [R-390] Beaten Horse Graveyard (Goldberg replacement for 3TF7)

wrote: How are you going to keep the water level constant under the sail boat?

Still some bugs I need to work out, I suppose. I could run a watering pump and keep the speed regulated with a couple of 3TF7's Tom

From: "Craig Anderson " <Craig.Anderson@saintpaul.edu> Date: Fri, 6 Jan 2006 07:53:01 -0600
Subject: [R-390] RE: R-392 Tubes

As long as we are on the subject of R-392's, I have two of these little beauties sitting next to my R-390A's. For those of you who have 392's you had better look at the current price and availability of 26C6's. The last JAN NOS 26C6 that I bought was $10. I finally decided to try to solid state the three 26C6's and it was very easy using 2N3819 N-Channel FETs using three Alden tube 7 pin test sockets sold by K5SVC

http://cgi.ebay.com/ALDEN-7-PIN-TEST-SOCKET_W0QQitemZ5779640770QQcategor
yZ48710QQssPageNameZWDVWQQrdZ1QQcmdZViewItem

It took all of a few minutes to complete the conversion and it is reversible. I just ordered a few more of the Alden sockets to do the other radio.

FYI Bill Perry of Wm Perry & Associates still stocks NOS Amphenol 164-4FS 9 pin female power plug for $20. I also see that there are 6 transistorized audio modules for sales on EPay

http://cgi.ebay.com/Transistorized-Audio-Module-for-R-392-R392-URR_W0QQi
temZ6594628548QQcategoryZ588QQssPageNameZWDVWQQrdZ1QQcmdZViewItem

I have one installed in one of my radios and it works great after I had to remove a feedback resistor in my audio driver (I think it was an 8.2 Meg) It will squeal unless you do. My radio is a '52 vintage and the newer ones apparently were changed to accommodate the solid-state audio module and had the feedback resistor built into the module.

It is a great radio but you definitely need a tube puller. Fortunately one of mine came with the two finger style tube pullers installed in the radio. Craig W9CLA

From: Barry Hauser <barry@hausernet.com> Date: Fri, 06 Jan 2006 10:16:44 -0500
Subject: Re: [R-390] Beaten Horse Graveyard (Goldberg replacement fo r3TF7)

wrote: You gotta supply your own gerbils.

Should they be mixed ... or geldings? If mixed male & female the good news is they'll be self-replenishing. The bad news -- overcrowding -- too many gerbils.

This all begins to make a $40 ballast tube look like very good deal, eh? Laffin' & scratchin' (gerbils got fleas) Barry

From: "Barry" <n4buq@aol.com> Date: Fri, 6 Jan 2006 09:40:30 -0600
Subject: Re: [R-390] Another (perhaps) silly ballast question

I started this mod last night, but was too lazy to do it all the way. Instead, I soldered a jumper wire from the 12.6V center tap and plugged it into pin 7 of the ballast tube socket. Naturally it worked fine. I plan to run it neatly into the plugs and sockets, but was just anxious to try this.

One thing I found very interesting was what happens when disconnecting the jumper while the radio is running. The BFO fades rather rapidly (about 5 seconds or so), but the PTO continues to run for about 15 seconds. Naturally, when the BFO is warming up or dying out, the change in output signal is easily recognized, but after the BFO dies, it is difficult to tell if the PTO is drifting or not without a counter connected somewhere. I'm curious as to whether the stability issues reported by those who have performed tests with regulated filament lines vs. not regulated lines are more due to the PTO or the BFO?

Anyway, it looks like my search for a ballast tube now is moot. Using the 12.6V line just makes sense -- at least for me. In a way, I a bit surprised the engineers way-back-when didn't run this as an option. In the field, if the ballast were to go out, there wasn't anything to do except either find a resistor or wait for a replacement ballast. If they had run the 12V line to blank position on the ballast socket (unused pins are available on both plugs), if the ballast fails, the radio could have been temporarily restored to operational status with a paper clip. I realize each inch of wire amounted to extra cost and they were trying to save on costs where possible and maybe it just wasn't a critical enough of an issue at the time given the fact that ballast tubes were in plentiful supply. Also, ballast tubes seem to last indefinitely as long as they're not abused, so maybe they figured it wasn't an issue. Dunno. I'm just happy the transformer has a 12.6V tap!

Oh, by the way, there was some discussion as to a suitable resistor to use for the ballast (in case that's the route you go). I looked at my setup last night and I have four 180-ohm resistors in parallel yielding 45 ohms. Just a tad closer to the actual value needed than the standard 47 ohm resistor and it allows using smaller wattage resistors to equally dissipate the heat. Mine happen to be higher wattage resistors (3-watts each, I think), but a bundle of four 2-watt resistors would be well over the required rating.

Happy Ballasting, Barry - N4BUQ (hoping nobody goes "ballast"ic on me for this post...)

From: "David Wise" <David_Wise@Phoenix.com> Date: Fri, 6 Jan 2006 08:23:53 -0800
Subject: RE: [R-390] Tuning the IF question

All the information supplied so far is correct, but I don't think anyone answered Paolo's implied question. The answer is, a metal tool will change the coil inductance. Always use a plastic alignment tool. Dave Wise

From: Mark Huss <mhuss1@bellatlantic.net> Date: Fri, 06 Jan 2006 11:29:56 -0500
Subject: [R-390] P101 Connector for R-392; [Re: Amphenol type 164-4FS connectors]

Confirmation that R-392 Power Connectors are available. $20 is a good price for these new-old stock. Get them while they last, guys

More women than men believe in ghosts, while more men than women believe in UFOs. This proves that men will believe almost anything if it comes with really great gadgetry.-- Captain Ed --

From: "Patrick" <brookbank@triad.rr.com> Date: Fri, 6 Jan 2006 11:37:58 -0500
Subject: Re: [R-390] Tuning the IF question

A bamboo skewer (bought at any supermarket) and a sharp pocket knife will make a great tunning tool

(very cheap) for both the upper and lower coils. Been using them for many a time. Pat

From: "paolo gramigna" <paolo.gramigna@controllo.it> Date: Fri, 6 Jan 2006 18:26:34 +0100
Subject: [R-390] Tuning the IF Second Question...

Hi all,

First, let me express my thanks to everybody who contributed, both personally and on the list.

Now, to the second question: the IF lugs are sometimes stuck in place, and i am afraid to breack them. What is the best de-stucker and lubricant for them?

From: Buzz <muttman@charter.net> Date: Fri, 06 Jan 2006 11:40:49 -0800
Subject: Re: [R-390] RE: R-392 Tubes

To make connectors you might wanna check Zorro's web page at: http://solo11.abac.com/zorroab1/Connectors/ARR-15connpg1.htm I made a connector that was gonna cost $90!!!!

I had a transistor module in my r392 then one day it went dead and was hotter than hell. I tried to repair it but no joy so I put the tube back in. Can you post info on the Jfet mod? Thanks, Buzz

From: John Lawson <jpl15@panix.com> Date: Fri, 6 Jan 2006 17:36:30 -0500 (EST)
Subject: [R-390] Waking up my non-A

Some months ago, thanks to a botched listing header, I found (and was the only bidder on) a 390 (non-A).

It is a Motorola, sn 3585, MWOs 11-5280-294-35/1 and /2. It has a Collins PTO.

Been modded a bit, mostly in the audio output wiring.

I brought it up slow on a variac and ammeter - after a couple of hours 'soaking' at 60V on standby.

After working up to full line voltage, and nothing exploding/burning/complaining, I am now in a position to make 'er Work.

So far - it's 50/50. Overall operation is quite poor - but it is working a little. There is backround noise, controllable by the RF gain, the BFO is working, and there appears to be recievable Calibrator signals (every 100Khtz) above 19 or 20 Mhtz. There is a birdie at 250kHtz and 710 kHtz on all bands. So far the only band that seems to be paying attention to the Outside World is 21 mHtz - faint sigs can be heard that respond to the controls, and stop when the antenna is removed - I'm using the Unbal ant for this quick-and-dirty test.

Mechanically, aside from being in desperate need of Oily TLC, it seems to be all there and working - nothing's binding, no coupler parts on the bench, no stuck/broken slugs. Even has the small green stamped gear affixed to the front of the IF rack, with "MWO" stamped next to it.

I have the Manual on CDROM, which I need to get immersed in, but I thought to ask the Gurus and Pundits if there is a 'condensed' set of tests or procedures I might undertake in the meantime, to narrow this down a bit?

I'm sending my R-388 panel off for re-furb while I fix it's PTO and give it new tubes and a few new capacitors, so I was hoping to use the R-390 as 'companion' radio to the -390A I have as my main receiver. Cheers John KB6SCO

From: <tracy.fort@auab.centaf.af.mil> Date: Fri, 6 Jan 2006 23:33:19 -0000
Subject: [R-390] Looking For Dave Sundheimer

Dave,

Hunting for your email. I'm out of the country and left your email at home. Tracy

From: "KC8OPP Roger S." <kc8opp@yahoo.com> Date: Fri, 6 Jan 2006 15:55:54 -0800 (PST)
Subject: Re: [R-390] Waking up my non-A

wrote: > I have the Manual on CDROM, which I need to get > immersed in, but I thought to ask the Gurus

John,

Not sure if I qualify to offer an answer, but at least I can give my opinion.

Here is how I would go through the R-390.

Good visual, looking for bent, broke, smoked or burnt things. B+ in specs? Audio section working Ok? Fixed IF, test and align, fix as necessary. PTO close to working, worry about endpoint and linear adjustments later. Variable IF's and crystal oscillators, check and align. Finally the RF deck repair and alignment.

When the radio is near working order and all of the surgery is finished is the time to start the deep cleaning and polishing.

Good luck and let us know how things are going. I have on the bench one of the most ugly 390A I have ever seen, but having been rescued from the landfill and now working I can start on the last step of cleaning and polishing. 73's Roger KC8OPP

From: "Scott Bauer" <odyslim@comcast.net> Date: Fri, 6 Jan 2006 19:08:24 -0500
Subject: [R-390] $71.00 antenna connector

It's true. 5848691926. I had better put mine in in the gun safe! Scott

From: "David C. Hallam" <dhallam@rapidsys.com> Date: Fri, 6 Jan 2006 19:09:47 -0500

Subject: RE: [R-390] Waking up my non-A

In spite of all that has been written in various reflectors, etc. and conventional wisdom aside, it is not a good idea to "bring up slowly with a variac" a vacuum tube radio. Vacuum tubes will not conduct until the filament temperature reaches design temperature (or close to it). Nothing good can come from letting the tubes try to operate at a low line voltage for any extended period of time.

If you want to reform electrolytics in place, risking your power transformer in the process, you can remove all of the tubes and replace the rectifier tubes with ss diodes. Then raise the voltage slowly with a variac. Fortunately the R-390 doesn't use an electrolytic in the power supply. David KC2JD

From: John Lawson <jpl15@panix.com> Date: Fri, 6 Jan 2006 19:29:49 -0500 (EST)
Subject: RE: [R-390] Waking up my non-A

wrote: > In spite of all that has been written in various reflectors, etc. and > conventional wisdom aside, it is not a good idea to "bring up slowly with a > variac" a vacuum tube radio. Vacuum tubes will not conduct until the > filament temperature reaches design temperature (or close to it). Nothing > good can come from letting the tubes try to operate at a low line voltage > for any extended period of time.

This is advice well-grounded in the physics and dynamics of vacuum tubes - and the point is well-taken. Having done a bit of vacuum tube design myself, and I mean the design of a couple of thermionic devices, as well as many years of involvement with the circuitry of same - I understand the fundamentals of your post.

That being said... I am also guilty of 40 years of 'soft-starting' gear that has been dormant for unknown periods of time - and I honestly cannot recall ever having anything sustain damage from that process alone. Now, most certainly I've blown up my share of gear - have various scars and fancy anecdotes of those 'events' - and I have had more than a few devices complain bitterly (and spectacularly) when I *didn't* take my time... however nothing in my experience has ever had a failure that I could atrribute to overall low system voltage, or due to poor space charge formation or low electron flux because of insufficient heater temps...

> If you want to reform electrolytics in place, risking your power transformer > in the process, you can remove all of the tubes and replace the rectifier > tubes with ss diodes. Then raise the voltage slowly with a variac. > Fortunately the R-390 doesn't use an electrolytic in the power supply.

That's what the 0-5 AC Ammeter and the 2A Heinemann QB circuit breaker is for... ;}

I certainly don't just crank 'er up and then wander off - I try to pay fairly close attention to the process. So far, I seem to have been pretty Lucky.

Thanks for the note, Dave, and Happy New Year! Cheers John KB6SCO

From: "Walter Rymarczyk" <wrymar@ix.netcom.com> Date: Fri, 6 Jan 2006 18:45:20 -0600
Subject: RE: [R-390] $71.00 antenna connector

The sad thing is you can get a twin-ax to UHF adapter from fair radio for $27. The one on ebay is twin-

ax to C connector, which only gets you half way there. Walt

From: "Walter Rymarczyk" <wrymar@ix.netcom.com> Date: Fri, 6 Jan 2006 19:02:11 -0600
Subject: [R-390] 115v

There is a 300 watt Hammond voltage regulator on ebay (6593768014) for $9.95 (not sold by me). It's a cheap way to step down 120 VAC to 115 VAC for the health of your 390. it's from Canada, though - watch the shipping. Walt

From: Flowertime01@wmconnect.com Date: Fri, 6 Jan 2006 20:03:03 EST
Subject: Re: [R-390] Tuning the IF Second Question Stuck Slugs

asked: Now, to the second question: the IF lugs are sometimes stuck in place, and I am afraid to breack them. What is the best de-stucker and lubricant for them?

Paolo,

This question comes up often.

Watch the other mail and see what other advice you get. Do not jump right into this problem.

Do you really need to get the skug unstuck? How do you get the slug unsuck? What do you lubricate the slug with once it free to keep it from deizing up again.

Then we throw in a whole bunch of stuff not to do.

Go through the alignement and just leave the stuck slugs alone. These receivers are over 50 years old and receivered lots of regular service in their day. No reason at all to belive the stuck slug is not set at almost its best position. Align the receiver and see what the signal to noise ratio is. Then try some tube swapping to get the ratio up a little better.

If and only if the reciver will not get you better than 15:1 signal to noise ratio and you can isolte the loss down to the stage with the stuck slug, then worry about getting it to adjust.

Worry not if you break the slug. A broken slug can be replaced. A real concern is twisting the core inside the can and breaking a wire between the winding and the terminals inside the can. Pull the cover off the transformer so you can see your core and coil winding before twisting very much on the slug.

Never, never, never use WD40. The long term effects are more trouble than you want.

There is no magic solvent that we just "know it works". Apply some rubbing achole and take the next day off while it all soaks in.

Good lights and a neddle may help you dislodge some gunk. large amounts of air may help blow some crud out of the tube and help free the slug.

Use a metal hex key in the slug to turn it. You may have to move the top slug a bit so the key will drop through the top and bottom slug to turn the bottom slug.

Heat the metal key with a solder iron to "melt or soffen" some of the gunk.

Hair dryers have been used to good effect for this. Gently warm the whole slug tube with the transformer cover off and watch the resin melt. Let the heat soak through the tube a bit before trying to turn the slug.

From: Mark Huss <mhuss1@bellatlantic.net> Date: Fri, 06 Jan 2006 20:17:44 -0500
Subject: Re: [R-390] $71.00 antenna connector

Worse yet, I brought mine (UG-970/U, a Twinax to SO-239 adaptor) for $29+s&h from http://users.erols.com/rfc/adapt.htm A lot more practical than a C connector.

From: Flowertime01@wmconnect.com Date: Fri, 6 Jan 2006 20:14:46 EST
Subject: Re: [R-390] Tuning the IF Second Question Stuck Slugs

asked :Now, to the second question: the IF lugs are sometimes stuck in place, and I am afraid to break them. What is the best de-stucker and lubricant for them?

Paolo,

This question comes up often.

Watch the other mail and see what other advice you get. Do not jump right into this problem. The answer has three parts.

Do you really need to get the slug unstuck? How do you get the slug unsuck? What do you lubricate the slug with once it free to keep it from seizing up again.

Then we throw in a whole bunch of stuff not to do. Go through the alignment and just leave the stuck slugs alone. These receivers are over 50 years old and received lots of regular service in their day. No reason at all to believe the stuck slug is not set at almost its best position. Align the receiver and see what the signal to noise ratio is. Then try some tube swapping to get the ratio up a little better.

If and only if the receiver will not get you better than 15:1 signal to noise ratio and you can isolate the loss down to the stage with the stuck slug, then worry about getting it to adjust.

Worry not if you break the slug. A broken slug can be replaced. A real concern is twisting the core inside the can and breaking a wire between the winding and the terminals inside the can. Pull the cover off the transformer so you can see your core and coil winding before twisting very much on the slug.

Never, never, never use WD40. The long term effects are more trouble than you want.

There is no magic solvent that we just "know it works". Apply some rubbing alcohol and take the next day off while it all soaks in.

Good lights and a needle may help you dislodge some gunk. Large amounts of air may help blow some crud out of the tube and help free the slug.

Use a metal hex key in the slug to turn it. You may have to move the top slug a bit so the key will drop through the top and bottom slug to turn the bottom slug.

Heat the metal key with a solder iron to "melt or soften" some of the gunk.

Hair dryers have been used to good effect for this. Gently warm the whole slug tube with the transformer cover off and watch the resin melt. Let the heat soak through the tube a bit before trying to turn the slug.

Once you get the slug free what do you lubricate it with?

There is a magic white powder for this. If you are a radio guy you buy it in big packages from secret sources. Other wise you acquire a life time supply from a local shop that sells magic tricks.

The stuff is a power magicians rub on their card decks for magic acts. Someone will surely toss in a name for this substance here.

Until you locate some "lube" just run the slugs out of the tube, clean them up as best you can and install them back into the tube.

Good luck with this Roger AI4NI

P.S. I hate when I fat finger a function key and post half a mail. Sorry Fellows.

From: John Lawson <jpl15@panix.com> Date: Fri, 6 Jan 2006 20:26:18 -0500 (EST)
Subject: [R-390] Lazy doco question

I find after an hour of plowing through many CDs and files - that I have plenty of info on R-390As - and none whatsoever on the -390.

So I thought I'd ask if I could be pointed at the 'best' download for the -390 - perhaps the equivalent of TM 11-856A (which I have a paper copy of, ed of Jan 1956)

Meanwhile it's off to the Cardmatic for all these Tubes.... Cheers John KB6SCO

From: DQ <greybeard5150@sbcglobal.net> Date: Fri, 6 Jan 2006 18:07:31 -0800 (PST)
Subject: [R-390] Re: $71.00 antenna connector

Aaaaaahh, that's CHUMP change...

Cost is no object for this guy if he decides that he wants it. In the last 30 days alone, he has made 44 purchases totaling over $10,000....and that's just on eBay. These include over a half dozen high-end collector radios (one R-390a from a list member), and loads of other parts and manuals too. There's also non-radio stuff.

Can we spell DEEP POCKETS? ~ Quig ~

From: "pete wokoun, sr." <pwokoun@hotmail.com> Date: Fri, 06 Jan 2006 17:37:47 -1000
Subject: RE: [R-390] $71.00 antenna connector

Does this connector tie one of the balanced lines to ground and input the BNC to the other balanced line?

From: Barry Hauser <barry@hausernet.com> Date: Fri, 06 Jan 2006 22:52:04 -0500
Subject: Re: [R-390] $71.00 antenna connector

> Does this connector tie one of the balanced lines to ground and input the > BNC to the other balanced line?

Yup -- one side of the balanced line is grounded internal to the adapter and the other goes through -- to a C-connector female in the case of this $71 unit. Barry

From: John Lawson <jpl15@panix.com> Date: Fri, 6 Jan 2006 23:03:27 -0500 (EST)
Subject: Re: [R-390] Lazy doco question

wrote: > So I thought I'd ask if I could be pointed at the 'best' download for the > -390 - perhaps the equivalent of TM 11-856A (which I have a paper copy of, ed of Jan 1956)

Answer to self: On BAMA, dummy. Sheeesh!

At least you got the 'lazy' part right!! ftp://bama.edebris.com/bama/military-kg7bz/r390/

Now to use up a brand-new ink cartridge... Cheers John KB6SCO

From: John Lawson <jpl15@panix.com> Date: Sat, 7 Jan 2006 00:45:34 -0500 (EST)
Subject: [R-390] R-390 fix - prob 1

The B+ is supposed to be 180V - at the TP it's more like 120 - 130, and the Hum Bal control (that, pre-doc, I thought was a voltage adj) varies the B+ by about 20V - and she's humming a lot to boot.

So - check the PS and AF chassis first - see if something's puked other than a Valve.

But that's tomorrow's project. tonite I'm just reading the docs from BAMA. Cheers John KB6SCO

From: "paolo gramigna" <paolo.gramigna@controllo.it> Date: Sat, 7 Jan 2006 10:03:50 +0100
Subject: [R-390] Looking for a C adapter or connectror

Hi all,

If i want to connect a whip antenna to the unbalanced input of a R-390A, I need an adapter for the C (female) connector J103, or a male C connector. Can't find them from my usual suppliers. Does anybody know of an online source? Looking forward, Paolo from Italy

From: "Walter Rymarczyk" <wrymar@ix.netcom.com> Date: Sat, 7 Jan 2006 05:41:51 -0600
Subject: RE: [R-390] Looking for a C adapter or connectror

Male C connectors are available on ebay (7548232488) for $15 each. C adapters to BNC or UHF are hard to find on the used market. Walt

From: Tom Norris <r390a@bellsouth.net> Date: Sat, 7 Jan 2006 07:49:21 -0600
Subject: Re: [R-390] Beaten Horse Graveyard (Goldberg replacement for 3TF7)

The bad news -- overcrowding -- too many gerbils.

but you can sell the gerbils on ebay heehee Tom

From: Barry Hauser <barry@hausernet.com> Date: Sat, 07 Jan 2006 10:15:37 -0500
Subject: Re: [R-390] Beaten Horse Graveyard (Goldberg replacement for 3TF7)

But be sure to put them in the right category with the title "Experienced R-390 Ballast Gerbils" and lead in with "Tom does it again, bringing you the very best in radio livestock -- and .... they've had their shots." Har har Barry

From: <w9ya@arrl.net> Date: Sat, 7 Jan 2006 10:21:41 -0500 (EST)
Subject: Re: [R-390] Tuning the IF Second Question Stuck Slugs

Hey gang;

A comment about the "magic powder" mentioned in the posting below:

Um, there are many kinds of powders that magicians use to rub into decks. Be sure to get the stuff called "fanning powder". Why ? - Because some of the stuff is designed to make the cards stick to one another, and that would make life worse for keeping slugs loose.

Very best regards; Bob w9ya

From: "tfrobase" <tfrobase@kitparts.com Date: Sat, 7 Jan 2006 10:04:20 -0600
Subject: [R-390] Open Z-503 AGC IF Transformer

I am looking for a replacement if anyone has one. Pulled it apart but it is open somewhere inside the windings, usually it is around the connections. Anyway, hoping someone can help. As you know it is not an easy guy to get to. ... Tom, N3LLL Thomas L. Frobase League City Texas 77573

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sat, 07 Jan 2006 12:49:59 -0500
Subject: Re: [R-390] Waking up my non-A

wrote: > In spite of all that has been written in various reflectors, etc. and > conventional wisdom aside, it is not a good idea to "bring up slowly with a > variac" a vacuum tube radio. Vacuum tubes will not conduct until the > filament temperature reaches design temperature (or close to it). Nothing > good can come from letting the tubes try to operate at a low line voltage > for any extended period of time.

Well, it's not the best thing for the tubes, but they are after all just tubes. I think what you're worried about is stripping or poisoning the cathode, and while that is a worry with big power tubes I don't think I've ever seen it do bad things to little receiver tubes.

The variac approach is for those who don't want to blow up capacitors unnecessarily, but I've got a long personal history of blowing up capacitors (usually with a vengance) and if there are any weak ones I'd rather know sooner than later. This is not exactly conventional radio maintenance philosophy but the process of "margining" (stressing the components to find weak ones at maintenance time rather than at use-time) is well established in other areas of electronics, so if you find me using a variac it's usually to boost line voltage a bit :-).

Now there are several components that are not so easily replacable with off-the-shelf parts (e.g. chokes, transformers) but on a radio with fused B+ lines they're mostly safe. Tim.

From: "Clarence Lozano" <jeeper@netins.net> Date: Sat, 07 Jan 2006 12:19:17 -0600
Subject: [R-390] r-388`s /two

Hello to all, i have two Collins r-3881s i want to trade for a good r-390 or r-390a in good condition. One r-388 has collins cabinet with it. jeeper@netins.net

From: "Fred Hambrecht" <w4jle@w4jle.com> Date: Sat, 7 Jan 2006 13:24:15 -0500
Subject: [R-390] R390 and R390A Manuals

As a newbie to this conference and the new owner of both a 390 and 390A, I have gone through the agony of downloading all the stuff available and looked at the daunting task of printing it all out. To print it here at the house with the cost of ink cartridges etc did not make sense. My local printer was every bit as bad, as far as price is concerned.

I did find that there is a low cost solution. I am planning to upload all of the stuff to LuLu.com, a print on demand publisher.

Once I obtain permission from authors of some of the later guides you will be able to purchase a bound printed 2 sided manual for about $15.00 a receiver.

If there is any interest, drop me an e-mail and I will pursue. 73 Fred W4JLE W4jle at w4jle dot com

 Dr. Fred Hambrecht Hambrecht Consulting (803) 996-5296

From: John Lawson <jpl15@panix.com> Date: Sat, 7 Jan 2006 13:42:23 -0500 (EST)

Subject: [R-390] R390 and R390A Manuals

wrote: As a newbie to this conference and the new owner of both a 390 and 390A, I have gone through the agony of downloading all the stuff available and looked at the daunting task of printing it all out. To print it here at the house with the cost of ink cartridges etc did not make sense.

Ha! My printer ran out about 1/4 through the first segment of TM 11-5280-357-35... part of today's running-around-errands is to cruise past Best Buy for more black cartridges. 213 pages! ;{}

But I find that, even with the expense and the need to replenish the paper stack - it's actually cheaper to print one good copy and then three-ring bind it - I then take the schematics to Kinko's and have 'em expanded - they'll do that from a .pdf.

I'll wait to hear back if are successful having them submitted for print-on-demand - how were you planning on dealing with the larger schematics and diagrams, BTW? Cheers John KB6SCO

From: Buzz <muttman@charter.net> Date: Sat, 07 Jan 2006 11:03:09 -0800
Subject: Re: [R-390] R390 and R390A Manuals

When I worked for a small company that tried unsuccesfully to build R390 radios, they had a blue line schematic drawing that was 4 ft. high, and abour 20 ft long, and wrapped around 2 walls in the test lab. Buzz

From: Dave Merrill <r390a.urr@gmail.com> Date: Sat, 7 Jan 2006 14:06:35 -0600
Subject: Re: [R-390] Looking for a C adapter or connectror

Bill Perry was at the WARAC hamfest today. He had right-angle male C connectors for RG-58 @ $3 each. I don't know if he ships internationally.

WILLIAM PERRY CO
702 (rear) Beechwood Road
Louisville, Kentucky. 40207
Fax-502-893-9220
Office-502-893-8724
E-Mail-WMPERRY@COVAD.NET

From: "Fred Hambrecht" <w4jle@w4jle.com> Date: Sat, 7 Jan 2006 15:24:02 -0500
Subject: [R-390] R390 Manuals

The schematics will have to be handled separately if you want to expand their size. A much smaller task!

The manuals will include everything on the net I can locate for each of the receivers, all in one printed manual. With the stuff I have acquired, I am estimating over 800 pages for the R390A and 500 for the 390. I will advise with the LuLu numbers for any that are interested in saving umpteen hours in the printing process. 73 Fred W4JLE

From: John Lawson <jpl15@panix.com> Date: Sat, 7 Jan 2006 15:49:54 -0500 (EST)
Subject: Re: [R-390] R390 Manuals

wrote: > The manuals will include everything on the net I can locate for each of the > receivers, all in one printed manual. With the stuff I have acquired, I am > estimating over 800 pages for the R390A and 500 for the 390. I will advise > with the LuLu numbers for any that are interested in saving umpteen hours in > the printing process.

Please do keep me informed - I'd be very interested. I don't mind CDROMS and folders full of .pdfs - but for fixin' broken gear - I need to spread out the papers all over. Cheers John KB6SCO

From: Terry Sellick <tsellick@ieee.org> Date: Sat, 07 Jan 2006 16:37:12 -0600
Subject: [R-390] Printing manuals

Hi all,

When I wanted to print out the Y2K 390A manual, I found out you can download a printer driver from Kinko's that will allow you to print to them over the web. You can select double sided printing and different binding options.

Then you can either go pick it up, or have it FedEx'ed to your house.

It cost me about $30 to have the manual printed out double sided, comb bound with a nice plastic cover. I picked it up locally. It was avaiable by noon the next day. Turned out great. I didn't have to burn up printer cartridges or punch holes.

More info here: http://fedex.kinkos.com/fpfk/index.php?CMP=ILC-FPFK38

73 Terry WA9TTY

From: <fwbray@mminternet.com> Date: Sat, 7 Jan 2006 23:04:20 -0000
Subject: [R-390] Looking for a C adapter

It appears that the person who has the C connectors on EBay (previously referenced as item # 7548232488) has an EBay store with a number of connectors and adapters. You could probably make the adapter you want by combining a double-male C and a female C to BNC, based on the pictures in his listings. You might want to verify this. Fred Bray KE6CD

From: "Walter Rymarczyk" <wrymar@ix.netcom.com> Date: Sat, 7 Jan 2006 17:49:55 -0600
Subject: RE: [R-390] Looking for a C adapter

You would also need a BNC-female to BNC-female adapter (RShack) for a total of 3 adapters at $30+RShack cost. The Male C connector seems a simpler approach, but requires more work. Walt

From: "SAM LETZRING" <sletz@msn.com> Date: Sat, 7 Jan 2006 16:54:07 -0700

Subject: Re: [R-390] Looking for a C adapter

Let me look at my collection tonight- I know I have plent y of Cadapters- exactly what do you need???
Sam

From: "Kenneth Arthur Crips" <CRIPS01@MSN.COM> Date: Sat, 7 Jan 2006 17:11:13 -0700
Subject: Re: [R-390] Looking for a C adapter

Because I have a preference for the "N" connector that is what I use for adapters with the "C" and twinax connectors. I find the "N" connector so much easier to put to gather. One solder point, so with new pins and rubber "O" rings you can reuse an "N" connector body over and over again. Just my 2 cents worth. Ken

From: DQ <greybeard5150@sbcglobal.net> Date: Sat, 7 Jan 2006 16:41:15 -0800 (PST)
Subject: [R-390] Tube Shield Questions_OT

I am only asking this question here because there are darn few questions that remain unanswered, whenever placed before this forum. Theoretically I suppose that some MIGHT fit a few R-390 tubes, so maybe it really isn't off-topic. That having been said:

Today I dug out my hodge-podge collection of tube shields and I've been going through and organizing them. At the bottom of a box, below the IERC's, and all of the various spring loaded ELCO's, EBY's, CINCH's, and what appears to be 160's, there were what appeared to be some cheesy looking cheap tin slip-sleeves.

For lack of a better word I will describe them as having small horizontal 'stiffener' beads. Some of them sort of looked like tube sheilds, and the more conical ones did and didn't at the same time.

After getting out the magnifying glass I pulled up a name and patent number: Staver Mini-Shield - Pat. No. 2499612. I looked up the patent and sure enough, they were in fact tube shields, and they were patented May 7, 1950. My question to this esteemed group is this:

Were/are these "correct" OEM's for some long gone tube radios, or were they just cheesy aftermarket wannabe stuff? I don't know whether or not to give 'em the heave ho, or if someone might want them for a particular flavor of tuber to make it original.

Also, I came across four other medium sized, bottle shaped, tin sheilds that are two-piece (8 halves total) and are held together via a round circular spring-clip. The same question of origin would apply to these as well. Thanks guys, ~ Quig ~

From: "Bruce Hagen" <b_hagen@sbcglobal.net> Date: Sat, 7 Jan 2006 20:38:08 -0500
Subject: RE: [R-390] Tube Shield Questions_OT

Quig:

I think what you have is a bunch of shields as used in '50's TV sets. As for the two piece jobs it sounds like radio stuff from the '30's that would fit tubes such as a 6F7, 78, 6C6, etc. I'd be happy to have a pair

of the bottle shaped ones. Bruce Hagen

From: "Dan Merz" <mdmerz@verizon.net> Date: Sat, 07 Jan 2006 23:11:45 -0800
Subject: RE: [R-390] Tube Shield Questions_OT

Hi, the split, bottle-shaped are commonly called "goat shields", a brand name that made some of that type, very common on early 30's consumer radios. I have several sets that use these beasts, Dan,

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Sun, 8 Jan 2006 05:59:39 -0800 (PST)
Subject: [R-390] Regulated Power Supply

To List,

I have two similar regulated power supply circuits that provide delayed B+ startup. They can be scaled for use with both R390's, SP 600's and similar receivers. They come from and Audio Express article and Welborne Electronics Mod kits for Dynaco amps.

Welbornes catalogs are well worth downloading.

The 6 files total about 10 Mbytes. Five files are TIFF Images. Reply off list and I will email. Regards, Perrier

From: "David C. Hallam" <dhallam@rapidsys.com> Date: Sun, 8 Jan 2006 10:02:31 -0500
Subject: [R-390] Break In Operation of R-390 & CV-591 Converter

Has anyone had any experience operating break in with the R-390 and & CV-591 converter. My set is not fully muting when the break in relay is activated. I can hear the relay(s) pull in and the audio output from the CV-591 drops but I can still hear the station so I gather there is still RF getting through the antenna relay. Is it just maybe dirty contacts on the antenna relay, or is there something else I need to do? David KC2JD

From: roy.morgan@nist.gov Date: Sun, 8 Jan 2006 11:33:14 -0500
Subject: Re: [R-390] Break In Operation of R-390 & CV-591 Converter

Quoting > Has anyone had any experience operating break in with the R-390 and & CV-591> converter. My set is not fully muting when the break in relay is activated.

David,

I have not done break-in with an R-390, but I can tell you a bit about the break-in relay and how it works:

The R-390A break-in relay is a 6.3 volt AC coil device and draws about 40 mA of current to operate. Grounding the rear terminal strip connection by an external relay or switch (with the radio function switch in the Break In position) makes the connection. The 6.3 volts is drawn from the internal filament supply. You cannot use a solid state switch or logic line to do the job.

The break in relay does two things:
- it causes the antenna relay to operate. (I think it is energized to pull the relay in.) This unhooks the antenna connector from the RF input coil(s) and grounds the antenna input jack.
- it grounds the audio in the radio at the output of the detector - input to the common audio preamp stage. Thus both line and local audio are supposed to go away.

The rusult is that the radio is still completely operating at whatever gain you had set (changed by the AVC when the antenna signal goes away partly or completely) but the audio signal is or should be muted by being grounded. Note that with the CV-591, any signals from the IF strip will be processed by the CV-591 as normal. The AGC in the 591 may operate also, incresing gain when the IF signal goes down. I can't remember if the CV-591 has any provision for external control of its audio or gain.

This whole system is meant to operate with push to talk type transmitter/receiver control. It is not capable of QSK type CW break-in where you hear the receiver between the CW dots and dashes being sent.

In expectation of one day setting up a station for full break-in CW operation, I have collected the experience and advice of folks on mail lists about full CW QSK operation. It takes a number of elements that the R-390A was not designed to have. Some of these elements are:
- very fast switching of the transmitter from on to off, with CW waveshape under control
- fast and very reliable switching of the antenna from transmitter to receiver: this usually involves vacuum RF high voltage relays, or in modern radios, PIN diode switch arrangements
- possibly a second antenna for the receiver only
- very stiff control of receiver gain - access to the receiver AGC circuits, and modificaiton of attack and decay times may be involved.
- possibly reduced and controllable receiver gain during tranmit times to provide a monitor function.

I have seen the R-390A operated in push to talk break in operation with an AM transmiter, and it works just fine. (Presumably, it will work just as well with T/R control for RTTY) CW QSK break in is another matter, and will take a more complicated system. Roy

From: "Scott Bauer" <odyslim@comcast.net> Date: Sun, 8 Jan 2006 14:37:36 -0500
Subject: [R-390] Follow up/ corroded tube pins

OK, I finally remembered to get to the store for some tonic water to try and get the heavily corroded tube pins cleaned off. I had bought 10 tubes on eBay that I thought were ruined It worked better than I anticipated. I rubber banded the tubes together and stood them up in a small tupperware and then poured in just enough tonic water to completely soak the pins.
I came back in 1 hour to check and the tube pins were perfectly clean. No scrubbing or scraping was needed. I did rinse the tubes off with water to remove the corn syrup though.

I used store brand tonic water. Some brands have different ingredients. I just made sure the brand I picked had phosphoric acid listed as an ingredient.

Thanks to all for the good ideas, Scott

Date: Sun, 8 Jan 2006 11:56:29 -0800 (PST) From: Joe Foley <redmenaced@yahoo.com>

Subject: Re: [R-390] Break In Operation of R-390 & CV-591 Converter

wrote: > through the antenna relay. Is it just maybe dirty > contacts on the antenna > relay, or is there something else I need to do?
+++++++++
Yes, you'll need to reduce the RF GAIN on every transmission, that's why so many RF GAIN pots are worn out. This is a common problem with the R-390's. Joe

From: Bonddaleena@aol.com Date: Sun, 8 Jan 2006 16:02:18 EST
Subject: Re: [R-390] Follow up/ corroded tube pins

writes: OK, I finally remembered to get to the store for some tonic water to try and get the heavily corroded tube pins cleaned off. I had bought 10 tubes on eBay that I thought were ruined It worked better than I anticipated. I rubber banded the tubes together and stood them up in a small tupperware and then poured in just enough tonic water to completely soak the pins. I came back in 1 hour to check and the tube pins were perfectly clean. No scrubbing or scraping was needed. I did rinse the tubes off with water to remove the corn syrup though.

I used store brand tonic water. Some brands have different ingredients. I just made sure the brand I picked had phosphoric acid listed as an ingredient. Thanks to all for the good ideas, Scott

Scott, that's a NEW one on me. Thanks fer the idea. What would happen if you used Tarnex? I am unsure what's in it, but it works wonders on old silver plated parts. Another thought, Naval Jelly. It has Phosphoric Acid, if memory serves me..... ron N4UE

From: DQ <greybeard5150@sbcglobal.net> Date: Sun, 8 Jan 2006 18:32:46 -0800 (PST)
Subject: [R-390] Re: Follow up/ corroded tube pins

I'll pass your salutations on to my wife and tell her with great pride that she just helped repair her first tube radio *smile* ~ Quig ~

From: DW Holtman <future212@comcast.net> Date: Sun, 08 Jan 2006 20:39:42 -0700
Subject: [R-390] Finger Stock

Hello,

Does anyone know who carries finger-stock? What I'm looking for is the finger-stock that goes under the RF Module in the R-390A. The stuff that I could find using a Google search is a different type. It is kind of an upside down "U" shape. I guess if would work fine, if I cannot find anything closer to the original. Thank you in advance for your help. 73's DW Holtman WB7SSN

From: "Barry" <N4BUQ@aol.com> Date: Sun, 8 Jan 2006 21:55:49 -0600
Subject: Re: [R-390] Finger Stock

Not sure, but I think Fair Radio sells it. Barry - N4BUQ

From: "Barry" <N4BUQ@aol.com> Date: Sun, 8 Jan 2006 22:05:27 -0600
Subject: Re: [R-390] Another (perhaps) silly ballast question

I got part of this mod finished this evening. I ran a teflon-insulated, 20GA wire neatly from the IF deck plug to pin 5 of the ballast tube socket. At first I thought this wasn't going to work because the compartments are completely isolated from each other between where the plug is located and the tube base; however, there is a very tiny opening where the sheet metal was folded in just the right way to allow the wire to snake very neatly beside the AGC amp and AGC detectors, beside the BFO and on to the tube socket. I ran the wire from the center tap through the plug on the IF deck (even was able to snake the new wire inside the large boot where the rest of the wires go into the plug and inserted a jumper between pins 5 and 7. I works great.

All I need to do is run the new wire through the plug on the PS. Kind of a pain when a resistor or appropriate tube will work, but I really wanted to do away with the unnecessary heat source. Regards, Barry - N4BUQ

From: "Barry" <N4BUQ@aol.com> Date: Sun, 8 Jan 2006 22:30:44 -0600
Subject: Re: [R-390] Another (perhaps) silly ballast question

Thanks, Glenn. I have nice, big, loopy bends in the wire. I did not know that about Teflon(tm), though. Barry - N4BUQ

From: Tom Norris <r390a@bellsouth.net> Date: Mon, 9 Jan 2006 01:33:51 -0600
Subject: [R-390] DIY $10 Twinax to BNC adaptor

With all the hoo-hah about the assorted adaptors out there such as the UG-970 from Fair and other sources, figured I'd mention how easy it would be to make your own.

I apologize for the quality of my writing, I've had a headache for some time and it won't seem to go away.

To make an adaptor I use a twinax connector and a BNC panel mount connector.
http://www.fernblatt.net/A/390_adaptor/ has a list of unorganized photos of my cheapie special.

Twinax connectors are standard stock items in Mouser and many other electronic catalogs. The Amphenol catalog number is 82-5589-RFX for the lowest priced version. If you can't find them, email me, I'll give you the phone number of my local distributor.

First collect all the parts of the twinax connector from the package. Assembly should be fairly intuitive, if not there is an assembly diagram in the R-390/390A manuals.

First, one side of the twinax connector. I do so in a way that provides some physical support for the grounded pin. Locate a piece of tinned steel component lead, such as from a rectifier, or find a piece of of steel paper clip. Drill a small hole as far down the body of the connector as possible on the same side of the pin to the grounded -- see the photos. Solder wire to pin then route other end through hole in connector. Solder.

Solder short piece of wire, preferably teflon-insulated to remaining pin, strip and trim wire slightly longer than body of connector, assemble outside screw-on ring of connector and set aside.

Next prepare the BNC connector. Since I'm lazy, on the past couple of these I've ground the threads off the the back off the connector. Again, see photo of example. Solder wire from previous step to center pin. Fill inside of connector with hi-temp epoxy or silicone to hold the connector parts together, insert BNC into end of twinax connector and set aside until epoxy/silicone cures. After this has cured solder the joint between BNC connector and twinax connector, using flux as needed.

This probably isn't the best way of building an adaptor -- I think some folks have threaded the inside of the twinax connectors to accept the BNC connector.

Other than the setting time for the glue, it only takes a few minutes to put together. It's ugly. It's cheap. I've got several and no matter how quickly I've put one together they all still work. Tom NU4G

From: Mahlon Haunschild <mahlonhaunschild@cox.net> Date: Mon, 09 Jan 2006 06:09:02 -0600
Subject: Re: [R-390] OT - Ham-Google

The tool's callsign data seems quite inaccurate/out of date. regards, Mahlon - K4OQ

From: <w9ya@arrl.net> Date: Mon, 9 Jan 2006 09:45:46 -0500 (EST)
Subject: Re: [R-390] OT - Ham-Google

We covered this a few months ago....including the errors. Vy 73; Bob w9ya

From: <mfisch@kent.edu> Date: Mon, 09 Jan 2006 10:03:12 -0500
Subject: Re: [R-390] Finger Stock

Try: http://www.tech-etch.com/ WWW.omegashielding.com They have pictures. I have no idea as to price. Mike

From: Roy Morgan <roy.morgan@nist.gov> Date: Mon, 09 Jan 2006 10:08:50 -0500
Subject: RE: [R-390] Waking up my non-A

wrote: >In spite of all that has been written in various reflectors, etc. and conventional wisdom aside, it is not a good idea to "bring up slowly with a variac" a vacuum tube radio.

Hear, hear! I agree.

My diatribe against using variacs this way is available upon request.

It turns out that the main filter cap in an R-390/URR is an oil-paper cap and is very unlikely to be shorted or leaky. In any case, it won't exhibit the leakage phenomenon that gets you in trouble by "bringing it up slowly on a variac". Still, I urge you to not do that to an R-390 of any sort.

There may be other caps in the R-390/URR that will cause trouble.

Morgan's Diatribes available: Variacs.txt Why your variac can blow up your radio and what to do about that.

powercordsandbypassing.txt About fused line cords and how they can make a widow of your wife. How to bypass your line cord for RF and reduce the chances of disaster, AND solve the "hot chassis" phenomenon. Information about the European line cord color code, and about fuses, GFI devices, and outlet testers.

reform.txt How to reform electrolyitc caps and how to test other caps for leakage (like the Black Beauties) Roy

From: Robert Meyer <meyer_rm@yahoo.com> Date: Mon, 9 Jan 2006 07:30:11 -0800 (PST)
Subject: Re: [R-390] Break In Operation of R-390 & CV-591 Converter

When I set my station up (Central Electronics 200V and R-390A), I pondered this problem to great length. I can't run full breakin on CW but I did manage to get some interesting things done.

I connected a pot through a relay to the RF-Gain terminals on the back of the R-390A. I have an antenna relay that allows a tiny bit of coupling across from the transmitter when it's switched to transmit mode (although there's probably sufficient leakage through coax cables to make this unnecessary. When the station is in recieve mode, the RF-Gain relay shorts the terminals on the back of the R-390A so that I get full gain on receive.

The benefit of this method is that I can get sidetone through the receiver so that I can tell if I'm getting artifacts on my CW (chirps, etc.), can tell if I'm drifting, etc. Also, if I'm using headphones on SSB, I can hear the side-tone. This has worked well since 1981. I imagine if you wanted full breakin, you could use some kind of solid state switch on the RF-Gain external pot but I have no idea how fast the R-390A reacts to changes in this gain. YMMV'73 de N2DXN Bob Meyer

P.S. If Paul, K2LMQ is still on list, my old Email died but this one works for me, now!

From: Roy Morgan <roy.morgan@nist.gov> Date: Mon, 09 Jan 2006 10:53:12 -0500
Subject: RE: [R-390] $71.00 antenna connector

wrote: >Does this connector tie one of the balanced lines to ground and input the >BNC to the other balanced line?

Yes it does. But "WHICH PIN?", is the question.

I recently made some twinax-to-BNC adapters for my R-39x radios. I started with a twinax connector from Amphenol (normal cost about $5). I drilled and tapped the thread-in cable clamping part to accept a BNC female chassis connector, and solved a couple of little problems about wire and keeping the twinax pins in place.

While figuring out which pin to ground I discovered MIL- SPECs for the UG-970 (twinax male to "UHF" female) and UG-971 (twinax to type C female). According to those mil specs, one of the

adapters grounds pin A and the other one grounds pin B. Which is which, I can't remember, but I built my adapters to match a UG-970 I have here.

The question remains, does it matter? It may, but I would not expect it matters much. The input circuit of the R-390A has a fixed cap on one side and a variable cap on the other side. This allows for setting the balance between the two connections of a balanced antenna, done by setting lowest received signal for a common-mode input. It seems to me that the low impedance of the antenna system would swamp out any difference brought about by grounding out one or the other of the two caps. Roy

From: "Barry" <n4buq@aol.com> Date: Mon, 9 Jan 2006 10:07:51 -0600
Subject: Re: [R-390] Another (perhaps) silly ballast question

I plan to post some pictures of the modification on my website. Barry - N4BUQ

Hello Barry & Crew,

Barry, I'd like to see a picture of those loopy bends? I thought that Kynar was used as WIRE WRAP applications and had Teflon Insulation. If I'm wrong, I'd like to be corrected or directed to a good read on the subject. Could we be talking about KAPTON wire in which the high-heat processing anneals the insulation to the wire? 73, Glen

From: glwebb@gundluth.org Date: Mon, 9 Jan 2006 10:31:45 -0600
Subject: [R-390] Re: Looking for a C adaptor

Tom,

I like your twin-ax to BNC adaptor. Here is a description of one I inherited. My R390A came with an adaptor that was made by the previous owner and it keeps the balanced input ungrounded. It consists of a 1 inch cube of double sided circuit board pieces soldered together. One side of the cube is open with a cover of thin metal like is used for magnetic shielding. One side of the box has a female panel mount BNC connector. Inside the box is a two hole ferrite balun core with windings; a primary and a secondary. I haven't checked the ratio of the windings but I presume them to be 1:1. Secondary is connected to two insulated pins from the box spaced to fit the input to the radio. It works very well and doesn't require any difficult to find parts. Gary L Webb NI9V

From: "Barry" <n4buq@aol.com> Date: Mon, 9 Jan 2006 10:44:43 -0600
Subject: Re: [R-390] Re: Looking for a C adaptor

Does anyone know if/where the mini-BNC to BNC adapters are available (the kind used for the IF output "jack"). Does Fair Radio sell them? Thanks, Barry - N4BUQ

From: "Dan Merz" <mdmerz@verizon.net> Date: Mon, 09 Jan 2006 09:47:43 -0800
Subject: RE: [R-390] Re: Looking for a C adaptor

Barry, I was never able to get these from Fair. I don't think they have them. There was one source selling them on eBay for a while and I think they finally drifted down to about$10-$15 there. They are

avaiable new from RF Connection for $20, Tech Line 301/840-5477 Order Line 800/783-2666, Gaithersburg, MD, MBfemale to BNCfemale, lead courtesy of Roy Morgan with follow up direct contact with them. I never bought any of these and satisfied my need another way with a small junction box using mini MB female connectors (available from Fair) AND BNC connectors. Dan

From: "David C. Hallam" <dhallam@rapidsys.com> Date: Mon, 9 Jan 2006 13:07:19 -0500
Subject: RE: [R-390] Break In Operation of R-390 & CV-591 Converter

Bob,

I took a look at the R-390 manual. I think your suggestion will be exactly what I want. I am primarily looking for PTT operation. Break in CW can come later.

I can use contacts on the operate relay in my Invader to activate the break in circuit in the R-390 which grounds the antenna input. With external contacts on my Dow Key antenna change over relay, I can open the RF gain terminals on the rear to disable the 1st RF amplifier. That should do disable the receiver on transmit. 73 David

From: "Bruce Ussery" <twc9198764412@earthlink.net> Date: Mon, 9 Jan 2006 16:30:38 -0500
Subject: Re: [R-390] R-392 Power Connector Needed

Thanks to all who remembered/recommended this source for the R392 power connector. I'm sure it was mentioned before but I didn't get a round tuit then- this time I did. The conn. works fine. 73, Bruce WA4ZLK

From: "Jim Shorney" <jshorney@inebraska.com> Date: Mon, 09 Jan 2006 15:59:51 -0600 (CST)
Subject: Re: [R-390] DIY $10 Twinax to BNC adaptor

wrote: >Twinax connectors are standard stock items in Mouser and many other >electronic catalogs.

Or can often be had for free from your friendly computer geek. I friend of mine has a couple buckets full of them, he sells them at flea markets for $0.75 each. Yes, he knows what they are for.... Jim

From: Tom Norris <r390a@bellsouth.net> Date: Mon, 9 Jan 2006 19:16:03 -0600
Subject: Re: [R-390] OT - Ham-Google

wrote: > The tool's callsign data seems quite inaccurate/out of date.

I didn't create the site. I simply forwarded the message. Tom "please don't shoot the messenger" NU4G

From: "W. Li" <wli98122@yahoo.com> Date: Mon, 9 Jan 2006 17:33:57 -0800 (PST)
Subject: RE: [R-390] Looking for a C adaptor

There is even a cheaper solution to the Twin-Ax antenna thread. In June 1999, Chuck Rippel posted a simple connection in which he used a bit of bare wire to ground the left hand (looking from the rear) pin

jack on the balanced antenna input connector to one of the antenna relay mounting machine screws, and connecting the right pin jack to the center conductor of RG-58/U coax, whch was then terminated to a PL-259 connector through a 0.01ufd condenser.

I use BNC's, instead of SO-239's as a matter of preference.

What I did was incorporate this setup into a small two piece surplus aluminum Asante transceiver case 3" x 1.5" x 0.5" that can be had for 25 cents. The gutted case was bolted to the rear chassis using two exisiting antenna relay screws after filing a hole big enough to pass the R-390A balanced antenna connector. A female panel mount BNC connector was attached to one end.

The entire shielded assembly fits neatly under the lip of the rear panel and the BNC line comes out against the rear panel making a neat, inobstrusive, and reversible addition. W. Li Mercer Island, WA

From: "Barry" <N4BUQ@aol.com> Date: Mon, 9 Jan 2006 19:51:33 -0600
Subject: [R-390] On eBay

Shore is a purdy lil' R390 on eBay today. Don't recognize the seller, but if I were to stumble across $1k sittin' around the house, I might have to have that one... Barry - N4BUQ

From: ToddRoberts2001@aol.com Date: Mon, 9 Jan 2006 20:56:02 EST
Subject: Re: [R-390] On eBay

writes: Shore is a purdy lil' R390 on eBay today. Don't recognize the seller, but if I were to stumble across $1k

Saw that one too. Say isn't it odd that it is missing the crystal oven cover though? It looks like one of the crystals was replaced with a newer miniature-size one? Probably works OK but might be worthwhile to ask the seller to make sure it works on ALL bands? 73 - Todd WD4NGG

From: odyslim@comcast.net Date: Tue, 10 Jan 2006 04:22:09 +0000
Subject: Re: [R-390] On eBay

Its gone now :-) Scott W3CV

From: "Osamu Hazawa" <pomerol@mocha.ocn.ne.jp> Date: Tue, 10 Jan 2006 22:24:48 +0900
Subject: Re: [R-390] My R-392 Starts Singing

Hello Francesco, Dan, Barry and Tom,

Sorry for late response. Thanks for your overwhelming information and sagas about R-392. I'm so excited about you are being with me.

I have less infromation about my R-392 because I've just started working with it.

The symptoms I noticed so far are:

(1)Fair signals can be heard on BC bands (0.5MHz through 1.6MHz).
(2)Signals can be heard up to 7.999MHz but are getting weaker on higher range and white noise is heard on every around 80kHz (This may be caused by a noise generated inside my house).
(3)Weak Cal tone is heard on some bands and no Cal tone on other bands, from 8MHz to 32MHz.
(4)AGC and limitter is working but the meter indicates under zero without a signal.

To my shame, I noticed I had forgotten to buy a set of inch size Allen keys for use of opening up the chassis!!! So what I can do for now is only wiggling the MC knob back and forth :-) 73's Osamu Hazawa

From: Gord Hayward <ghayward@uoguelph.ca> Date: Tue, 10 Jan 2006 08:38:47 -0500
Subject: Re: [R-390] Open Z-503 AGC IF Transformer
>
>I am looking for a replacement if anyone has one. Pulled it apart but it is >open somewhere inside the windings, usually it is around the connections. >Anyway, hoping someone can help. As you know it is not an easy guy to get >to. ... Tom, N3LLL

When I got mine, Z503 was open too. I tried to steam (hot air really) the ferrite off but the whole thing came undone. Not finding a replacement, I took a big coil out of my junque box, cut the form to fit, added a resonating cap at 455 kHz and rebuilt the guts of the can. Now its dead on spec.

The trick is to use a small cap, 20 to 40 pf or so to get the Q as high as possible. That circuit needs the high Q to get the AGC voltage high enough. Do the resonance check before the cutting and installation steps.

From: JMILLER1706@cfl.rr.com Date: Tue, 10 Jan 2006 08:52:26 -0500
Subject: Re: [R-390] Open Z-503 AGC IF Transformer

Believe it or not I have rewound RF/IF transformers like this that have been fried. If you can unravel the turns, just measure the total length after getting the wire off, go buy some small diameter magnet wire of the same gauge and length, or close, and wind it back on. It won't look pretty but it will probably work. Glue or wax to hold it in place. I did that with an RF coil in a 51S1 once. Worked great. Alternately, it is possible that a coil from generic 455 khz IF can would work. JM

From: Barry Hauser <barry@hausernet.com> Date: Tue, 10 Jan 2006 08:58:07 -0500
Subject: Re: [R-390] My R-392 Starts Singing

Hello Ozamu:

It is possible that you have "inch" -- English -- sized allen keys in the form of bits to one of those multi-purpose screwdrivers or tool kits. I am thinking of the inexpensive ones that have all kinds of tools in them and lots of bits. Often they have a whole row of metric and another of English. One tends to forget all that's in them. I also have one set that came with allen keys -- one set in chrome, the other black -- one is metric, the other is English. So the right tool might not be with your good tools ones but with one of those sets. Most are made in China or maybe some in Taiwan. They vary in terms of what they include. I mention this because they are the kind of thing I buy on impluse -- and because they're cheap

-- just to have around, and then forget about them.

You might be able to open it with the closest fitting metric size that's a bit smaller, maybe with a bit of tape on the end of the Allen wrench. It may be that the case bolts are not in too tight -- but don't force them with the wrong size key in there or you may damage the hex socket in the bolts.

Sounds like you need to check some tubes first. Also, the calibrator works on harmonics which, as I recall, get weaker higher up in frequency, so if the calibrator tube is weak the effect will be more so.

Also, I think 8-32 mHz corresponds to the switchover to triple conversion, so that's a clue. good luck -- let us know how you're doing. Barry

From: <fwbray@mminternet.com> Date: Tue, 10 Jan 2006 15:22:33 -0000
Subject: [R-390] Fair Radio R-392's

Has anyone purchased an R-392 from Fair Radio yet. I am considering picking one up and I wonder what the general condition is. I assume that like the 390a's that they had, the better ones will be sold first.

Also does the substitute meter function properly, or does it just fill the hole? Any idea of the vintage of the lot that Fair has? Thanks. 73, Fred Bray KE6CD

From: Tom Norris <r390a@bellsouth.net> Date: Tue, 10 Jan 2006 11:19:19 -0600
Subject: Re: [R-390] Fair Radio R-392's

Fred --

With an R-392 it's easier to get a unit in good condition because the case is sealed.

Most typical R-392 stories start out with the person talking about how beat up a particular radio looks, then being surprised that it looks like new inside.

I've not tried to substitute a meter on a 392, so can't answer that question. Tom NU4G

From: <mfisch@kent.edu> Date: Tue, 10 Jan 2006 13:19:40 -0500
Subject: Re: [R-390] Fair Radio R-392's

I got two R-392's several years ago without meters and found a surplus meter that fit and seems to work about right. The dial looks different- but I'm certain I could make a new one if needed. If memory serves me there is a picture on the Net. The insides of both were very clean. Mike

From: Barry Hauser <barry@hausernet.com> Date: Tue, 10 Jan 2006 14:56:26 -0500
Subject: Re: [R-390] Fair Radio R-392's

Hi Tom, Fred list .. > With an R-392 it's easier to get a unit in good condition because the case is sealed.

That's provided it was stored closed up -- but most all are. The one downside -- very strong MFP "bouquet" -- formaldehyde-y -- but you don't smell it when the radio is closed up.

> Most typical R-392 stories start out with the person talking about how > beat up a particular radio looks, then being surprised that it looks like > new inside.
>
> I've not tried to substitute a meter on a 392, so can't answer that question.

I'd imagine the original meter is the same as the carrier meter in the R-390/R-390A, with the unusually low (17 ohm) DC coil resistence. To get other meters to work reasonably well in R-390/R-390A's may involve changing some resistors in the IF deck as the meter is part of a bridge circuit. Either that, or building a little op-amp meter driver as some have done.

Gary at Fair tells me that he is selecting substitute meters that give reasonable deflection on strong and medium signals -- after adjustment -- without doctoring the IF deck. Apparently, the R-392 is more forgiving of substitute meters than the R-390/R-390A. (more of an adjustment range available.)

Vintage-wise, I personally haven't found that much difference between various pedigrees and contracts of R-392's. I've seen Collins, Stewart Warner, Federal, Dubrow, and "Collins remanufactured by Stewart-Warner" -- maybe others have opinions. He mentioned that he has some Stewart-Warners, but probably a mixed bag of others too.

It is true -- they're shipping the nicest ones first, but says he still has some of the nicer ones. '392's are fairly easy to detail in a way that's authentic-looking -- e.g. touch-up paint chips with OD as per the mil manual.

I wouldn't wait too long if you're thinking of ordering one -- the numbers are limited and they seem to be flying out of the place, even at $550. In addition to matching up meters, Gary tests the tubes and burns the radios in for about 24 hrs. before shipping.

Also, sounds like the substiture meters are the kind you can open, so you could download a copy of the right meter scale, print on label stock and apply over the existing one.

I have no pecuniary interest -- just another customer -- bought a '392 from Fair a long time ago and it's still my best one. Had to call about something else, and digressed into this topic, which is someting that happens to me quite a bit ;-)

If you have any detailed questions, I suggest you call Gary there. Barry

From: "Craig Anderson " <Craig.Anderson@saintpaul.edu> Date: Tue, 10 Jan 2006 14:55:37 -0600
Subject: [R-390] Amp 9 pin PTO connector R-390A, R-392 Needed

Does anyone know of a source for the blue hexagon locking connector (male & female) used for the power connection to the R0390A and R-392 PTO's. I'm trying to make up an extension cable so that I can work on the PTO on the bench. W9CLA

From: "David C. Hallam" <dhallam@rapidsys.com> Date: Tue, 10 Jan 2006 16:35:32 -0500
Subject: RE: [R-390] Amp 9 pin PTO connector R-390A, R-392 Needed

Try William Perry Co. I'm sure they have them. May not be exactly inexpensive but you will get what you need. http://militaryradio.com/Images/WilliamPerryCompany.jpg David KC2JD

From: "Barry" <n4buq@aol.com Date: Tue, 10 Jan 2006 15:41:32 -0600
Subject: Re: [R-390] Amp 9 pin PTO connector R-390A, R-392 Needed

Following another "Barry's" suggestion, I made one from a spare harness by using two female connectors (there are two of the same type as used for the PTO in a single harness) and used pins to change the "sex" of one of the female sockets. It works.

I believe you can contact Barry Hauser on this list to purchase a spare harness. Barry - N4BUQ

From: "Dan Merz" <mdmerz@verizon.net> Date: Tue, 10 Jan 2006 16:39:39 -0800
Subject: RE: [R-390] My R-392 Starts Singing

Osamu, I agree you have to get it open. If nothing else just taking the tubes out and putting them back in may help - not an easy job unless you have the tube removal tool - I never had one and wrestle with them to get them out in the tight quarters. Your correspondence urged me into switching over to the 26 volt supply which took a bit of wiring to get an ac line cord properly attached into the Lambda supply, salvaged from a rack mounted assembly no doubt with just a terminal strip on the back for all power connections. The 392 works a little better now. I'm using the small LS-166/U speaker so audio is nothing to brag about. My set has tube audio. Best regards, Dan

From: "tfrobase" <tfrobase@kitparts.com> Date: Tue, 10 Jan 2006 18:45:31 -0600
Subject: RE: [R-390] Open Z-503 AGC IF Transformer

Thank you for the offer, I found one at Fair radio. I pulled one out of a blue line backup radio, but I want to get it repaired, your correct it is a bear! Have you ever diagnosed the failure mode, I guess maybe a plate short on the AGC tube?

Sent: Tuesday, January 10, 2006 9:56 AM From: LI WHA HO WALLY [mailto:k5op@yahoo.com]
Subject: Re: [R-390] Open Z-503 AGC IF Transformer

Tom, I have a few new original coils left... I usually get 25 bucks for them... I have worked on these things for about 25 years... Rewinding them usually takes about 10 hours.... These coils are high Q... If you use another coil, your AVC voltage will be real low... If you have looked below the chassis you will see that replacing this coil is a real bear... About 12 wires to take aloose.. I use a special proceedure that uses only 4 soldered joints.... 73's Wally k5op

From: ToddRoberts2001@aol.com Date: Tue, 10 Jan 2006 22:09:41 EST
Subject: Re: [R-390] Open Z-503 AGC IF Transformer

writes: Believe it or not I have rewound RF/IF transformers like this that have been fried. If you can unravel the turns, just measure the total length after getting the wire off, go buy some small diameter

magnet wire of the same gauge and length, or close, and wind it back on. It won't look pretty but it will probably work. Glue or wax to hold it in place. I did that with an RF coil in a 51S1 once. Worked great. Alternately, it is possible that a coil from generic 455 khz IF can would work. JM

An open winding in coil L514 in the Tuned Circuit can Z503 seems to be a common failure mode in the R-390A IF deck. I have run across several open-circuited ones over the years. It may be corrosion eventually breaks the tiny wire leads from the coil or it may be something to do with the insulation breaking down as this coil has about 180VDC running through it and some current. If anyone is interested I measured the inductance of L514 in Z503 as 1.385 mH. This would require a capacitance of 88pF to resonate at 455KHz. I see that Mouser has some Hi-Q miniature radial inductors with a Q of 100 in a 1.2mH and 1.5mH size. These would easily fit inside the Z503 can. The 1.2mH inductor would require 102pF to resonate at 455KHz and the 1.5mH inductor would require 82pF. The peak may be broad enough that you could get by with a fixed cap across the coil but one could also mount a miniature trimmer cap and a slightly smaller fixed cap inside the can to get the best peaking on the coil. I haven't measured the Q of the original coil yet but I do have a Heathkit Q-meter and I will check it out. I would think a coil with a Q of 100 would be suitable here. In the future the Z-503's are going to be hard to find. It would be nice if an 80 cent inductor from Mouser and a small mica cap would get it working again. 73 Todd WD4NGG

From: "Leigh Sedgwick" <bipi@comcast.net> Date: Tue, 10 Jan 2006 21:12:25 -0800
Subject: [R-390] ITT Mackey Stuff

Would the person who just put out the message regarding ITT Mackay equipment send me an e-mail...sorry, I hit the wrong key and deleted your e-mail. Thanks Mike, K7PI Mercer Island, WA

From: DW Holtman <future212@comcast.net> Date: Wed, 11 Jan 2006 05:49:36 -0700
Subject: [R-390] Another satisified Ebayer?

I thought that this is kind of interesting.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5852810746&fromMakeTrack=true 73's DW Holtman WB7SSN

From: Dave Merrill <r390a.urr@gmail.com Date: Wed, 11 Jan 2006 07:16:53 -0600
Subject: Re: [R-390] Another satisified Ebayer?

Seems to me his beef is with Rick Mish and he is using eBay to vent in a public forum.

From: "Cecil Acuff" <chacuff@cableone.net> Date: Wed, 11 Jan 2006 07:34:36 -0600
Subject: Re: [R-390] Another satisified Ebayer?

That and warning other potential buyers of what to really expect.... Cecil....

From: Jim <jclark6@gmail.com> Date: Wed, 11 Jan 2006 08:04:05 -0600
Subject: Re: [R-390] Another satisified Ebayer?

Sounds like he felt he did not receive full disclosure concerning the facts of the item he was buying. The Mish page dose not say reproduction. It dose say panel. It is hard to tell if the box is metal or cardboard. The unit on the page is better quality than the one he has.

I could reproduce the meal panel exactly as the original as my brother has and industrial engraving business with laser engravers and such. I think my cost alone for the panel and handles would be close to what Rick sell his unit for.

One side of the story is presented on the epay page and I have never dealt with Rick but it seems to be well respected. I would like to hear the other side of the story.

Epay is good as any place tp bring a problem to light. 73 De Jim N5TJZ

If you own Collins Amp 30L-1 SN 29068 Contact me

From: "Bruce Hagen" <b_hagen@sbcglobal.net> Date: Wed, 11 Jan 2006 09:52:52 -0500
Subject: RE: [R-390] Another satisified Ebayer?

Hi all:

I've had dealings with Rick and something stinks here and I doubt that it is Rick. Bruce Hagen

From: mikea <> Date: Wed, 11 Jan 2006 09:01:39 -0600
Subject: Re: [R-390] Another satisified Ebayer?

wrote: > I've had dealings with Rick and something stinks here and I doubt that it is Rick.

I'll echo that enthusiastically. My dealings with Rick have been _completely_ satisfactory, and I have seen him go well beyond the call of duty. Mike Andrews, W5EGO

From: "Norman J McSweyn" <normn3ykf@stny.rr.com Date: Wed, 11 Jan 2006 10:22:30 -0500
Subject: Re: [R-390] Another satisified Ebayer?

If anyone would like pics, I would be happy to oblige I WILL NOT EDITORIALIZE! THIS IS NOT A FORUM FOR SUCH THINGS! Drop me a note, tnx de n3ykf

From: "Dan Merz" <mdmerz@verizon.net> Date: Wed, 11 Jan 2006 09:38:18 -0800
Subject: [R-390] Reproductions/radios

Hi all, the subject of legitimate reproductions has been brought up on this listing in various ways. Since collecting radios is one of my central activities, I could pass on my observations about the subject, which is somewhat controversial, even among collectors who represent the best of the lot. I once heard the following definitions

Replica, a duplicate of a radio or item that embodies the essential functional characteristics and

appearance but is obviously not an original

Reproduction, a duplicate of a radio or item that is in detail and materials the same as the original. It might even be made using the original production method.

Copy, a duplicate of a radio or item that looks the same as the original.

I'm sure these could be discussed ad infinitum but the point is that it brings up some of the features and pitfalls of trying to duplicate old radio items as part of restoration or obtaining a particular item. Generally collectors seem to like originals better than copies, replicas or reproductions. Sometimes originals are not readily available, and reproduction parts sometimes are the only option in restoring a particular radio. Some collectors like to have an old radio look like the day it came off the production line; for them a quality reproduction might be better than a marred original. The only items that I've personally examined as true reproductions were of the first microphones and cylinder recording machines copied from items in the Smithsonian right down to the extra, first trial, layout holes in the cast iron base.

A small industry developed in making replica Atwater Kent breadboard radios in the 50's, 60's and 70's. At first this was done with authentic parts and replica boards, because these were available and the assembled set was worth more than the parts. Then some enterprising plastic molders refined the technique of casting in boat resin the phenolic parts of some of the more difficult to obtain components. For the better examples, it is very difficult to visually detect a reproduction part compared to an original but not impossible because the material is not the same. I have seen a replica done so well that it would pass 90% of collectors and certainly would not show up as such in an eBay photo. The only thing a buyer can do is trust the seller to know and tell what he's selling or just not bid on such stuff as original if there's any doubt.

So what is a "cardboard" LS 206/A - it's a copy in the terminology used above. What are the ethics of selling such an item? I would assume the seller would be forthright in representing exactly what he is selling including that it was not metal, if that is the case and the original was metal. I personally have little interest in having this item, though I've built replica's, copies and reproductions of radio items for various reasons. I've often wondered when the time comes to sell/get rid of them, will I be tempted to exaggerate or leave the buyer to his own resources to figure out what he getting. I think not, mainly because there are some buyers out there that will value them for exactly what they are and I'll get what I deserve for my efforts in making them. Judging from the appearance of the LS 206/A, I would not want to try to make one for $300, even out of cardboard. The mere fact that someone bothered and was able to make such a copy is impressive in itself, aside from the apparent dissatisfaction of one of the buyers. Dan.

From: "Kenneth G. Gordon" <kgordon@moscow.com> Date: Wed, 11 Jan 2006 09:39:02 -0800
Subject: RE: [R-390] Another satisified Ebayer?

wrote: I've had dealings with Rick and something stinks here and I doubt that it is Rick.

Look at the complainer's feedback rating. The only negative he got was from a fellow ham...out of 74 total. I would be wary of selling anything to him. Ken W7EKB

From: odyslim@comcast.net Date: Wed, 11 Jan 2006 20:49:40 +0000

Subject: Re: [R-390] Another satisified Ebayer?

I have one of his speakers. It works perfectly. He has the cardboard boxes for the rear panel custom made. Take it off and compare the audio quality. The speaker as you all know is designed to be rack mounted. That cardboard box will last for ever in a rack. The speakers are high quality 2 way (whizzer cone) that will handle plenty more power but still efficient enough to work fine without and audio amp. Mine has a perfect paint job and the letters are ink stenciled. I think the person complaining is whacko.

I have had other dealings with Rick besides the speaker. He always does excellent work. He treats his customers fine and he will take the time to help out if one may have a small problem.

Rick is an all around good guy. No complaints from me. Scott W3CV

From: "Ziegenbein, Randy" <rziegenbein@volcanotherapeutics.com> Date: Wed, 11 Jan 2006 12:58:05
Subject: RE: [R-390] Another satisified Ebayer?

Yeah, but cardboard?!! I sure don't want cardboard anything in collection. I'm with the wacko. I'd be ticked too. my73, Randy

From: Jim <jclark6@gmail.com> Date: Wed, 11 Jan 2006 16:22:57 -0600
Subject: Re: [R-390] Another satisified Ebayer?

Scott, I don't think a custom made cardboard box is a thing of quality, I make one of those evertime I ship an item. Are you not concerned with the fire hazard a painted carboard box poses to your rack and valuable equipment? When you purchased your unit were you informed that it was a reproduction and about the carboard box? Maybe I am missing somethng here, I do like the front panel and you stated it sounds good so I say enjoy. Maybe I am a Wacko also. Jim

From: Radiograveyard@aol.com Date: Wed, 11 Jan 2006 17:44:35 EST
Subject: Re: [R-390] Another satisified Ebayer?

Hey guys I have a couple of the speaker assemblys, the originals, and none have sound chambers, cardboard or otherwise. Seems to me Rick was trying to improve on the Military and give the buyer a better sound. Am I missing something here? Rick has always been great to deal with and as far as I am concerned an asset to the 390A legacy. Just my thoughts. Pete

From: "ELDIM" <eldim@att.net> Date: Wed, 11 Jan 2006 14:43:56 -0800
Subject: Re: [R-390] Re: Looking for a C adaptor

Hello Barry & Crew,

What I believe that you are looking for is a mini BNC which is affectionately known as a Type MB Connector or in your case is an MB RF Adapter. Then there is the MALE or FEMALE gender which may not be politicially correct and so, a Male would be called a "Plug" and have a Pin, and the Female would be the "Jack" and have a Socket. I believe that AMP or AMPHENOL made these adapters. They are rather scarce and I'm sure that they are no longer manufactured, unless someone like

PASTERNACK has resurrected tham and had a batch made at their overseas plant. So if any one has any PART NUMBERS, I'd be happy to run them and see what tyurns-up. 73, Glen Galati, KA7BOJ Tacoma, wa.

From: Jim <jclark6@gmail.com> Date: Wed, 11 Jan 2006 16:55:05 -0600
Subject: Re: [R-390] Another satisified Ebayer?

Well that makes sense. As I stated before I don't think I could reproduce the panel and handles for his selling price. Do you feel the cardboard presents a problem ?

I wonder if Rick would sell just the stamped panel ? I can have it engraved and paint it. Jim

From: Dave Merrill <r390a.urr@gmail.com> Date: Wed, 11 Jan 2006 17:05:53 -0600
Subject: Re: [R-390] Another satisified Ebayer?

I don't have personal experience with the LS-206A/U, but it would appear there are metal (?) boxes attached to both of these recent auctions: 5825590058 and 5848698188

From: "Dan Merz" <mdmerz@verizon.net> Date: Wed, 11 Jan 2006 15:48:54 -0800
Subject: RE: [R-390] Another satisified Ebayer?

Yes, I suspected maybe this was meant to be an improvement on an original speaker but still not sure just what the claims are for the speaker or what the originals looked like. Evidently the originals had no box??? I also suspect this replica uses not what any of us would recognize as ordinary cardboard but a higher quality composite board material of some sort. On the performance side, I have several speakers mounted in 12x12x8 inch USPS priority mail cardboard boxes for two of my boatanchors. They sound as good as any other speaker I have, probably because I used a 6" high efficiency simple speaker and my hearing at high frequencies ain't so good anyway. These were expedient measures that seemed temporary at the time but hang around somehow. I'm convinced there's a little better cardboard out there that would do a better job cosmetically if I went to the trouble to find it. But then that would turn into a major project compared to the 20 minutes it took to make what I have. But it could be a fun project and an alternative to using thin wood which was the other material I considered. Maybe further postings will reveal what Mish's cardboard really is. I'd be interested. best regards, Dan.

From: Jim <jclark6@gmail.com> Date: Wed, 11 Jan 2006 16:12:57 -0600
Subject: Re: [R-390] Reproductions/radios

Dan, good definitions. I also believe the cost for the item is close to its value. The issue is the disclosure of what you are getting and we do not know what was stated. I think a cardboard enclosure is the last thing I would expect to see on any level of reproduction. Painted cardboard seems to me a big fire hazard to place in a rack. Jim

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Wed, 11 Jan 2006 19:42:09 -0500
Subject: Re: [R-390] Another satisified Ebayer?

wrote: > Yes, I suspected maybe this was meant to be an improvement on an original > speaker but still not sure just what the claims are for the speaker or what > the originals looked like. Evidently the originals had no box???

Bent-sheet-metal-box speakers always have (to my ears) a "tinny" sound.

Die-cast-box speakers are a step better but still sound a little tinny. (Still I have a pair of "Minimus-77's", Rat Shack's die-cast speakers of the 70's and 80's, that do a tolerable if not stellar job. The main reason they're still around is that they are well-nigh indestructible.)

The best-to-my-ears speakers have a box made of high-density particle board. I'm guessing they sound "mellower" because they don't have resonances/rattles in the way that sheet metal boxes do. And to my ears "mellow" is what I want for long-term listening.

Make particle board thin enough and it becomes cardboard, I guess...

The WORST speakers I've ever heard are the ones sold as "computer" speakers. They all sound tinny and crappy to me. I don't care if they have some monster big powered woofer, they still sound bad, no mellowness at all! Tim.

From: "kurt" <tem14me@usa.net> Date: Wed, 11 Jan 2006 17:58:19 -0700
Subject: [R-390] Cutting power cords

I would like to stir the pot and ask a question that I have not seen covered here before. What are your opinions on cutting the power cords off of equipment before it is sold off as surplus. Is this simply a quick and dirty way to render inoperative or an indication that the device truly does not work? The reason for asking is that I'm looking at some surplus stuff (390 related) it is strictly what you see is what you get and the price is too high to gamble. Thanks for your and consideration, Kurt Holbrook

From: "Veenstra, Lester" <lester.veenstra@lmco.com> Date: Thu, 12 Jan 2006 07:53:04 -0500
Subject: RE: [R-390] Re: Looking for a C adaptor

"The RF Connection" in Gaithersburg MD has the MB connectors and cable that can be assembled to make MB/MB jumpers. They also have MB to other coax connector adapters

From: "Norman J McSweyn" <normn3ykf@stny.rr.com> Date: Thu, 12 Jan 2006 09:27:25 -0500
Subject: Re: [R-390] Another satisified Ebayer?

Gentlemen:

Mr Mish and I had a conversation this A.M. regarding the speaker panel. He would not make good on the purchase price.

The auction will run for a month. Road Runner gives each subscriber a 5mb homepage. Can anyone guess what's going to go there?

Anyone who desires a full recounting and/or pictures may contact me off list. 73 es 24 de n3ykf

From: <w9ya@arrl.net> Date: Thu, 12 Jan 2006 09:45:34 -0500 (EST)
Subject: RE: [R-390] Another satisfied Ebayer? (sp corrected)

It's not a good idea to put cardboard in a rack around stuff that from time to time lets smoke out. (Been there, seen the results, and it is not pretty.)

i.e. Me too: I'm with the wacko.

Or put another way, a drilled, painted and stenciled panel with some speakers for $ 325 is a very highly priced item. IF you feel it is worth the money; f.b. If the paint is runny, as the buyer claims, all the more so.

Me, I would rather pay much less for such things. Rack panels are essentially free in most populated areas if you know where to go. Drilling and painting should not cost much at all. Speakers are also very inexpensive; again if you know where to go. About the only real time/expensive item is the labeling.

No hard feelings, just a friendly opinion. Vy 73; Bob w9ya

From: <w9ya@arrl.net> Date: Thu, 12 Jan 2006 09:53:14 -0500 (EST)
Subject: Re: [R-390] Another satisified Ebayer?

Perhaps the seller only SAID it was a Rick Mish item, and it is NOT really made by Rick ?

^ That seems to be a more likely possibility. Vy 73; Bob w9ya

From: "Paul H. Anderson" <paul@pdq.com> Date: Thu, 12 Jan 2006 11:32:11 -0500 (EST)
Subject: Re: [R-390] Another satisified Ebayer?

Rick's web page ad is quite misleading, principally though omission. >From the descriptions and pictures, I would have expected either a refurbished LS-206 or a near exact reproduction (steel cabinet primarily). What he is selling is not what I would have expected at all.

In order to clear up customers expectations, Rick should a) modify the text of his ad, clarifying exactly what he is offering, _and_ b) offer Norm an immediate refund on return of the 206, as well as an apology for the misunderstanding.

Anything else is bad customer relations.

I like Rick and admire his work greatly. However, his customer relations are at times 'special'. He only invites more pain upon himself to continue advertising the speaker panel the way he does. Paul

From: "William G. Mills" <millsend@alltel.net> Date: Thu, 12 Jan 2006 11:48:57 -0500
Subject: [R-390] LS-206/A Loudspeaker Assemblies

I have been reading the comments regarding Rick Mish's reproduction LS-206/A Loudspeaker Assemblies. Over a 22 year career in the U.S. Army Signal Corps, I saw hundreds of the LS-206/A

assemblies in operation and all had a double speaker enclosure made of metal.

If Rick Mish is up front with his prospective buyers about the enclosure being made of heavy duty card board or pasteboard then "buyer beware". I think the price of Mish's reproduction LS-206/A is way too high considering what it cost him in materials to build a single unit. The U.S. Army contract production units did not have the two front panel handles which have been added by Mr. Mish. Also, his web site pictures on his reproduction LS-206/A are "fuzzy" to the point that you can not discern whether the enclosure is metal or pasteboard.

I have had experience with Rick Mish and his capabilities on repairing R-390A receivers. My experience was not good!

I sent him a R-390A receiver for repair several years past. The receiver on return from his shop was marginally operational. I took the receiver to a local repair tech (which I did not previously know) which specializes in repair/rebuild of R-390A receivers who repaired and aligned the receiver properly. Too bad that I had spent the money and time sending the receiver to Mish for repair.

Bottom line, I would not send nor would I recommend Rick Mish to repair a R-390A receiver. Best 73, Bill Mills KC4AA

From: Dan Arney <hankarn@pacbell.net> Date: Thu, 12 Jan 2006 08:58:53 -0800
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

To all of the experts out there.

I did a lot of cost to make a run of 30 LS units. I would have to get $460.00 plus shipping to make it worth my while.

After all of the people that flaked on me on the CNC panels and SX-88 Bezels. This deal would Money up front for 30 units before I placed the order. I am tired of maybe, Oh forgot the check etc. bunch of people Hank KN6DI

From: "Dan Merz" <mdmerz@verizon.net> Date: Thu, 12 Jan 2006 09:44:15 -0800
Subject: RE: [R-390] Another satisified Ebayer?

Hi, well it seems obvious now that the rear enclosure shown in the current auction is what most of us call cardboard, not some superior quality product that I would have guessed without seeing the thing apart with the edges exposed. This only confirms in my mind that a lot of questions are in order before buying anything that is known to be or suspected to be a reproduction. I can sympathize if the buyer asked and wasn't told. I once bought a reproduction large paper tag for the inside of the lid of a Federal 61 battery radio at a price that could only be justified by quality and from a reputable seller; it turned out to be a rather poor xerox copy that was not going to be used on my restored radio. The seller refunded my payment with no question when I told him I was disappointed in the quality, though I didn't really expect a total refund. He didn't even ask me to send it back. I ended up making the tag myself and it was as good as an original, complete with the red and black coloring and pictoral display of the original. It took more time than I want to admit. I repaid the seller by offering him one of my tags at no cost because I thought he was a fair guy and my tags were so much better than his and his xerox helped me lay out my creation. I figured he knew others that might need the tag. And I couldn't resist the

temptation to show him how it could have been done in the first place in case he wanted to market something better. He never accepted my offer - guess he didn't want to improve his product. I consider him an honest person, with perhaps a different idea of what is an acceptable reproduction. In his favor, he wanted me to be a satisfied customer and has my lasting respect for that. Dan

From: <w9ya@arrl.net> Date: Thu, 12 Jan 2006 20:43:42 -0500 (EST)
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

Well I have not personally seen ANY of Mr. Mish's work, good or bad. But I do not think a repro consisting of cardboard is appropriate at any price as it cannot be a decent repro with such a thing as none of the originals came with enclosures other than metal. I hope we all can agree on that even if we cannot agree on the price of said cardboard.

Now I have bought your work. It is top-notch and well worth the money. It looks just like it should, made with the proper materials, and with due-diligence and care.

As such I guess we are comparing apples and oranges. And yours is the more tasty fruit that goes down easy. Vy 73; Bob w9ya

From: bw <ba.williams@charter.net> Date: Thu, 12 Jan 2006 21:26:21 -0600
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

I have some tube gear here that uses paper material for the backs. Some use Masonite. I have seen a lot of paper tube shields, wrapped in foil. Most of this has high heat build up inside. Barry

From: Robert Nickels <w9ran@oneradio.net> Date: Thu, 12 Jan 2006 22:22:28 -0600
Subject: Re: [R-390] Another satisified Ebayer?

Since this list is a pretty concentrated group of R-390 aficionados, I wonder if anyone here has purchased one of the Miltronix LS-206 A/U "replicas"? Or know anyone who has? If so, what are your impressions and how does the construction and quality compare with Norms? 73, Bob W9RAN

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 13 Jan 2006 00:14:10 -0600
Subject: [R-390] More on the R-390 Classroom Literature

Got an email from the fellow from whom I bought the '390 classroom notes. He says he has more and is sorting through it right now. I asked if he would consider selling it direct and am awaiting a reply.

Thought I'd let the list know. This is for the the '390, not the 390A. There seems to not be too much floating around for the '390.

All paper that I am able to purchase will be scanned and available for the archives. 73 Tom NU4G

From: "B Riches" <bill.riches@verizon.net> Date: Fri, 13 Jan 2006 08:53:02 -0500
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

Just thinking out loud - Since Mr. Mish is involved with our boatanchors I would imagine that he is on this list - why has he not defended his cardboard box? 73, Bill Riches, WA2DVU Cape May

From: odyslim@comcast.net Date: Fri, 13 Jan 2006 14:37:05 +0000
Subject: Re: [R-390] Another satisified Ebayer?

Bob,

I have one and I like it very much. Here is my list of impressions.

1: Very nice audio
2: Professionally fabricated of high quality components
3: Perfect paint with no blemishes
4: Professionally silk screened front panel
5: The cardboard speaker cabinet was just an added bonus
6: Milspec transformers

Personal comments about this whole issue.

1: If R.M. was selling real NOS LS 206 speakers for $300.00 shipped, he would have sold out long ago.
2: A new 206 on eBay would probably sell for over $500.00
3: The 206 does not have rack handles. That would have set off a red flag immediately.
4: I have a LS/139 G with no rear speaker cabinet. It sounds tinny when listening to music. I eventually mounted it in a CY 979A and filled it with fiberglass insulation to improve the audio.

5: There are very few people that would go through the time it takes to build the RM replica. Each hole, even for the speaker grill has been individually drilled. It is not a stamped out plate. I spoke with Rick about the " replica " speaker years ago when I purchased mine. He does put a lot of time and effort into that speaker. Is it a real authentic LS/206? No. But anybody should have noticed the difference by looking at it. I think the RM speaker looks very nice amongst my collection of R-390XX radios. I also believe that Rick Mish/ Miltronix had a pretty bright idea to supply a nice speaker that would normally be almost impossible for the enthusiast to obtain.

So, lets give this guy a break.

One last thing. I dont know how many people restore military gear for a living. There cant be many. We should all appreciate the efforts weather you support them or not. IMHO, My Flame suit on, Scott W3CV

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Fri, 13 Jan 2006 09:40:20 -0500
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

asks: > Just thinking out loud - Since Mr. Mish is involved with our boatanchors I > would imagine that he is on this list - why has he not defended his cardboard box?

The method of "attack" is E-bay. It's also a bizarrely strange method of attack, because the item in question was not sold by Mr. Mish on E-bay, and anybody foolish enough to make personal or business

attacks on other on E-bay is looked down upon by the ROW (Rest Of World).

I think we should applaud and appreciate Mr. Mish for not dragging this list into a stupid pissing contest. I would also like to applaud and appreciate everyone else who doesn't drag every little aspects of their wheeling and dealing (or other's wheeling and dealing) and griping and complaining to this list! Tim.

From: rbethman@comcast.net Date: Fri, 13 Jan 2006 14:45:43 +0000
Subject: Re: [R-390] Another satisified Ebayer?

I believe that RM is doing the best he can within reasonable limits.

The manufacture of an enclosure whether steel or aluminum would drive costs ballistic.

The handmade nature of the front panel, the transformer, and the impedance matching along with the beautiful lettering and painted finish show a professional job!

I have opted to use one of two Halli R-42 "reproducer" speakers for my own pleasure. Just imagine what it would cost to duplicate THEM!

I do NOT feel we should be beating RM the way this is running!

Just MY $0.02! Hank does VERY good work, along with Chuck R.! Bob - N0DGN

From: "David C. Hallam" <dhallam@rapidsys.com> Date: Fri, 13 Jan 2006 09:49:39 -0500
Subject: [R-390] R-390 Break In Operation

Would there be any problems with the operation of my R-390 or expected damage if I opened the RF gain terminals on the rear terminal strip during transmission for muting during PTT operation? This would open the cathode leads of the RF amplifiers and the 1st and 5th IF amplifiers. David KC2JD

From: Michael Melland <w9wis@yahoo.com> Date: Fri, 13 Jan 2006 07:05:58 -0800 (PST)
Subject: Re: [R-390] Another satisified Ebayer?

>...I wonder if anyone here has purchased one of the> Miltronix LS-206 A/U "replicas"?

I have one of the first batch he manufactured. Paint is perfect, back is a sort of fiber board... perhaps technically a cardboard but it doesn't look corrugated. It came with the speaker jacks instead of the correct switches and it has black handles. Lettering isn't painted but more like Datak transfer lettering, but it looks correct. Overall I'm extremely satisfied.

Rick was up front when he was telling me about his LS-206 speaker copy project so I knew these weren't exact copies. When I first mentioned I saw the speakers on his web page and started asking about them I remember getting the lecture on how these were copies and how "anyone knowing what they were looking at" would know that by the photo's. We discussed the speaker jack vs. switch issue and he told me he used speaker jacks thinking people would find them more useful. Further he said that it would be easy for a buyer to install switches if they wanted them themselves. I had sent my R-390A

to Rick for refurbishment, received it back in museum condition and was surprised to find a new speaker delivered free of charge a week or so later. So.... my cost is $0

BTW the web page with the Miltronix information etc. isn't maintained by Rick. IIRC Fred Osterman at Universal Radio put that page up quite a while ago as a favor because he thought he'd help advertise for Rick. The prices etc haven't been update for at least 5 years as far as I can tell.

My dealings with Rick over the past 6 or so years has always been positive and enjoyable. Mike, W9WIS

From: odyslim@comcast.net Date: Fri, 13 Jan 2006 15:15:59 +0000
Subject: Re: [R-390] Another satisified Ebayer?/ reproduction costs

I wonder what it would cost to re-produce the PM-23 Halicrafters speaker?

From: "Barry" <n4buq@aol.com> Date: Fri, 13 Jan 2006 09:44:16 -0600
Subject: [R-390] Antenna Connectors

Not intended to be a "Mish" post, but was interested in the mod I see on the radio displayed on the "Strip Alignment" page: http://www.dxing.com/r390/strip.htm

Anyone else decided to remove the antenna relay and replace it with a SO-239? Barry - N4BUQ

From: "Barry" <n4buq@aol.com> Date: Fri, 13 Jan 2006 09:50:55 -0600
Subject: [R-390] LS-206 Dimensions?

Can someone tell me the height of the LS-206's front panel. It appears to be a 5U (8.75" tall), but not sure. Thanks, Barry - N4BUQ

From: <w9ya@arrl.net> Date: Fri, 13 Jan 2006 11:42:47 -0500 (EST)
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

Hey Bill and the gang;

I guess because his only defense is to take the crap back and refund the money and place his apologies ?

(Which to date he has seen fit NOT to do. And I have been told privately is definitely NOT what he does in such situations. i.e. Mr. Mish has crappy customer relations.)

Dunno, just thinking out load also. <- Is it pompous or silly of me to think Mr. Mish is a ripoff artist ?
Vy 73; Bob w9ya

From: "Cecil Acuff" <chacuff@cableone.net> Date: Fri, 13 Jan 2006 10:48:23 -0600
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

I think the appropriate thing to do at this point is to take the Mish bashing and the discussion of this particular Ebay transaction to an OFF LIST discussion. Further discussion of this here is not providing anybody that subscribes to this list any benefit. If you don't trust Mr. Mish....don't do business with him. End of story! Cecil.....

From: <w9ya@arrl.net> Date: Fri, 13 Jan 2006 11:51:57 -0500 (EST)
Subject: Re: [R-390] Another satisfied Ebayer?

Hey Scott and the gang;

But what Norm got was not blemish free. It fact it has paint runs.

It does not have quality transformers from what I can tell in the pictures.

He was NOT told it was a repro prior to purchasing.

The cardboard speaker "cabinet" does not belong in a rack for safety reasons.

So I guess you got something else. That certainly is possible. Perhaps you should email Norm and get the rest of his story; which since he did not want to put in here on this list, I will respect that and also not do so.

But what he got was a "rush-job" that looks like crap. Literally with paint runs. His private emails explain why this "rush-job" happened. It seems like Mr. Mish got angry and shipped some crap on purpose. He certainly is not refunding the money for it, and that represents a disrespect for his customers and the main reason I will not buy from him. Vy 73; Bob w9ya

From: "Kenneth G. Gordon" <kgordon@moscow.com> Date: Fri, 13 Jan 2006 09:05:20 -0800
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

wrote: > is definitely NOT what he does in such situations. i.e. Mr. Mish has > crappy customer relations.)

Thinking out loud here myself: I think that depends on what type of customer is involved.

Rick has always, ALWAYS, been very good to me. I have absolutely no complaints.

Further, I understand that, in fact, MOST of his customers are very satisfied with his work.

In any business, especially a SERVICE business, there will always be some customers whom it will be impossible to please, for any of a number of reasons.

Sometimes once things get started in a wrong direction, there is nothing anyone can do to change that.

I certainly have experienced that, and I worked as hard (in my own opinion, much harder) than everyone else in my business did to do a top notch job at all times. Ken Gordon W7EKB

From: <w9ya@arrl.net> Date: Fri, 13 Jan 2006 12:08:56 -0500 (EST)
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

No need to answer that as the emails since I wrote this clearly indicate that many of you are satisfied with the speaker sets you got from Mr. Mish.

I took the time to take Norm up on his offer to tell his story in a private email. He extended this offer to each of us on this list. Norm has CLEARLY told me he was NOT informed it was a repro prior to purchase and that ALONE should be enough to concern us all <- that is *if* we care about such things in commerce.

I *still* think Norm was ripped off after looking at what he got material-wise and the lack of quality in the painting and labeling. That is to say that even *if* Mr. Mish told me it was a repro, such shoddy work and lack of due-diligence for such money would offend me. Maybe not you, but I would also be unhappy.

And I *still* think that Mr. Mish's customer relations stink because he is willing to send a runny paint knock off for premium bucks and not stand behind his work. i.e. Will I get such a lemon with no recourse to rectify the situation if I ever have the will to buy from him ?

I am glad others are not being taken advantage of, i.e. that is good to know and thanks for sharing.

Anyways, you all have spoken. Thanks for the input !! es vy 73; de Bob w9ya

From: "David Wise" <David_Wise@Phoenix.com> Date: Fri, 13 Jan 2006 09:16:04 -0800
Subject: RE: [R-390] R-390 Break In Operation

Assuming you also disconnect and ground the antenna input to avoid frying the RF coil, sure. I'm curious though: why not use the standard break-in connection? It does exactly that, and mutes the audio line too. It requires a contact closure, which you can probably supply as easily as the contact opening required for your proposal. Dave Wise (SWL in Portland Oregon)

From: Bill Abate <wabate@verizon.net> Date: Fri, 13 Jan 2006 12:23:33 -0500
Subject: Re: [R-390] Antenna Connectors

Barry wrote: >Not intended to be a "Mish" post, but was interested in the mod I see on the >radio displayed on the "Strip Alignment" page: > >http://www.dxing.com/r390/strip.htm > >Anyone else decided to remove the antenna relay and replace it with a >SO-239? > >Barry - N4BUQ >

Barry,

I replaced the 'unbalanced' connector with an SO-239 but I did it differently. The original connector was bashed in, so I did not have anything to loose. The connector is merely soldered in. I removed it (forcefully) and cleaned up the residual solder in the socket of the relay housing. I then removed the flange of the 239 and trimmed it slightly on a lathe so that it would fit the existing opening. Then I soldered the SO-239 to the relay housing. Then you just have to reconnect the center connector. Not hard but you need a lot of heat for solder to flow on that massive housing. Everything else stays the same. In effect I eliminated an adapter. Then I grounded one pin of the twinax connector. I think I

swapped the mini bnc's as is documented elsewhere to connect the antenna to the RF coils. 73, Bill, K3PGB

From: Jim <jclark6@gmail.com> Date: Fri, 13 Jan 2006 11:29:16 -0600
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

I would like to say I have received a few Private emails and I think I will dismount form this horse and move on to a new ride. Many on the list have been patient as this was discussed so I will extend the same courtesy and move on. Jim N5TJZ

From: "Barry" <n4buq@aol.com> Date: Fri, 13 Jan 2006 11:30:18 -0600
Subject: Re: [R-390] Antenna Connectors

Along the lines of antenna connections, I "discovered" something interesting the other evening. For testing purposes, I have been connecting my RG-58 to the unbalanced input. I decided to switch to the balanced input. When I connect the center conductor, the radio jumps to life; however, when I connect the outer shield to the other pin (not grounding either pin), the received signal becomes much quieter and about a 10dB increase in signal strength (according to the Carrier Level meter).

I figure this is because I aligned it to the balanced input (with a lower-than-125-ohm impedance), but I was kind of surprised at the difference I could detect between the two inputs, especially when I disconnected one pin on the input (the coax's shield).

One other thing: the antenna input caps (the ones in the first transformers that go across the first transformers) don't do ANYTHING. Is this simply due to too much impedance mismatch? Barry - N4BUQ

From: "David Wise" <David_Wise@Phoenix.com> Date: Fri, 13 Jan 2006 09:54:12 -0800
Subject: RE: [R-390] Antenna Connectors

It's necessary to involve both pins. If you don't, the coil primary is essentially in series with either the fixed or trimmable balance caps.

Unlike most radios, the R-390x have a balanced, or differential, input. The balance caps contribute to circuit operation in an interesting way ONLY if you are using a balanced antenna lead. In that case, when the caps are trimmed right, the receiver will respond only to the difference between the two conductors, and will ignore common-mode noise. The way most of us have the input set up (single-ended, i.e. one pin grounded), this feature is defeated and the trimmers don't do a thing. Note that use of an "un-bal" (opposite of a balun) at the receiver is futile, since the only common-mode noise that will be rejected is what's picked up between the un-bal and the receiver! Dave Wise (SWL in Portland Oregon)

From: "Jim M." <jmiller1706@cfl.rr.com> Date: Fri, 13 Jan 2006 13:10:57 -0500
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

Let us put this little loudspeaker thing in perspective:
http://www.cnn.com/SPECIALS/2003/iraq/forces/casualties/index.html

And if that's not enough, just remember it is NOT a tsunami. I have bought several BA's that turned out to have defects that weren't advertised. Rather than bitch and moan, I just fix 'em. We're talking about ancient technology here folks, what's the big deal? Run down to Home Depot, buy some eighth inch oak paneling, some angle brackets wood glue and brass screws, make yourself a box! Then put it in the rack, and you'll never know!

Maybe RM has been having bad days in his life lately, you never know what's going on. 30 years ago I Probably did better fabricating work than I do today. Maybe he got overwhelmed with too many orders, and he had someone else help him. Who knows? Just remember, it ain't a tsunami. Jim M.

From: "Brad Huff" <huffb@avalon.net> Date: Fri, 13 Jan 2006 12:52:56 -0600
Subject: [R-390] signal generators

I have seen a few comments about the urm-25 vs the HP 606A, and we all know that the HP 8640B is far superior to these. What is the general feeling about the Boonton 103B? In today's world of cheaper surplus test equipment, is it of any value to own a urm-25?-Brad

From: "Cecil Acuff" <chacuff@cableone.net> Date: Fri, 13 Jan 2006 13:18:21 -0600
Subject: Re: [R-390] signal generators

I had a URM-25 after having used many different signal generators professionally and found it clunky to operate and a bit confusing. Those that were raised on them will probably disagree but that's OK....it's a personal thing. I gave it to my brother and bought an HP-606A. It's big and heavy but it's rock solid and very straight forward to operate. It was shipped to the east coast from the west coast by UPS and was dead on when it got here....

I have no experience with the Boonton 103B. I have used a Boonton VHF/UHF generator before when doing commercial 2-way work and it worked OK. There is a 103D on auction right now for less than $100. I'm still like the HP stuff and a good 606 can be bought for no more than $100 most of the time.

From: DJED1@aol.com Date: Fri, 13 Jan 2006 14:18:36 EST
Subject: Re: [R-390] signal generators

I don't think the URM-25 the best choice these days given the availability of quality test gear. I finally traded up because I realized that I was trying to do testing with a piece of gear almost as old as I am! However, I keep it around because it's one of the few generators that will go to 50 KHz to aligh boatanchors with a 50 KHz IF. Ed

From: <w9ya@arrl.net> Date: Fri, 13 Jan 2006 14:21:41 -0500 (EST)
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

It's a NEW repro (reproduction) item. Not an OLD "boatanchor". Vy 73; Bob w9ya

From: "Craig C. Heaton" <wd8kdg@worldnet.att.net> Date: Fri, 13 Jan 2006 11:25:58 -0800

Subject: RE: [R-390] signal generators

Hello Brad,

Both the URM-25D and a HP8640B are on my test/repair bench. Got my 25D for 50 bucks last year, it gets the job done! Only thing it lacks is a frequency counter, most shacks have one on hand. One afternoon the 25D was recapped and a shorted tube replaced, its ready for another 40 years.

The HP8640B has more whistle n' bells, built in freq counter and lock are nice. You are going to pay much more for one and I'll bet you a soda it isn't working 100%. Parts can be still found by searching for someone with a hanger queen, or you can buy several to keep on hand for solid state break-downs.

So if its just for keeping one old boatanchor R390 or R390/A working like a wonderful receiver, a URM-25D will do. Got more stuff in the shack, some FM receivers, etc., could be time to upgrade. I bought the HP just for something to fix during the rainy season in Oregon. Still fix'n and the rains haven't stopped. 73's wd8kdg Craig

From: "Jim M." <jmiller1706@cfl.rr.com> Date: Fri, 13 Jan 2006 14:42:26 -0500
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

We here are in a boatanchor world. Anything you do with and for your boatanchors is boatanchor, new or old. It's just a hobby. Have fun with it. Jim M.

From: ToddRoberts2001@aol.com Date: Fri, 13 Jan 2006 14:43:01 EST
Subject: Re: [R-390] Open Z-503 AGC IF Transformer

If anyone is interested here is a recap of the measurements I took of the tuned circuit Z-503 inductor coil L514. I measured the inductance of the coil as 1.385mH. I also had a chance to measure the Q of the Z-503 coil L514 and I was surprised to find it measured a very low Q of only about 30-40 Q at 455KHz on the Heathkit Q-meter. I have a bag of small 1.2mH molded inductors I picked up a while ago from Hosfelt Electronics and measured one and its Q was about 60 at 455KHz so it looks like just about any small commercial inductor would work fine to get Z-503 working again. I think those inductors only cost me about 20 cents each. I found it took about 85pF to resonate the 1.2mH inductor at 455KHz, so a typical small Mica cap would work well across the inductor to get Z-503 working again. Best to use something like a Heathkit Q-meter to determine how much capacity is needed to resonate the new coil at 455KHz due to the unknown distributed capacity of different inductors. If someone ever needed help with a burned out Z-503 I can mix and match small inductors with a small cap to resonate at 455KHz. 73 Todd WD4NGG

From: "B Riches" <bill.riches@verizon.net> Date: Fri, 13 Jan 2006 16:27:57 -0500
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

I cannot find anything wrong with Rick using a custom made cardboard box - if it was a wood box it would be more expensive and more work. The speaker looks great and sounds much better than the original. It is a very labor intensive job to get all the holes right. Let us be glad Rick produces the unit for us. 73, Bill Riches, WA2DVU

Date: Fri, 13 Jan 2006 17:16:22 PST
From: Gary Gitzen <r390a@uwave.com>

Hi R-390 guys & gals,

Visited a surplus electronics place today and found about a dozen 6082 tubes, mostly NOS/NIB. Are there any folks here on the list with enough interest in them at $15/ea + shipping for me to travel 75-80 miles to get them?

They also had a large number of 6BJ6, 5651, 5749/6BA6, 5814, 5654/6AK5.

I also noticed about 10 silicon 866 replacements. If I go for the 6082s, they can be had for $20 ea + ship.

Also noticed two what appear to be 5U4 silicon replacements.

If I go there again, and if you have any special tubes you need, send me a list. They have a large number of "number" tubes, and I also noticed some sweep tubes. .From what I've seen so far, cost should be a bit below AES. Packing & shipping will add some to that.

Please note: I am not in the tube sales business, and don't want to go there. I saw these 6082s and had heard they were getting scarce, so thought I'd share them with the R-390 list. If I get overwhelmed with replies I'll have to back away from this.

I have no idea what packing will cost these days, but a box + cushioning + gas for running around will probably come close to $5. Shipping, with insurance, will add more.

I've newly rejoined the R-390 list after an absence of a few years because I recently bought another R-390A. But that's a story for another time. Gary

From: Les Locklear <leslocklear@cableone.net> Date: Fri, 13 Jan 2006 18:21:38 -0700
Subject: Re: [R-390] 6082 (and other) tubes

If you aren't in the tube business and don't want to go there, just post the name, address and phone number of this surplus dealer.

Simple huh? Les Locklear Gulfport, Ms. Professional Curmudgeon Equal Opportunity Annoyer

From: bw <ba.williams@charter.net> Date: Fri, 13 Jan 2006 20:04:52 -0600
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

> Barry, I assume you are speaking of consumer items and not military gear. I have also seen fiber board backs, but I would also guess that they are fire > rated. I have not seen any cardboard in military or commercial rack mount gear. I will confess that there is much more rack mount equipment which I have not seen than seen. Jim

Jim,

Yes, I was referring to commercial gear to put some perspective out there. Thanks for the note about what I said. One person is writing me off list and acting like he is echelons above me in his lofty position as speaker/rack equipment guru. He doesn't know me and it is laughable. Personally, I wouldn't worry too much about speakers. Maybe the enclosures could do with some work to help the speakers along, but some people don't have much of an ear to whether it sounds this way or that. I don't care about HF audio except that I want to hear what being received. Beacon chasing below 500 is another matter all together. You really have to pay attention to the audio then! Barry

From: bw <ba.williams@charter.net> Date: Fri, 13 Jan 2006 20:08:05 -0600
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

> Just thinking out loud - Since Mr. Mish is involved with our boatanchors I would imagine that he is on this list - why has he not defended his cardboard box? 73, Bill Riches, WA2DVU

I wrote Rick over a year ago about something or another being said about him. He said that he really doesn't have the time to keep up with bickering. I gather that he gets his share of space cadets in his line of work. He is a nice guy and enjoys talking about boatanchors. I'm sure he would have something to say about the potshots being taken right now, but I also think that he doesn't need the unnecessary headaches either. I'm pretty sure that he has not belonged to this list, but I could be wrong. Barry

From: bw <ba.williams@charter.net> Date: Fri, 13 Jan 2006 20:10:19 -0600
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

> I would also like to applaud and appreciate everyone else who doesn't drag every little aspects of their wheeling and dealing (or other's wheeling and dealing) > and griping and complaining to this list! Tim.

Tim,

I agree with the following caveat. Tips on ripoff artists, junk, and scams are always welcome with me. I consider it a sort of warning system. That can be taken too far, of course, but it has mostly been helpful. I like knowing who to avoid. Barry

From: bw <ba.williams@charter.net> Date: Fri, 13 Jan 2006 20:13:09 -0600
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

> Dunno, just thinking out load also. - Is it pompous or silly of me to think Mr. Mish is a ripoff artist ? Vy 73; Bob w9ya

One word- absolutely! Barry

From: bw <ba.williams@charter.net> Date: Fri, 13 Jan 2006 20:16:34 -0600
Subject: Re: [R-390] Another satisfied Ebayer?

> The cardboard speaker "cabinet" does not belong in a rack for safety reasons. Vy 73; Bob w9ya

Bob,

If you are so afraid of simple speaker hazards, maybe you should give up all electronics. Barry

From: Gary Gitzen <r390a@uwave.com> Date: Fri, 13 Jan 2006 18:27:12 PST
Subject: [R-390] 6082 tubes, a followup

Les wrote (and Peter said essentially the same in private mail):

If you aren't in the tube business and don't want to go there, just post the name, address and phone number of this surplus dealer. > Simple huh?

If memory serves, I actually posted it to this list years ago.

The reasons I'm not doing it right now are twofold:
1: They don't do mail order. I asked.
1A: I don't think I'd trust their packing.
2: I personally would prefer that members of the list get tubes they need instead of a single person buying them all, or a business buying them up for resale.

After I/we see what happens with this, I'll happily (re)post information on the source. Regards, Gary

From: <w9ya@arrl.net> Date: Fri, 13 Jan 2006 21:28:31 -0500 (EST)
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

O.k....I can agree with all of this very last statement of yours.

The ONLY part that still confuses me is how some of the same people that are complaining about how high the cost of r390's et al have gone up - are the very same people that think that well over $ 300 is acceptable for two speakers on a rack panel with runny paint and a cardboard box.

^ - This just slays me. Really.

Anyways; thanks to everyone for thier good wishes and humorous dialogs. Vy 73; Bob w9ya

From: bw <ba.williams@charter.net> Date: Fri, 13 Jan 2006 20:29:19 -0600
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

In attempting to allay the fears of someone off list I remembered something as I tryed to set things back in the neighborhood of common sense.

They do use cardboard for speaker construction. I've seen cardboard tubes used for bass reflection. Also, I remember seeing stuff that looked like cotton material that you can buy called batting. It is used to stuff things in sewing. Anyway, I'm sure nobody is too paranoid if that catches fire. The point is that this worry about fire is silly to me. Barry

From: "Bruce Hagen" <b_hagen@sbcglobal.net> Date: Fri, 13 Jan 2006 21:38:50 -0500
Subject: RE: [R-390] Another satisfied Ebayer? (sp corrected)

I agree with Barry. There was a Pro Speaker manufacturer in Meadville, PA about 15 years ago that made some decent MI stuff in cardboard cabinets. Bruce Hagen

From: Joe Foley <redmenaced@yahoo.com> Date: Fri, 13 Jan 2006 18:44:11 -0800 (PST)
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

Has anyone EVER seen even ONE speaker with anything BUT a flamable paper cone???? Joe

From: <w9ya@arrl.net> Date: Fri, 13 Jan 2006 21:50:37 -0500 (EST)
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

>> Dunno, just thinking out load also. <- Is it pompous or silly of me to>> think Mr. Mish is a ripoff artist ? >> Vy 73; >> Bob>> w9ya> One word- absolutely! > Barry

Gee what a surprising response. Uh, please let me rephrase that:

Someone reminded me in a private email that a few years ago there was discussion here about a radio (390) that Mr. Mish repaired and returned. Unfortunately it arrived broken. Mr. Mish filed a claim (only shippers could do so), there was a decent sized settlement, and then kept the money. The radio's owner was left with a broken radio and no funds to compensate. Mr. Mish ended up being paid more than once for the work. Mr. Mish was o.k. with that, since that was his payment for filing the claim. (Or words to that effect.)

Anyone else remember that thread ?

(I am sure you do Barry. And I am sure you will correct me on anything I got wrong as well. In fact I am counting on you to do so.) Vy 73; Bob w9ya

From: "Bruce Hagen" <b_hagen@sbcglobal.net>
Subject: RE: [R-390] Another satisfied Ebayer? (sp corrected)

Oh, yes. The Hartley MS220 with a plastic impregnated fiberglass cone starting in the '50's. Some Canadian woofers of the '90's, and lots of Hi end consumer in-walls today. Bruce

From: <w9ya@arrl.net> Date: Fri, 13 Jan 2006 21:54:22 -0500 (EST)
Subject: Re: [R-390] Another satisfied Ebayer?

>> The cardboard speaker "cabinet" does not belong in a rack for safety reasons Bob w9ya

> Bob, If you are so afraid of simple speaker hazards, maybe you should give up all electronics.
> Barry

Well not speaker hazards, just runny painted cardboard enclosures that are burning hazards.

Um, my employer won't let me give up my repair work. Too many electronics and such around the tee wee station (actually a network operations center for tv) to fix. Vy 73; Bob w9ya

P.S.....This banter is becoming quite humorous OM.

From: "Bruce Hagen" <b_hagen@sbcglobal.net> Date: Fri, 13 Jan 2006 21:54:34 -0500
Subject: RE: [R-390] Another satisfied Ebayer? (sp corrected)

<Has anyone EVER seen even ONE speaker with anything BUT a flamable paper cone???? Joe

Left out two words. The current and up North stuff used aluminum.

From: bw <ba.williams@charter.net> Date: Fri, 13 Jan 2006 21:28:22 -0600
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

AHAH! So this is about ax grinding? I thought I smelled a stinking rat and I was right. Barry

From: bw <ba.williams@charter.net> Date: Fri, 13 Jan 2006 21:29:07 -0600
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

> Has anyone EVER seen even ONE speaker with anything > BUT a flamable paper cone???? > > Joe

Damn Joe! I forgot about speaker cones. Good thinking. Barry

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 13 Jan 2006 22:08:38 -0600
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

I can think of two right off the bat- The LS-166 and the LS-454.

Then again, I'm a smart aleck. And I have one of each looking right at me with its shiny cone. Tom

From: Tom Norris <r390a@bellsouth.net> Date: Sat, 14 Jan 2006 03:06:14 -0600
Subject: [R-390] Schematic needed for CV-1694/GRC-129

Subject says it all. I know the thing is fairly simple, but it would be nice to have a complete diagram around should I ever need to do any troubleshooting in the future.

also Before I connect the thing, what is the function of the "control" line if used with a radio other than a R-1247/GRC-129? Wondering if it's an output to the rx or an input to the convertor. thanks Tom NU4G

From: Tom Norris <r390a@bellsouth.net> Date: Sat, 14 Jan 2006 03:28:59 -0600
Subject: [R-390] Dimensions for LS-206 speaker front panel needed

I need the dimensions for the LS-206 dual speaker panel. Thanks for any help Tom NU4G

From: Michael Crestohl <W1RC@Verizon.net> Date: Sat, 14 Jan 2006 07:32:40 -0500
Subject: [R-390] FS: Set of Three Tube Socket Adapters

Hi Gang:

I have an extra set of three MIL tube socket adapters consisting of an octal, 7 and 9-pin miniature. For those of you who may not know what these are, they are invaluable for taking meter readings on different tube pins simply and easily. They plug into the tube socket on the chassis and the tube is plugged into the adapter. There is a test point for each pin on the adapter and you get the rest.....They are definitely a safety feature and also save a great deal of time when troubleshooting. These are getting very hard to find especially in sets of three. I am asking $25.00 plus postage for these. If interested please reply by e-mail. 73, Michael, W1RC w1rc*at*verizon*dot*net

From: Dan Arney <hankarn@pacbell.net> Date: Sat, 14 Jan 2006 05:25:33 -0800
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

Seems to me that all should have the message by now. ON TO BIGGER & BETTER. Hank KN6DI

From: "Steve Hobensack" <stevehobensack@hotmail.com> Date: Sat, 14 Jan 2006 10:24:04 -0500
Subject: [R-390] Re: Another satisfied Ebayer?

Take one Zenith Allegro speaker, turn it horizontal, mount it in a 19 inch rack. Excellent sound!
....N8YE

From: <w9ya@arrl.net> Date: Sat, 14 Jan 2006 10:47:13 -0500 (EST)
Subject: Re: [R-390] Re: Another satisfied Ebayer?

> Take one Zenith Allegro speaker, turn it horizontal, mount it in a 19 inch rack. Excellent sound!

Hi Hi.....

Yeah, I use the very exact same setup for my r390a's and the sp600....!!

I do not remember where I got the speaker set, but they work well. The other one from the set goes above the operating position for use with the homebrew qrp rigs.

Only down side is the space they take up on the book shelf, but in the rack it is about the same space as the military one we were discussing. Vy 73; Bob w9ya

From: Jack Absalom <kf4yio@charter.net> Date: Sat, 14 Jan 2006 11:34:49 -0500
Subject: [R-390] TIRED OF READING ABOUT CARDBOARD SPEAKERS

Hey Guys

Do you think we could return to some more R390/R390A related topics? This is getting to be too much Jack

From: 2002tii <bmw2002tii@nerdshack.com> Date: Sat, 14 Jan 2006 12:46:25 -0500
Subject: Re: [R-390] Another satisfied Ebayer? (sp corrected)

Joe wrote: > Has anyone EVER seen even ONE speaker with anything > BUT a flamable paper cone????

Let's see, in the 20 years I spent in the high-end hi-fi business, I saw: wood aluminum titanium beryllium kevlar bextrene impregnated fabrics phenolic composites mylar styrofoam glass fiber composite glass ceramic cork

And that's just what I remember off the top of my head for coil-driven speakers of some size (4" or more). Tweeters have used all kinds of things, including a gaseous plasma. Best regards, Don

From: "Barry" <N4BUQ@aol.com> Date: Sat, 14 Jan 2006 11:58:49 -0600
Subject: [R-390] Interesting Speakers

I do recall an article in Popular Electronics back in the '60s about using fire itself as a speaker. Apparently the tension on the surface of the flame could be caused to vibrate and act as a speaker.

I guess these wouldn't work very well in a cardboard enclosure, though :) Barry - N4BUQ

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 14 Jan 2006 12:05:52 -0600
Subject: Re: [R-390] TIRED OF READING ABOUT CARDBOARD SPEAKERS

We're about two days past too much....

I agree with the idea of a warning about problems associated with business dealings with folks in the business but this has gone from productive warning and friendly discussion to unproductive personal mortar attacks. It's time to agree to disagree on the topic of RM and his use of cardboard and fix a radio or two.

In that vein.....

I refilled the engravings on my "Blue Stripper" project radio's refinished front panel last night. The panel was quite rough when I started out but came out pretty nicely. I have no plans of making this a perfect radio but plan on using it as the test bed for evaluating all the mods floating around to decide which ones work for me and which ones don't so I can decide which ones I want to incorporate into the planned radio rebuild for the listening position. (a black faced Motorola in a black CY-979A cabinet) I used a little different capacitor rebuild process than I have seen after having much trouble with the drill and tap routine to attach the new capacitor leads to the pins in the base of the original caps.

I cut a defective octal tube base apart to salvage the pins that I soldered to the new cap assemblies. I

pushed the pins into the appropriate socket locations and mounted the original cans minus the bases in their associated clamps and screwed the clamps back in place on the audio deck. So the cans basically float over the new cap assemblies that are plugged into the octal sockets on the audio deck. Looks completely original once the module is back in the radio and I can re-enter the caps at any time to make changes. I think the next one I do I will cut the original cans lower around the crimp and it will look even more authentic once reinstalled.

Just another way of doing the cap job that will make it easier to go back in. All leads are insulated with Teflon tubing so nothing electrical exposed to get against something it's not supposed to!

I plan to put the panel back in place today and begin the turn up and alignment.

The other mods already done to this radio include replacement of the selenium rectifier with a silicon bridge, 12BA6 tubes and a jumper for the ballast tube, a complete recapping of all paper caps using one of Walter Wilsons kits, a 20 turn pot for the "S" meter zero, solid stated power supply as per the military mods and an inrush current limiter for a softer start.

All of the various controversial stuff discussed on the list from time to time....but none of the above conspire to do near the damage to the radio than the government had already attempted to do by having them out in the weather for an extended period. Most of which I feel I have reversed.

I expect it to be a nicely performing radio before any additional performance enhancing mods are done. The gear train sure is slick and feels wonderful. Very easy to tune both Khz and Mhz!

What are some of the other group members current winter time projects.....

We'd love to hear about them!

My next challenge will probably be an SP-600VLF that needs caps under the RF deck and every tube socket replaced.....sounds like fun don't it! HA! Keep it FUN guys...that's why we do this! Cecil Acuff WB5VCE

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sat, 14 Jan 2006 13:44:42 -0500
Subject: Re: [R-390] TIRED OF READING ABOUT CARDBOARD SPEAKERS

wrote: > What are some of the other group members current winter time projects..... > We'd love to hear about them!

Making a HBR-16 type receiver from scratch is mine. Been tearing through junker BC-453B's for IF transformers. For those who don't remember, the HBR-series of receivers were in QST articles in the 60's, and are dual conversion (1.6MHz first IF and 85kHz second IF, adjust to fit whatever IF transformers you can find.) Have a nice big Millen dial and VFO put together already, and have been sweeping out and tweaking IF transformers for eventual use. qth.net also has the HBR mailing list, I highly recommend it as well as the HBR site: http://k5bcq.edebris.com/

I know the habit here is to talk about brown beauty caps, but the paper-caps-in-metal-cans in my BC-453B's make brown beauties look good in comparison! In many cases the metal cases are leaking green gunk (or, they have been leaking gunk for a couple decades now.) I didn't know that paper caps had that much gunk in them!

I still have my project from summer to wrap up too, the yellow-striper R-390A from Fair Radio. All the modules are cleaned up, recapped, and re-aligned, and work in my other chassis, but haven't quite put the banged-back-into-shape chassis from Fair back together yet (there's actually some banging still to be done on the back panel - the front panel has been done for half a year now!)

Realistically these projects will stretch into summer too.

Been on the air with my Ten-Tec Triton IV on CW recently. It's sweet on CW w/break-in, but no tubes! Tim.

From: Barry Hauser <barry@hausernet.com> Date: Sat, 14 Jan 2006 14:03:49 -0500
Subject: Re: [R-390] Floating Capacitor Cans & Other Issues

I dunno, Cecil, that seems to be a deceptive method of stuffing the plug-ins. One day, 30-50 years from now when it's time to re-do the caps again, some pilgrim is going to lift those things and go ... "WHOAAAAH! This ain't right! I've been took!!!"

The other issue: What could possibly cause the need to replace ALL of the tube sockets in that SP-600-VLF? Not that I doubt you, but very curious. Severe corrosion? Soaked with 409 and internally ionized with salt compound residue? Wanna know. (You might have posted on that before, but I don't remember.)

BTW -- here's a small project for the group: It would be nice if there were a small standard form layout to indicate mods and when things were last serviced on R-390's, R-390A's, etc. Ideally, it should go inside the radio somewhere -- there are a few "cubbies" -- or attached to the back panel. It would be helpful when the radio is passed along -- or even before that if you have a few and lose track of where you left off. That would be the place to indicate SS rectifiers, replacement/bypass of the selenium rectifier, ballast tube alternatives, tube substitutions, AGC mods, etc. Could be a little address book thing or a layout in Excel or Word to fill in on the PC and re-print each time there's a change -- or just something with lines to write in and indicating dates, such as "1/7/2006 -- Overhauled plug-in caps -- floating can method." Be sure to write the year out in all four digits, so no confusion with 3006 when the time comes.

Needs some kind of holder -- maybe rolled up in an aluminum cigar tube and wired to the tool holders or velcro'ed on. I've taken to putting hang-tags on the rack handles to keep track of things, but they're just blank and don't have enough room -- and the string might break -- and it doesn't look too pretty.

Will have to get back to you with wintertime projects -- it's half over and I'm way behind on 'em. Anybody familiar with PRD-1's? Barry

From: Barry Hauser <barry@hausernet.com> Date: Sat, 14 Jan 2006 14:26:46 -0500
Subject: Re: [R-390] TIRED OF READING ABOUT CARDBOARD SPEAKERS

Hi Tim

I have that ATC stock -- includes side and back panels. There are a lot of good side panels. Back panels vary, but some are not too bad. If your panels are just slightly bent, I've found one of the best

tools -- rather than pounding with a heavy hammer -- is a large adjustable "Crescent" wrench -- at least a foot long. You tighten up the (smooth) jaws very firmly at the point to be bent back, using some pasteboard -- such as from a matchbook or cereal box -- to avoid marring things. Then lean on the panel and rock the thing -- i.e. get a feel for the metal -- and bend to original angle. Alternative is a big C-clamp if you can get a grab on it. Big old monkey wrench would also be good -- the ones with the smooth parallel jaws. (I think the ones with the toothed curved jaws are called "Stilson wrenches" -- or I might have that backwards.) Let me know off list if you need any panels.

Date: Sat, 14 Jan 2006 14:27:49 EST
From: DJED1@aol.com

I've got a bit of a problem because my wife has her own ideas on winter projects. I'll be rebuilding a bathroom for her, so my radio list has to be more modest: I want to try and fix the warble in my Progressitron PTO and put it back in the radio, then set up a jig to calibrate the Cosmos. I've done it in the radio a couple of times, but my hands and eyes get awfully tired working in tight spaces. My concern is that if I want settability of 100 cycles on the PTO, I need a fixture that will read out accurately to a small fraction of a degree. After that, I want to clean and lube the geartrain in my SP-600. Anyone know of a reference to tearing down the geartrain on the SP-600? Ed

From: "Al Parker" <anchor@ec.rr.com> Date: Sat, 14 Jan 2006 14:49:05 -0500
Subject: [R-390] re: Floating Capacitor Cans & Other Issues

Hi guys,

Yes, let's move on, with a new subject line so we won't delete something good without looking. (it's easy with the digest)

Interesting method Cecil, but I still like the can mounted to the base somehow. Just did 3 for R-388's, one had a slightly different base/pin arrgt that made drilling/tapping a little difficult, but came out OK.

Haven't done an R-390A cap yet (only have one here, I could do it), been working on R-390/URR's lately, still am into the one that's been open for a cupla mo.s. Need to ck the span on the PTO, then abt ready to re-assemble, but am not decided on how much clean/paint I should do on xfrms/cans. The gray is kinda speckled with rust. Open to suggestions.

Tim, I've just gotten a Triton IV on the air about a month ago, have been on 40m CW every day for at least 1 qso since. I bought a new Triton IV back in abt 1976, wanted to see if it was still a neat rig, it is. TenTec makes great CW rigs, this one was the beginning of them getting into the "bigtime".

Barry, yes, a short-form data/work sheet would be nice. I guess the best would be radio specific. I keep a notebook on all I do, but don't always incl. a synopsis when the radio moves on. SP-600's & R-388's have been the bulk of what I've worked on for a cupla yrs, other than a few one time shots. 73, Al, W8UT

From: odyslim@comcast.net Date: Sat, 14 Jan 2006 20:31:08 +0000
Subject: [R-390] What I did on my winter vacation

So Far, I re-built 14 multi-section capacitors. I did my project pretty much the usual method everybody uses with only a couple of changes. I used a large tubing cutter and made precise cuts along the bottom of the can. After removing the can from the base, I screwed in a 3 1/4" long eye-hook with 1/4 thread diameter all the way into the center of the muck. I then made a loop out of 1/4" parachute cord about 3 1/2 ft diameter.I Put the can in my vise with just enough overlap on the jaws of the vise to keep the can from slipping through. After that, I attached the loop of cord to the eye-hook, put my foot into the loop and pushed down. Like starting an old Harley. The entire contents of every can popped right out. I then drilled the pins out in the usual way. This was a good excuse to buy a nice bench top drill press since I had 14 to re-build. I then did the standard 4-40 tap job and installed the brass screws and finally soldered in the caps. I did try a new (to me) item I discovered called alu-weld with poor results. The heat from the torch melted the base of the caps before the alu-weld would solder the cans. Therefore I used JB Weld. I was installing quad 20 FP type cans to replace the older caps but decided I would like to return the radios back to the original appearance. It made a good winter project but did not last long enough. Now I guess it's shack cleaning time :-) Scott W3CV

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 14 Jan 2006 15:09:04 -0600
Subject: Re: [R-390] Floating Capacitor Cans & Other Issues

30 to 50 years from now it won't matter to me no more! The next guy can figure it out. Don't know what they will be listening to then anyway....

Well the VLF chassis top side appears to have been exposed to something that has caused the tube bases...the part that actually bolts to the chassis and holds the insulated piece to corrode a bit and split/crumble. It may have been rodent urine exposure or who knows what. The chassis is not in bad shape it has just pretty much attacked the tube sockets. I have a box full of NOS ceramic ones that I thought I'd put in. It's going to be quite a job but I think it will be worth the effort. Sad part is it don't need a recap below the chassis as it has all ceramic caps. But they didn't put ceramics under the RF deck.....peeked in there and can see the darned Black Beauties. Cecil.....

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 14 Jan 2006 15:11:58 -0600
Subject: Re: [R-390] TIRED OF READING ABOUT CARDBOARD SPEAKERS

What I do know is don't lube the gear train on an SP-600. Clean it really good and maybe lube the contact points where shafts go through bushings but be sparingly with the lube. The drive design can't tolerate any lubricant of any kind. Cecil....

From: John Lawson <jpl15@panix.com> Date: Sat, 14 Jan 2006 16:20:15 -0500 (EST)
Subject: [R-390] Saturday Afternoon occupations

I'm half-way through de-mounting the panel from my venerable R-388 - it and the dial-drum are heading to Howard Mills for ReFurb.

The front panel of this radio was "re-finished" by a twit (or twits) before it came to me (I've had it about 20 years now) in a beige/pink/salmon gloss, with those 'press-on' transfer decals for the control designations.

While the Cosmetics are with Howard, I'l repair it's recently-dead PTO and re-tube, re-cap, and when

it's back together again, it'll get a nice tuning-up.

Hopefully it'll now outlast me - and perhaps become a Problem for whoever has to clean out my Junk after I've gone SK. "My God! What did he want with all that STUFF???" Cheers John KB6SCO

From: Flowertime01@wmconnect.com Date: Sat, 14 Jan 2006 17:29:24 EST
Subject: Re: [R-390] Getting that winter project onto the front burner

Ed,

To do PTO adjustments, you can just hang the PTO out of the receiver bottom. Turn the receiver up on one end. Use the mini BNC to BNC connector to get the PTO output coupled into the frequency counter.

Use the Odem coupler on the PTO shaft for a knob. A simple pencil mark on the PTO and frame let you align the shaft rotation. Once around is 100 KC ten times and you get the meg. We did it on the bench that way back when and got very close. (within a few cycles). No real jigs or setup is really required. Mostly you just need the time to slowly go through the Cosmos adjustment points and do the service work. Roger AI4NI

From: Barry Hauser <barry@hausernet.com> Date: Sat, 14 Jan 2006 17:42:01 -0500
Subject: Re: [R-390] Floating Capacitor Cans & Other Issues

> 30 to 50 years from now it won't matter to me no more! The next guy can > figure it out. Don't know what they will be listening to then anyway....

Y'see! Then don't complain when you get some radio that's been modded and there's no clue heh heh.

OK, instead of the standardized maintenance & mod book, leave a scribbled note saying "Hi there, Pilgrim. Yup, I modded and rodded this rig everywhichway. I did make detailed notations -- can be found in the inside jacket pocket of the suit I wore to my funeral. A hearty har, har, har..... from the Next World. Hmmmmm, wonder what kind of boatanchors they have there .... Heck, if you plug a mike into the headphone jack of your Hallicrafters receiver while there's an aurora borealis overhead for a week, maybe I can tell ya'."

See below for more serious faire ...

> Well the VLF chassis top side appears to have been exposed to something > that has caused the tube bases...the part that actually bolts to the > chassis and holds the insulated piece to corrode a bit and split/crumble. > It may have been rodent urine exposure or who knows what. The chassis is > not in bad shape it has just pretty much attacked the tube sockets. I > have a box full of NOS ceramic ones that I thought I'd put in. It's going > to be quite a job but I think it will be worth the effort. Sad part is it > don't need a recap below the chassis as it has all ceramic caps. But they > didn't put ceramics under the RF deck.....peeked in there and can see the > darned Black Beauties.

Yup -- they figured they'd put the latest & greatest where the sun don't shine. Sprague Black Beauties (tm) were all the rage when they came out -- hermetically sealed to last for eternitiy. I have it on authority that they never leak, never split.

OK, more seriously now -- I promise -- It seems like a shame to have to unsolder and disturb all that just for the socket flanges. I did play a trick and replaced one or two once -- by harvesting the flange off another socket and fitting it around. As I recall, the plated ones on the ceramic sockets do not have a pre-existing split. Not sure how they were originally assembled.

However, it should be easy to remove the old rusted ones by clipping the flanges at the thinnest part -- 90 degrees away from the screw holes. Remove the nuts and bolts, pull the socket away from the chassis enough to get at the side of the thing with a big pair of wire cutters. Bend/twist enough to get the old flange off and over the leads.

Remove the flange from a new or salvaged socket the same way. Twist it open and slightly outward -- i.e. enlarging the diameter a bit. Then slip over the leads and around the socket. bend back into shape and into the groove or slots on the socket. Bring the ends back together - compress around the socket as much as possible. Get a small clamp around the flange to hold the cut ends together. Lay in a piece of solid hookup wire - 20 gauge or so -- to add strength on the bottom of the flange -- not the side that's supposed to be flush with the chassis. Use a soldering gun to solder it together.

Of course, whether this is worth doing depends on (a) the particular socket and assumes the new ones are the same and the flanges will fit and (b) the wiring to the socket -- if only a few leads and not much of a problem to disturb them, then, of course it's easier and better to replace the whole thing. The only purpose of the flange-replacement-in place method is if there are some where you'd rather not unsolder the works. Also, a major reason for not desoldering from tube sockets is to avoid damage to the lugs -- not a consideration here. However, one annoying thing -- in most cases you have to preserve lead length and there's nothing to spare. So that means full desoldering -- no clipping. In the process, some of the lead ends will break or weaken to the point where you won't be confident with them.

Of course, 30-50 years from now, that pilgrim will take a close look and say "Whoaaahhh! Those tube socket flanges sure look funny!" But, at least there will be that note as to where he could possibly find the particulars. Barry

From: "tfrobase" <tfrobase@kitparts.com> Date: Sat, 14 Jan 2006 16:50:30 -0600
Subject: RE: [R-390] What I did on my winter vacation

I use a jewelers saw to cut the can, but like your pipe cutter approach. I then heat the upper area severed aluminum can with a propane torch, just enough to soften the goo and then pull the bottom out with the pins attached. I make the cut just above the crimp to the octal socket. I have used this process numerous times with consistent results ... Tom, N3LLL

From: DQ <greybeard5150@sbcglobal.net> Date: Sat, 14 Jan 2006 15:37:32 -0800 (PST)
Subject: [R-390] Re: Zenith Allegro speakers for the rack

wrote: Take one Zenith Allegro speaker, turn it horizontal, mount it in a 19 inch rack. Excellent sound! N8YE

==========

Am I correct in assuming that you're talking about the Allegro's horn only? (the one mounted up in the

corner)

I've read that they made many versions/series of these (1000, 2000, 3000, 4000, etc) and the components did vary among them. Are the horns pretty much standardized, or would I need to scout around for a certain series? ~ Quig ~

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 14 Jan 2006 18:31:24 -0600
Subject: Re: [R-390] Saturday Afternoon occupations

Same problem here...too much stuff...but I love my stuff! Howard does great work. I've seen several of his jobs....a true master! Cecil...

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 14 Jan 2006 18:40:10 -0600
Subject: Re: [R-390] Floating Capacitor Cans & Other Issues

Hey I don't complain about modded radio's....I own two of John R. Leary's specials....one an SP-600 and the other an SP-210X. No notes on the 210 and very few on the 600. I guess they were in his coat pocket. I've tried the Aurora thing but I guess I am using the wrong type antenna. (needs to be holistically polarized me thinks) I'll check into the tube socket flange swap idea.....Might just work. Cecil....

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 14 Jan 2006 18:44:14 -0600
Subject: Re: [R-390] What I did on my winter vacation

I got em unpacked with no problem but when I drilled out the aluminum pieces in the base the tap wouldn't cut threads because the aluminum was so soft....it just augured out. I ended up driving the pins out from the bottom and considered pressing the octal base pins in their place but was struck with the idea of just plugging the caps with the octal base pins into the socket and covering the whole thing with the cap shells. Cecil....

From: Les Locklear <leslocklear@cableone.net> Date: Sat, 14 Jan 2006 19:28:57 -0700
Subject: [R-390] O/T E-Bay special

We have all been there/here!!! http://tinafolsomphotography.com/ebay_song.html

Les Locklear Gulfport, Ms. Professional Curmudgeon Equal Opportunity Annoyer

From: "Michael Murphy" <mjmurphy45@comcast.net> Date: Sat, 14 Jan 2006 22:11:54 -0500
Subject: [R-390] Metal Paper Caps?

Hey Tim,

I had to change out one of those round metal triple-caps on a command set RX myself, last weekend. It was on the the B+ feed of the BFO. The BFO would run for a while, warble for a few minutes and then quit all together. Normal voltage on the cap was supposed to be about 180 VDC. It turns out that the

BFO had around 27 VDC when it was functioning "normally" and 14 VDC when it would warble. Below that it would finally quit. Now that is overdesign. With a new cap the voltage returned to the nominal 180 V. The command set was last weekends project.

This weekend I brought a Sky Buddy back to life for a "buddy" at work. It had some bad caps of course and a little creative modification or two which had to be undone, but it came back and I was listening to AM and CW all afternoon on it. What a simple box! I think this was a 1938 design, but it is a late model S-19R with the more modern tube lineup. 6K8, 6SK7, 6SQ7 and a 41 in the PA. The BFO is a separate 76 tube. It has a "real" power supply with a type 80. I am keeping it long enough to use it at the end of the month in the AWA Linc Cundhall Memorial OT Contest which is CW only, pre-1946 only.

I see you are getting into HBR's. I have not done that yet, but I am on the lookout for a carcass to rebuild. My latest craze is re-discovering Q-Multipliers. I just built two, one for my TCS at 455kc using a single 6J5 which is a "peaker" and one for the 3-6 McCommand set for 1415 kc IFs using a 12AT7 which peaks and nulls. Wow! is all I can say; almost enough to make my R390A a little nervous. Mike WU2D

From: Tom Norris <r390a@bellsouth.net> Date: Sat, 14 Jan 2006 21:28:56 -0600
Subject: [R-390] Cardboardless Projects

wrote -- [snip] > All of the various controversial stuff discussed on the list from > time to time....but none of the above conspire to do near the > damage to the radio than the government had already attempted to do > by having them out in the weather for an extended period. Most of > which I feel I have reversed.

Bah! Controversial or no, if it works, it works. I would like to get together a solid state regulator for the 390's. I have a couple decent circuits that I'll try when I run low enough on 6082's.

> I expect it to be a nicely performing radio before any additional > performance enhancing mods are done. The gear train sure is slick > and feels wonderful. Very easy to tune both Khz and Mhz! > > What are some of the other group members current winter time > projects..... > > We'd love to hear about them!

Now a new project -- 63 Imperial 390A #1 now has a 17 MC oscillator that isn't. It's not the tube and it's not the crystal -- but it *did* happen less than a day after buttoning it all up from an unrelated matter. On the plus side, while I had it out I was able to get my PTO end point setting to w/i 100 hz, and linear across it's range.

So... lessee, 63 Imperial 390A #2 (from the SK lot) had a slipped clamp so I need to resynch the bandswitch, though I may be able to do so w/o pulling the deck.

51 Collins 390 #1 & #2 both are full of bugs, the electrical kind. but '67 390A EAC works, so I'm not totally 390A-less.

There's the WRR-2 and the T-368 in the living room, where they may stay for the next few months, as well as a barn-worn SP-600 vanilla that I've not checked at all. (Think I fussed about that last week)

There are probably things I've forgotten about and should be doing, like working on the house...

> My next challenge will probably be an SP-600VLF that needs caps under the RF deck and every tube socket replaced.....sounds like fun don't it! HA!

I'd rather roll around in ground glass and razor blades than replace the caps underneath the RF deck of a Super Pro. Bleh. FUN!

Like Cecil says, the idea is to have fun. All but the #1 Imperial and the '67 EAC are projects from *last* winter. Last winter I spent working on projects for a couple other folks, as did I this summer. Argh! 73 Tom NU4G

From: "paolo gramigna" <paolo.gramigna@controllo.it> Date: Sun, 15 Jan 2006 09:14:03 +0100
Subject: [R-390] Rebuilding canned multi-section capacitors

Hi all,

I'm very lucky, becose i can make use of a lathe. It is then very easy to turn away the aluminum of the can just above the crimp on the base; then i heat gently the can, and the whole content drops off.

Sometimes i was able to drill a very tiny hole in the pins, insert the capacitor's leads in the tiny hole and finally crimp it with a crimping tool; then i sealed the joints with a drop of thermo-glue, agains oxidation. Very fast, since i spared the tapping job, and so far no problems; the original leads were in fact crimped as well, in most of my cans. Cheers, Paolo

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 15 Jan 2006 08:09:02 -0500
Subject: [R-390] Metal strips on inside of 390A's side panels?

On the inside of a R-390A's side panels, there are these aluminum strips above and below the main deck. They're like 3/64" thick and 8" or 10" long and 1/2" or so wide. (Actually the left ones seem to be different than the right ones). They seem to be glued on (they've fallen off in a couple of places on my yellow striper.)

What are these for? The main deck plate is attached by seven screws on the left side and 5 screws on the right side, so clearly they aren't there for locating the main deck plate. The modules seem to be very licely located onto the main deck plate by the green screws.

Maybe the side strips help locate a module when access is poor or the whole rig is on its side or something? Any insight for a newbie like me? Tim.

From: "Al Parker" <anchor@ec.rr.com> Date: Sun, 15 Jan 2006 10:22:29 -0500
Subject: [R-390] Rebuilding canned multi-section capacitors

hi agn folks,

I have documented what I've done for the re-stuff process on my website. You can take a look at: http://www.boatanchors.org/filtercap.htm that page covers work on Drake receiver, SP-600, R-388 filter caps, and the bathtub caps found in the SP-600 & R-388 series.

I did 3 caps for R-388's this past week, 2 had good sized pins to drill into, the oldest one (51 date code) had pins with holes that looked like they could be used as-is for crimping, but did have just enough meat for drill/tapping. 73, Al, W8UT

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 15 Jan 2006 10:27:41 -0500
Subject: [R-390] Strange BFO backlash explained!

You guys may remember me asking about a strange BFO backlash that I had with my yellow striper's IF deck last summer. It manifested itself sometimes, and not others, and while I had dinked around with it I never thoroughly understood the cause.

Now that I'm putting that deck back together (I had to pull the BFO reactor to get at and replace the V505 socket, which had crumbled into dust over the years) I can understand the cause: the shaft of the BFO reactor shifts in and out a little bit. I don't know if this is "typical" or not, but seeing as how the internals work it makes perfect sense that this causes backlash.

The springy-thing shaft coupler can be adjusted to provide enough tension over the working range that this problem is at least minimized.

Is the BFO reactor shaft really supposed to have this much (I'd guess 1/32") wiggle in and out? I'd be very surprised if so... Tim.

From: Michael Crestohl <W1RC@Verizon.net> Date: Sun, 15 Jan 2006 10:24:40 -0500
Subject: [R-390] FS: Set of Three Tube Socket Adapters

Hi Gang:

I have a nice SIMPSON 260 Volt-Ohm meter in clean, working condition with probes that is surplus to my needs. There is no sign of corrosion in the battery compartment. I am asking $45.00 plus postage for it. If interested please reply by e-mail. In case of multiple offers to purchase, it will be offered to the senders in the order that the messages were received. 73, Michael, W1RC

From: ToddRoberts2001@aol.com Date: Sun, 15 Jan 2006 10:46:51 EST
Subject: Re: [R-390] Rebuilding canned multi-section capacitors

writes: I have documented what I've done for the re-stuff process on my website. You can take a look at: http://www.boatanchors.org/filtercap.htm 73, Al, W8UT

Al, thanks for the link to all the great info and close-up pics you have presented on your website on rebuilding multi-section caps. Everything needed for anyone who hasn't tried it yet. Lots of great info on repair work to other radios you have done in your website also. Thanks! 73 Todd WD4NGG.

From: Tom Norris <r390a@bellsouth.net> Date: Sun, 15 Jan 2006 10:03:22 -0600
Subject: [R-390] Nice R-392 seen on Ebay

Very nice looking if you ignore the holes drilled in the side of the case, but pricey. Includes an LS-166

and a power cable, though none of the plugs I've had have had that type of shell.
http://tinyurl.com/byabz Tom

From: ToddRoberts2001@aol.com Date: Sun, 15 Jan 2006 11:27:13 EST
Subject: Re: [R-390] Nice R-392 seen on Ebay

writes: Very nice looking if you ignore the holes drilled in the side of the case, but pricey.

Hi Tom, thanks for the link. Not sure what to think about all the holes drilled into the side of the case. I imagine someone did it for cooling, but the hermetic seal is now ruined. Now dust, moisture, smoke and humidity can enter the radio. 73 Todd WD4NGG

From: Tom Norris <r390a@bellsouth.net> Date: Sun, 15 Jan 2006 10:49:44 -0600
Subject: Re: [R-390] Nice R-392 seen on Ebay

I emailed the guy about the case to the left in the picture, but no reply . Of course I *just* emailed him.

Apparently it was a somewhat common mod to make it operate better. After all, the engineers didn't *really* mean for it to operate in a closed case, did they? ;-) Tom

From: roy.morgan@nist.gov Date: Sun, 15 Jan 2006 13:09:31 -0500
Subject: Re: [R-390] Nice R-392 seen on Ebay

Quoting : > I emailed the guy about the case to the left in the picture, but no reply. Of course I *just* emailed him. Apparently it was a somewhat common mod to make it operate better.

Tom,

"Better" is defined by the hacket with the drill who ruined the case.

After all, the engineers didn't *really* mean for it to > operate in a closed case, did they? ;-)

Yes. Absolutely. The entire radio takes 50 to 75 watts of power total. That is not too muich for a case of that size. The thing is meant operate in army field conditions. This inclued 110 degree heat, continuos rain in the back of a jeep whose top was recently blown off by enemy gunfire. Really.

The closed, water proof case and seals on all conncectors and controls keeps the thing running just FINE day in and day out, monsoon or not.

One fellow some years ago put one in a lake or bathtub and discovered that it does in fact float, but face down. The holes in the case of the seven hundred dollar radio reduce the value to about $300 in my opinion. I don't plan to bid on it. Roy

From: "Ed Zeranski" <ezeran@ezeran.cnc.net> Date: Sun, 15 Jan 2006 10:34:54 -0800
Subject: RE: [R-390] signal generators

I had a URM-25 after having used many different signal generators professionally .....

My URM-25F is still here in the line-up because its portable. I lucked out a few years ago finding a pile of HP-606A/B generators for $5 each in San Diego, kept one, and use it along with an HP-608D. It is a pleasure to use. Last year a Measurements 65B turned up and though old it looks to be a good unit butI have not had a chance to go through it yet. For audio the old HP-200A and CD models are still hangin' in there. EdZ

From: "Patrick" <brookbank@triad.rr.com> Date: Sun, 15 Jan 2006 13:44:51 -0500
Subject: Re: [R-390] 6082 tubes, a followup

Gary, I " think" that your source of 6082 tubes is eBay, you just bougth 4 and have previously purchased 2 from this seller in Australia. Like you I just bought 4 of them for $7.00 each. He still has a quantity of them left. Just trying to keep the record straight. See: item 5852647779 on eBay Regards, Patrick Tocornal

From: Dave Merrill <r390a.urr@gmail.com> Date: Sun, 15 Jan 2006 12:45:49 -0600
Subject: Re: [R-390] Nice R-392 seen on Ebay

Fair Radio will probably sell you a case - bought one myself this fall.

From: "David C. Hallam" <dhallam@rapidsys.com> Date: Sun, 15 Jan 2006 13:58:10 -0500
Subject: RE: [R-390] signal generators

I have a URM-25D and a HP-606B. The 25D takes up less bench space but the 606B is easier to use. The delta f controls makes getting it on frequency easy and it is rock stable after warm up. I don't believe the 606A has an output for a frequency counter as does the 606B. With any of these you need an external frequency counter to get on frequency. The 606A/B is big, heavy, and takes up a lot of bench space. David KC2JD

From: "Patrick" <brookbank@triad.rr.com> Date: Sun, 15 Jan 2006 14:58:38 -0500
Subject: [R-390] Re: Accusations of dishonesty

No apologies needed for expresing my opinion which I still stand by. An if you think that I am accusing you of disonesty, I go by the old saying "if the shoe fits....."

Also since you know that a source is available for $7.00 each, why do you think that for this audience a price of $15.00 each would be a bargain (Quote: "Are there anyfolks here on the list with enough interest in them at $15/ea + shipping for me to travel 75-80 miles to get them?") You just purchased 4 of them yesterday from Raytheon 6082 WB Electron Tube NOS DUTCH 37 in Australia for $7.00 each.

Additionally, since in your direct e-mail to me, you ask for an apology to be sent to you and to copy ther entire forum, I am attaching your e-mail to me for the entire forum to read.

After this I consider this matter closed and will not comment or respond to any additional e-mails.

Patrick Tocornal

From: Flowertime01@wmconnect.com Date: Sun, 15 Jan 2006 15:54:54 EST
Subject: Re: [R-390] Strange BFO backlash explained!

Is the BFO reactor shaft really supposed to have this much (I'd guess 1/32") wiggle in and out? I'd be very surprised if so...

Tim,

We do expect the BFO shaft screw in and out as you tune it.

We do not expect the shaft to have any slop moving in and out so there should be no backlash as you adjust the BFO.

I can believe the BFO bushing is worn to the point where you have the 1/32 free play in your BFO reactor shaft.

Like you said the bellows coupler can be adjusted to place minimum force on the reactor shaft and the IF deck BFO shaft bushing.

I believe you BFO suffered from years of miss adjusted bellows coupler and that has caused a lot of wear on the reactor can bushing and thus giving you a lot of slop.

If you can live with it OK. If not, it is not real hard to do a reactor can replacement. The reactor cans did die and were replaced. Roger AI4NI

From: Tom Norris <r390a@bellsouth.net> Date: Sun, 15 Jan 2006 15:57:24 -0600
Subject: Re: [R-390] Nice R-392 - no holes

Had to look at the larger pics again to see as my eyes haven't been doing well the past couple days -- there are holes because it's out of it's case and you're looking at the frame. The case is setting beside it in the third pic. The side of the frame looks dark in the pics, though. It was because of the lighting. It comes with a smooth style case. No holes. Tom

From: ToddRoberts2001@aol.com Date: Sun, 15 Jan 2006 17:05:49 EST
Subject: Re: [R-390] Nice R-392 - no holes

writes: Had to look at the larger pics again to see as my eyes haven't been doing well the past couple days -- there are holes because it's out of it's case and you're looking at the frame. The case is setting beside it in the third pic. The side of the frame looks dark in the pics, though. It was because of the lighting. It comes with a smooth style case. No holes. Tom

Hi Tom, that is too funny. Everything, the lighting, the camera angle, the darkness all conspired to make it look like someone had drilled holes in the side of the cabinet. That should help his auction along better now! 73 Todd WD4NGG

From: "Barry" <N4BUQ@aol.com> Date: Sun, 15 Jan 2006 16:30:47 -0600
Subject: Re: [R-390] Metal strips on inside of 390A's side panels?

Tim,

Those strips are spot-welded, not glued, to the side panels. It is a clever way to gain extra support for the main shelf. The weight rests on these instead of relying on the shear strength of those little #6-32 screws. All the screws do is keep the center shelf tight against the side panels while the spot-welded strips take the weight. Also, it helps keep the center panel at precisely the right height so that the controls will be centered as closely as possible. Barry - N4BUQ

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sun, 15 Jan 2006 17:43:02 -0600
Subject: Re: [R-390] Re: Accusations of dishonesty

Here we go again.... Another mortar attack.... Patrick are you in the market for 6082's? Cecil...

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sun, 15 Jan 2006 23:43:13 -0600
Subject: [R-390] 6082's and my Blue Stripe Radio

And if you were inclined to sell a few by the time you paid the shipping from Down Under and paid your Ebay fees and took into account any that may arrive broken and/or gassy....then added the cost associated with your time I'd bet their true cost would be closer to $15 each....or maybe more.

Not saying that Gary is doing that but if he was that's his business.

I'm sitting on 22 NOS and I don't think I would sell them for any less than $15. Antique Electronics Supply last sold them for $14 each plus shipping and they are out of stock.

I don't think Gary's offering price is out of line and I don't think he should be beat up for offering to make them available to users of this group with a fair return on his time and expenses....

Nuff said...now back to our regularly scheduled programming...

I heated up my Blue Stripe R-390A radio project last night and found a few problems right away. Somebody had been inside the antenna relay and it was open any way you checked it. The contact strips were all bent out of shape so I had to pull it all apart and remove the strips, reshape them and solder them back in. Once everything was aligned I put it back in the radio.....surprising how much difference it makes to have a real signal path. Did a quick alignment on the 1st and 2nd variable IF and the RF deck and it hears pretty good. Frequency is real close at the bottom end. Will do an endpoint tomorrow and start the Fixed IF alignment and Xtal deck adjustments then start some measurements to see what she looks like. Still have the scratchy antenna trimmer.

This thing has been in pieces for the last 5 or more years so I am glad to get it back together and working....somewhat.

Did find a couple of the RF deck coils with the peak out of range. Swapped them out with spares and all tuned up fine. I'll need to cut the caps out of these and find the one that is out of spec.

Anyway it looks like another radio from the "SJC Pile" will live again! Lots of fun! Cecil Acuff WB5VCE

From: "Don Reaves" <don@reatek.com> Date: Sun, 15 Jan 2006 18:29:53 -0600
Subject: [R-390] Off Topic and Personal Attack Messages

Ahem.

Sorry, but we will have a cooling off period now. Please note the simple list requirements. Don Reaves R-390 list administrator<mailto:r-390-admin@mailman.qth.net>

R-390 Mailing List Rules: 1. Stay on topic 2. Be civil and courteous

From: Tom Norris <r390a@bellsouth.net> Date: Sun, 15 Jan 2006 20:26:39 -0600
Subject: [R-390] C-103 needed for 390A

Does anyone have an extra C-103 -- the 50 mf bathtub cap on the back panel just below the power input filter? One of this latest bunch of radios that I'm going to keep has one that has taken a good *whack*. I know it would be easier to just put an everyday capacitor there, but it just wouldn't be the same, looks wise. Somebody I can paypal to? Thanks Tom

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Mon, 16 Jan 2006 20:12:32 -0500
Subject: Re: [R-390] Metal strips on inside of 390A's side panels?

wrote: > Those strips are spot-welded, not glued, to the side panels. It is a clever > way to gain extra support for the main shelf. The weight rests on these > instead of relying on the shear strength of those little #6-32 screws. All > the screws do is keep the center shelf tight against the side panels while > the spot-welded strips take the weight. Also, it helps keep the center > panel at precisely the right height so that the controls will be centered as > closely as possible.

Thanks Barry. On my yellow striper the welds had undone themselves (what would undo spotwelds?) at a couple of welds. For now some super-glue seems to be holding them in place, although I'm dubious of super-glue providing enough strength to keep the main deck plate supported, that sounds like a job for JB Weld :-).

Project for 2005: manufacture an entire R-390A entirely out of JB Weld!

Maybe the strip is a different alloy than the aluminum side plate, and temperature differentials did the work of detaching them?

And another chemical testimonial: Goof-off is good at removing spray paint from the back and side panels. Takes several applications followed by scraping but it does work (and the original legends are still at least mostly there.) It also removed dymo label remains nearly instantly.

Also went into both my RF decks and replaced a bunch of out-of-tolerance 1/2W carbon comp resistors. Lots of 10K's were at 20K+, many 2.2K's at 6 or 7 K, a 1M at 2M, etc. The worst of them

had signs of charring (past abuse?) I know I'm a heretic for it, but most of them got replaced by 1W metal films (yeah, yeah, tell me all about their self-inductance...)

Why so many charred out-of-tolerance resistors on my RF decks? One was a Stewart-Warner yellow-striper, the other is a Stewart-Warner that has been very gingerly treated over the years. Incidentally, the serial numbers on my two RF decks: #625 and #626! Twin brothers, separated at birth, one treated royally, the other abandoned at SJC, and finally reunited on my bench! Tim.

From: John Lawson <jpl15@panix.com> Date: Mon, 16 Jan 2006 20:28:22 -0500 (EST)
Subject: Re: [R-390] Metal strips on inside of 390A's side panels?

wrote: > Project for 2005: manufacture an entire R-390A entirely out of JB Weld!

Duct tape, too! Don't forget the duct tape... Cheers John KB6SCO

From: "Barry" <N4BUQ@aol.com> Date: Mon, 16 Jan 2006 20:41:40 -0600
Subject: Re: [R-390] Metal strips on inside of 390A's side panels?

I'd guess that bad welds combined with a couple of shock drops could have popped the welds. I would investigate getting them spot-welded. JB Weld or Super Glue (or even epoxy) really doesn't bond well enough to do the job here (at least in my opinion). Barry - N4BUQ

From: Barry Hauser <barry@hausernet.com> Date: Tue, 17 Jan 2006 08:51:19 -0500
Subject: Re: [R-390] Metal strips on inside of 390A's side panels?

I have side panels available from the ATC stock if you'd like to order a pair. They're not perfect, but do have the strips attached. Barry

From: "Cecil Acuff" <chacuff@cableone.net> Date: Tue, 17 Jan 2006 08:55:30 -0600
Subject: Re: [R-390] Metal strips on inside of 390A's side panels?

My opinion would be to pick up a replacement side panel from Barry Hauser. They are "experienced" surplus so it would probably match the look of the rest of the radio with no problems. Beyond that I would drill and bolt the strip back in place with some small stainless bolts....or maybe even pop rivets from the outside. Cecil....

From: Joe Foley <redmenaced@yahoo.com> Date: Tue, 17 Jan 2006 16:34:08 -0800 (PST)
Subject: [R-390] Bulb NSN?

Does anyone know the NSN for the bulb in the URM-25's? Thanks, Joe

From: Larry Strong <l.strong@mchsi.com> Date: Tue, 17 Jan 2006 20:24:03 -0600
Subject: [R-390] Looking for Speaker for GPR 90

Hi,

A new collector of Boatanchors. I have a R390A and R388. A little off your main topic but I'm looking for the matching speaker that goes with the GPR 90 radio. Any help would be appreciated. Contact me off the list if you have one. I have been reading the posts for a few months. Some very interesting posts but was really surprised the last few days of all the arguing. Keep up the good work because guys I really enjoy your posts lots of information. Regards Larry

From: "Craig C. Heaton" <wd8kdg@worldnet.att.net> Date: Tue, 17 Jan 2006 19:55:12 -0800
Subject: RE: [R-390] Bulb NSN?

Joe,

Looking in one of my manuals, AN3136-323, Lamp, incandescent: 3V; 190 ma; bulb T-1-1/4 clear; 35/64inch lg o/a; special screw base; C-2R tungstem filament; burn any position. This is for the dial lights.

Don't know if anyone still makes this lamp. I do believe Ashley Hall, on that e-place has some.

VO-16: Lamp, neon 105-125V; 1/25W; bulb T-3, 1/4 clear; min bay s.c.; burn any position. This is for the ON lamp. 73's wd8kdg Craig

From: Tom Norris <r390a@bellsouth.net> Date: Wed, 18 Jan 2006 01:33:08 -0600
Subject: [R-390] R-390A Aluminum Strips - Photos

For folks that were wondering what some of us were talking about when we were discussing the thin aluminum strips on the inside of the side panels of the '390A, here are a couple of photos --

http://www.fernblatt.net/A/390A_strips.jpg

I had taken some assorted pix some time ago, if anyone needs any more without the labels, email me. Tom

From: glwebb@gundluth.org Date: Wed, 18 Jan 2006 07:56:49 -0600
Subject: Re: [R-390] Bulb NSN

When I've had to find lamps in the past, I would get out my catalog from Chicago Miniature.

I don't have one now, but their website with a new name is here: http://www.chml.com/

From: David M sundheimer <w0nbz@juno.com> Date: Wed, 18 Jan 2006 10:28:39 -0600
Subject: [R-390] Subs detection of radiation

Re: discussions on the detection of radiation by enemy subs - the Library of Congress, Veterans History Project, Book "Voices of War", Page 135. The writer was on the Queen Elizabeth to England.

"When the ocean trip began, all electrical devices were called into a central room, the reason being that they sent out waves that German submarines may pick up. I turned in my electrical shaver." Dave

From: "Paul H. Anderson" <paul@pdq.com> Date: Wed, 18 Jan 2006 11:38:04 -0500 (EST)
Subject: [R-390] "Y2K" R-390 TM

Hi folks,

For the first time since my daughter was born, I have some time to kill.

A few years ago, I took the TM11-5820-357-35 from LOGSA, OCR'd it, scanned most of the pictures, grabbed text and pictures from the Collins R-391 Instruction book, and typeset the whole mess using a tool similar to LaTex called Lout. There is a parts list appendix, which is taken from the R-391 manual, and is a superset of the R-390 parts list. Parts should be easy to distinguish (e.g. the R-390 doesn't have any automatic tuning related parts).

I need help proofreading the manual. It is a 13MB PDF.

Prospective volunteers would ideally have TM11-5820-357-35 handy, either as a printed copy, or the original LOGSA copy (which I can make available).

My primary goal right now is to ensure accuracy, and also get feedback on suggested changes or additions at the chapter level. Later, I'd like to consider adding sections about restoration issues specific to these receivers (R-390 and R-391).

May I have volunteers with some time on their hands? If more than one, I'll suggest splitting different sections to different volunteers. Thanks, Paul

From: Gary Pewitt <n9zsv@cei.net> Date: Wed, 18 Jan 2006 18:40:42 -0600
Subject: [R-390] R-390(x) receiver shipping boxes

Who is it that sells the shipping boxes for the R-390 series receivers? I have a couple to ship and want them to arrive undamaged. Thanks Gary

From: "Gary H. Harmon Jr." <gharmon@idworld.net> Date: Wed, 18 Jan 2006 18:49:02 -0600
Subject: RE: [R-390] R-390(x) receiver shipping boxes

Hank Arney has some, hankarn@pacbell.net 73, gary

From: mikea <mikea@mikea.ath.cx> Date: Wed, 18 Jan 2006 19:10:20 -0600
Subject: Re: [R-390] R-390(x) receiver shipping boxes

wrote: > Who is it that sells the shipping boxes for the R-390 series receivers? I > have a couple to ship and want them to arrive undamaged. > Thanks Gary

I got mine from Rick Mish; my R-390 made the trip from Ohio to Oklahoma absolutely without blemish

in it. Recommended. -- Mike Andrews, W5EGO

From: "Brad Huff" <huffb@avalon.net> Date: Thu, 19 Jan 2006 03:54:38 -0600
Subject: [R-390] Single Sideband reception with the R-390/R-390A

Gentlemen,

I would like to thank all of the people that responded to my signal generator question a few days ago. I received responses within minutes of my posting. Unbelievable! That is what makes this group so great. I would now like to open a discussion about single side band reception with the R-390/R-390A series receivers. For the purpose of this discussion let us assume that the radio has been altered such that the AGC has been modified for proper SSB reception. I have had experience with:

1) the radio with no external adaptors and increased BFO injection.
2) a CV-591A SSB adaptor.
3) a Hammarlund HC-10.
4) a Central Electronics Sideband Slicer.
5) a Sherwood Engineering SE-3
6) a PD-1.

I have not had any experience with the Capt. Lee onboard product detector mod or a couple of the home brew units that are out there. I have schematics and have ordered parts for one of the home brew units I just have not had the time to build it yet so I can not comment on these. The adaptors that I have mentioned are not necessarily in any particular order as far as favorites, I just listed them as I thought of them.

They all work. Some work better than others, and some folks can probably detect differences in the various units better than my tin ear. That is where you guys come in. I am curious as to your experiences and what you feel are the best units. Maybe we could rank the units that I have mentioned. Some units require external hardware to operate, that is, external amplifiers etc.. Some units will allow the audio to be fed back in to the receiver at the rear of the unit. Much has been written about the quality of the stock audio but I have found that the audio is quite acceptable if the audio deck is altered using Mike Murphy's suggestions. Any thoughts? Please respond to the entire group, it will be interesting to see what everyone's experiences are.-Brad

From: "Norman J McSweyn" <normn3ykf@stny.rr.com> Date: Thu, 19 Jan 2006 08:39:54 -0500
Subject: Re: [R-390] R-390(x) receiver shipping boxes

Gary, et al.
My solution was a similar.
You can get a 24x24x24 box from most pack/box/mail places. I measured a reciever and figured out what I'd need in terms of cushioning foam.
1. checked yellow pages for local foam retailer.
2. had retailer cut foam to dimensions.
3. cut box down a little (19" I think)
Grand total $72
Cost me 48 bux to ship it from Binghamton, NY to Arkansas, tho.. 73 de n3ykf

From: "Gary H. Harmon Jr." <gharmon@idworld.net> Date: Thu, 19 Jan 2006 09:57:34 -0600
Subject: RE: [R-390] R-390(x) receiver shipping boxes

Thanks Norman,

I've done that myself over the years and even though it takes personal time to do it, the final product works fine and I've shipped many heavy radios using a heavy duty packing box and the hard foam available from home improvement stores (4 x 8 outside insulation sheets). Hank's boxes are custom made for the radios and come with the all the internal foam for safe travel. Yes, it does hurt to pay money to ship an empty box cross country. Good luck. gary

From: "Barry" <n4buq@aol.com> Date: Thu, 19 Jan 2006 09:56:30 -0600
Subject: Re: [R-390] Single Sideband reception with the R-390/R-390A

I have a PD-1 but thinking of selling it because I just don't use it. Nothing wrong with it, but I find it easy enough to tune sideband with the existing, non-modified radio.

The other thing I've done is feed my Kenwood TS/440SAT with the 455kc output, tune the 440 to 455khz, and listen to sideband that way too. Of course I have to remember to tune to 455khz because I can't find 455kc on the 440 ;-) Barry - N4BUQ

From: "Barry" <n4buq@aol.com> Date: Thu, 19 Jan 2006 09:58:51 -0600
Subject: Re: [R-390] R-390(x) receiver shipping boxes

The last R390A I bought came rolled in used carpet pad. That stuff works pretty good as a packing material, is dense enough to absorb a lot of shock (provided you include several layers), and is cheap. Of course, you have to account for several layers making the box the radio goes into quite a bit larger. Barry - N4BUQ

From: "Les Locklear" <leslocklear@cableone.net> Date: Thu, 19 Jan 2006 10:04:37 -0600
Subject: Re: [R-390] Single Sideband reception with the R-390/R-390A

Well, I have used several of those listed. None will work the way they are intended to unless you address the attack and release times of the stock R-390A.

My personal favorite was the PD-1 using an older receiver/amplifier and large speaker. The ssb capabilities of the R-390A using the 2 kc filter are superb, and the audio was fantastic for ssb!

The best agc mods can be found on the Hollow State Newsletter website. Dallas Lankford published those mods years ago and they work great.

Les Locklear Gulfport, Ms. Professional Curmudgeon & Equal Opportunity Annoyer

From: Larry Strong <l.strong@mchsi.com> Date: Thu, 19 Jan 2006 12:55:46 -0600
Subject: [R-390] Sideband slicer

Could someone explain how to hook up a Model A Central Electronics sideband slicer with a R390A or R388? Since they have IF's out the back to you have to some wiring changes? Any help would be appreciated. If who ever helps doesn't want to do alot of typing email your phone number and I will call you. Regards Larry Strong

From: "Dan Merz" <mdmerz@verizon.net> Date: Thu, 19 Jan 2006 11:55:07 -0800
Subject: RE: [R-390] Single Sideband reception with the R-390/R-390A

Hi, I was pretty happy with the Lankford mod using a couple of diodes on my 390a but this didn't handle range of signal strengths without riding the rf gain control. I built an outboard product detector ala Ed Newman WB2LHI/Alex AI2Q that uses a LM1496. I've been happy with this and I never have to touch the rf gain control, which remains at the highest gain position. The unit has built-in agc and is attached with no mods to the set, with 4 connections (i.f., diode load, audio, agc) at the back of the 390a or 390.

My version was built using some old National NC 100 coils for the bfo and tuned output circuit for the bfo. It is set to the appropriate sideband with a knob on the front of the coil can and exhibits no drift of the setting. I can easily switch the unit out and compare original performance without it. The biggest advantage is the improved agc, with some slight improvement in signal quality, compared to the original detection scheme in the 390. I use it all the time on my 390.

I was dedicated to the idea of an outboard unit without modifying the innards of the radio. Mine uses the original audio circuit of the 390, though one could feed the output of the PD to an external amp. A small audio preamp is included in the circuit to adjust the level going back into the 390. I have no experience with other auxilary ssb detectors so can't offer anything on relative performance. I prefer listening to the 390 compared to my unmodified NRD-525 because the audio is better. Best regards, Dan.

From: Mark Huss <mhuss1@bellatlantic.net> Date: Thu, 19 Jan 2006 19:44:45 -0500
Subject: Re: [R-390] Subs detection of radiation

wrote: >Re: discussions on the detection of radiation by enemy subs

For what it is worth. When I arrived at Ft. Devens, MA for Advanced Training a few buddys and I took a trip to Rockport, MA one weekend. Looking through an Antique Shop for an old-fasioned ships lamp, I saw an interesting poster from WWII. It was a drawing in the typical style showing a civilian in a watch cap on the deck of a ship holding out a small box with a wire dangling from it. In the distance was a rough drawing of a Nazi bomber, with a brown bomb-shaped airplane much closer, heading straight for the sailor. The caption read 'Your Shaver Might Save Your Ship!!!'

As I was attending 33S school at the time, it interested me. But for $100, it was too rich for my blood. But I was interested as to what it was. The salesgirl was no help at all. Several months later, I finally found the answer from a historian at M.I.T.'s Lincoln Labs. During late WWII, the Germans developed an Anti-Ship Gliding bomb with a TV camera in the nose. Launched from a Condor, it glided to its target, controlled by the bombader in the aircraft. A nasty little bugger, it was terrorizing Merchant Ships in the North Atlantic and Med with its great accuracy.

Then during one attack, so the story went, an officer decided he should look his best at the Pearly Gates, turned on his electric razor (had to have been British ;), and the bomb, about to hit his ship, suddenly swerved and missed! Putting two and two together, he realized that the razor must have somehow interfered with the glide bombs guidance. Reporting the incident, word got back to M.I.T.'s Radiation Lab who was desperately trying to develop a countermeasure for the new bomb. M.I.T. had the poster in question printed up and distributed to all Merchant Ships as a stop-gap measure until the jammers could be manufactured and distributed. It was probibily more of a feel-good measure than anything else, but an interesting piece of trivia.

From: DJED1@aol.com Date: Thu, 19 Jan 2006 23:10:48 EST
Subject: Re: [R-390] Single Sideband reception with the R-390/R-390A

Thanks for the comments on SSB adapters, Dan. I'm really happy with my outboard SSB adapter for all the reasons cited (I did add the crystal BFO, per AI2Q). As Les indicated, you haven't solved the problem unless you've solved the fast attack AVC part of it- a product detector is not enough. My outboard SSB adapter does that, and it is integrated with the receiver so all controls and the carrier meter still work as intended. **It always aggravates me to read Jan Skirrow's description of his outboard box, which copied my design, then says how mine never worked. But he left out the AVC circuit, and so needs to ride the RF gain to keep from overloading the detector.** $150 and no real improvement over how the stock radio operates!

I've continued to play with the concept. I've breadboarded a circuit for synchronous detection, and will add that to the box if I ever finish my wife's "to-do list" for this winter.

Incidentally, I built another version with a downconversion and 100 Kc filter for sideband selection, kinda like the CV-591. It worked well, and doesn't require offsetting the BFO to change sidebands (BFO is fixed at 100 Kc). However, the radio must be set at the 4 KC bandwidth, and so signals bleed through into the IF and meter circuit. I didn't like it as much as the original, so reinstalled the original box. I think the audio is better than my R4C, although the AVC is not as tight as the Drake. Ed WB2LHI

Date: Fri, 20 Jan 2006 09:12:56 -0500
To: Larry Strong <l.strong@mchsi.com>, r-390@mailman.qth.net

wrote: >Could someone explain how to hook up a Model A Central Electronics sideband slicer with a R390A or R388?

Larry,

The R-390A has an IF of 455 kc. The Model A Sideband Slicer had an IF of 455 KC more or less, so it will work.

The R-388 has an IF of 500 KC so the slicer may not work. You would have to change the frequency of the oscillator in the Slicer. I don't know if this is easily done or not.

>Since they have IF's out the back to you have to some wiring changes?

No, the IF Output of the R-390A is all you need to run the Slicer. HOWEVER.. the slicer may not be

meant for the relatively high signal level provided by the receiver. You'll have to try it out. Some slicers were equipped with an IF Preamplifier. If I remember right, this is a little chassis with one tube that plugs onto the back of the slicer.

If I remember right, the slider audio is routed back to the radio and connected to the audio gain pot or some such thing. I suggest you use an external amplifier and speaker for that. OR: you can run the audio back to the diode load terminals on the R-390A.

Do you have a manual for the slicer? I think BAMA has it. Roy

From: "David Wise" <David_Wise@Phoenix.com> Date: Fri, 20 Jan 2006 08:09:40 -0800
Subject: RE: [R-390] Sideband slicer

If you do route the slicer audio back to the radio, don't forget to remove the diode load shorting link, else you'll get slicer + radio. But you knew that, Dave

From: Larry Strong <l.strong@mchsi.com> Date: Fri, 20 Jan 2006 15:47:03 -0600
Subject: [R-390] Sideband slicer Model A

I wanted to thank Roy and Dave for the help hooking up the Sideband slicer. I did hook it up to a SP-600 and it worked pretty darn good. Had a little hum so I think I will wait to hook it up to my R390A after I replace some caps.

Very nice forum you guys have especially for someone like myself not being to knowledgeable on electronics. Regards Larry Strong

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Fri, 20 Jan 2006 20:39:53 -0500
Subject: [R-390] Looking for parts...

Looking for:

Qty 2 big knobs, either original or new manufacture.

Substitute Line Level and Carrier Level meters. I emphasize cheapness over originality, and am not fundamentally opposed to whatever outboard sand state circuitry must be added to make them functional.

(Above for 390A).

I have for trade many tubes (including good ballast tubes) and will also willingly part with some cash.

Also looking for maybe a spare RF deck with most (maybe not all) slug-tuned cans, and some spare slugs. Tim.

From: "Paul Staupe" <pstaupe@qwest.net> Date: Sat, 21 Jan 2006 10:46:33 -0600
Subject: Re: [R-390] Sideband slicer Model A

Larry,

I'm glad your CE Sideband Slicer Model A works well with the SP-600. I haven't had a chance to play with mine much, but I'm hoping it will do the trick with my SP-600 and R-388, since it has the variable IF input unlike my Sherwood SE-III. I was lucky enough to get a model A with both the IF interface and an internal audio amp and speaker, so it is a self contained unit... Best regards, Paul W0AD Minneapolis

From: "Paul Staupe" <pstaupe@qwest.net> Date: Sat, 21 Jan 2006 10:59:51 -0600
Subject: [R-390] Tubes?

Folks,

Five years ago I was fortunate enough to get a couple of sets of complete R-390 non-A tube sets from Lowell, K6KC.

As several members of this esteemed group will testify, in my 50 year old kid-type wisdom (or is it an obsession?), I have invested in more than a few versions of the non-A, the A and others such as two 389s, a 391 and two 392s.

I want to make sure that these radios perform at their peak... (each one has a unique history)... so I'd ask for suggestions as to who you folks would suggest for a good tube source for these radios as spares and/or replacements... Best regards, Paul W0AD Minneapolis

From: "Scott Bauer" <odyslim@comcast.net> Date: Sat, 21 Jan 2006 15:41:28 -0500
Subject: Re: [R-390] Tubes?

I have had very good luck with "The Tube Center" The prices are better than any other seller I have seen and I have never received a bad tube. I buy directly from their eBay store. Search for "thetubecenter". Phone number is 407-826-9172. Good Luck, Scott W3CV

From: "Scott Bauer" <odyslim@comcast.net> Date: Sat, 21 Jan 2006 23:20:20 -0500
Subject: Re: [R-390] Tubes?

Also " Heavinly Tubes " on eBay is good. Fair Price and good service. Scott

From: "Jim M." <jmiller1706@cfl.rr.com> Date: Sat, 21 Jan 2006 17:09:56 -0500
Subject: Re: [R-390] Tubes?

I have bought from www.tubesandmore.com with success. Jim M.

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 22 Jan 2006 10:51:50 -0500
Subject: [R-390] Little ball bearings... where from?

When my yellow striper came from Fair Radio, I found two or three little BB-sized ball-bearings embedded in grease-turned-shellac around the RF deck etc. The RF deck has been cleaned up and I'm pretty certain it is not missing any of these BB's, but is it possible that these belong to a front-panel control (for example a detent?)

The front panel and wiring harness is the next section to clean up.

Of course it's possible that the BB's date from 40 years ago (falling out of something higher in the rack) or somehow accumulated on the pile at SJC (which is where I would guess the RF deck grease turned into shellac) and they have nothing at all to do with my radio. Tim.

From: roy.morgan@nist.gov Date: Sun, 22 Jan 2006 11:37:20 -0500
Subject: Re: [R-390] Little ball bearings... where from?

Quoting >: > When my yellow striper came from Fair Radio, I found two or three little > BB-sized ball-bearings embedded in grease-turned-shellac

Tim,

That's a mystery. Now, if you can locate the radio with the two missing bearings, you'll have a but of lore connecting the two redios heheh.

I thought you were asking where to get small bearings, so I'll suggest:
1) your local hobby shop (railroad/airplanes ...) has them. Bring your micrometer.
2) Small Parts, Ink in Florida has them. Roy

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 22 Jan 2006 12:53:14 -0500
Subject: Fwd: Re: [R-390] Little ball bearings... where from?

wrote: > If under the RF deck, there is one in the Geneva coupler, so if it isn't > missing it's ball, I'd say all is well...

Good point, the ball in the Geneva coupler is there and working fine. It did get dropped on the floor at least once when I was rebuilding the geartrain, but it's back where it's supposed to be!

> I don't know of any in the > front panel. There might be one in the band width control detent > mechanism under the IF deck - I can't recall offhand.

In fact a quick look-see confirms that bandwidth detent in the IF deck has its ball too. So who knows where those little balls came from, maybe I can put them on Ebay under the heading "Art Collins' lost balls".

Right now the subject of swearing and consternation is that while I was putting the chassis back together, several of the original 6-32 machine screws had their heads simply snap off. (And I'm not exactly putting this thing back together with an impact wrench!) One of them was at least a little my fault (too long a screw) but a lot of them have a lot of corrosion right under the head. Time to abandon the old corroded hardware I guess, and get a left-handed drill to remove the #$!%#%$ broken screws.

I did fix up the broken fuseholders on the back, added an IEC socket and filter, an inrush current limiter, etc., and am happy with that progress. Strangely enough the B+ fuse that has 4 wires to one terminal (F105) had never had one of its terminals soldered, I don't think it was a recent replacement because none of the wires nor the terminal show any sign of solder! Still have to replace the very banged-up-and-rusty selenium rectifier (almost certainly with a solid-state bridge, I think Barry was doing this too, how did that turn out BTW?) and the screw terminal strips on the back are missing some hardware too. Tim.

From: "John Schmitz" <cjs004@comcast.net> Date: Sun, 22 Jan 2006 11:10:31 -0600
Subject: RE: [R-390] Little ball bearings... where from?

I just finished rebuilding a Stewart Warner 390A which I spent a year and a half on and I had the front panel and RF Deck completely disassembled. I'm talking down to bare chassis with holes. I had the RF deck completely disassembled, including planetary gear and knocking the pins out of cams to remove them from their shafts and everything (yes, I guess I'm a fanatic). Anyway, the only ball bearing I came across in the whole unit was a single ball bearing that is part or the band switching and you have to disassembly the Geneva drive to get to it. So I think I can vouch for the 390A and say they are not from that unit. I don't know about the straight 390, haven't taken one of them apart yet. John

From: "Doug McRae" <d.mcrae@telus.net> Date: Sun, 22 Jan 2006 10:53:28 -0800
Subject: [R-390] OT, wanted to buy an/frr59

Hi all,

I am looking to buy a AN/FRR 59, A or B model. Any help would be great. Thanks, Doug

From: "Mark Richards" <mark.richards@massmicro.com> Date: Mon, 23 Jan 2006 07:15:48 -0500
Subject: RE: [R-390] OT, wanted to buy an/frr59

Are you interested in restoring? I have two hulks waiting for attention. There's very little information (or interest) in these radios it seems.

I'm not certain I wish to sell, but would appreciate an opportunity to collaborate on information and perhaps bits and parts. /m

From: <w9ya@arrl.net> Date: Mon, 23 Jan 2006 10:31:56 -0500 (EST)
Subject: Re: [R-390] R-390(x) receiver shipping boxes

Hey gang;

When I moved from Indiana to New Mexico over Xmas '04 I went to Target and bought some $8 foam beds, queen size, and wrapped the radios in that. Then I slightly compressed the foam with a wrapped and taped overlay of heavy garbage bags. The foam is at least a couple of inches thick in places, with one side bumpy. The bumpy side faced in toward the radio and the foam itself was easy to cut where needed.

We found out that the moving truck had a bad rear axle and the truck had bounced much of the way to

Albuquerque ! The truck trailer bounced up and down a foot or so just backing up ten feet or so in front of the new house upon delivery.

There was much damage to the stuff the packers had packed including almost 8 thousand dollars worth of insurance settlement. (Most of which I have received to date, but that is another story for another time.)

However there was almost *no* damage to speak of to the stuff, my shack and office, that I had packed. The SP-600 and both R-390As along with the tube and other old stuff arrived just fine. Even the delicate stuff like old Tek scopes and such arrived dusty but otherwise working.

I guess along with a hard multiple layer or dual cardboard box system to mail the radios in -> these inexpensive foam beds covered in heavy plastic garbage bags should do the trick. They are VERY simple to work with. Vy 73; Bob w9ya

From: Tom Norris <r390a@bellsouth.net> Date: Mon, 23 Jan 2006 18:38:03 -0600
Subject: [R-390] Buncha 390A modules seen - ebay

FYI

List of assorted modules by a fellow in New Jersey - http://search.ebay.com/_W0QQsassZgfrskiQQhtZ-1. He lists mfg in most of the actual listings. Not connection, etc Tom

From: ToddRoberts2001@aol.com Date: Tue, 24 Jan 2006 17:53:04 EST
Subject: [R-390] SAQ 17.2KHz WINTER TRANSMISSION FEB 19 0900 &1300 UTC!

I just received word that VLF Radiostation Grimeton will run 2 special rare wintertime CW transmissions of SAQ 17.2KHz on 0900 & 1300 UTC Sunday, February 19, 2006. Each transmission will be about a half-hour in length. Remember to convert UTC correctly to your own time so you don't miss the transmission. SAQ is the world's only remaining operational Alexanderson Alternator Transmitter and this will be a great opportunity to try your luck receiving them in optimum wintertime conditions for VLF! So get your VLF loops or longwire antennas ready and brush the cobwebs off your R-389's, SRR-11's, RAK's, RBL's, RBA's, WRR-3's or whatever cool VLF receiver you might have available! A solid state Rx on batteries works well too! 73 Todd WD4NGG

From: "Mike Crawford" <mcraw@mashell.com> Date: Tue, 24 Jan 2006 16:11:24 -0800
Subject: [R-390]R-390/URR Questions

Gentlemen,

I am a long time lurker, first time poster. The time has come to pick the collective brain.

I have a R-390/URR which I acquired several years ago but am just getting around to working on. It is in fairly good condition, not pristine by any means, but all of the big pieces seem to be there and no major mouse nests are to be seen.

It is missing 1 small and 1 medium knob along with the rack handles. I see that Fair Radio has these

items for the R-390A and was wondering, are they interchangeable?

It also seems to be missing the "green gear". As I am planning on completely tearing down and cleaning the gear train is the green gear necessary at all?

The power cord is missing and I have been studying Roy Morgan's diatribe on power cords and bypassing and am leaning towards replacing the connector/filter with a modern computer connector and line filter. Any comments?

I have copies of a couple of R-390 FAQs and the -10 -20, and -35 TMs. Are there any R-390/URR specific web sites? I have found several for the R-390A/URR, but none for the R-390/URR.

Thanks in advance for any help you might be able to give me. Mike

From: Richard Loken <richardlo@admin.athabascau.ca> Date: Tue, 24 Jan 2006 18:03:19 -0700 (MST)
Subject: Re: [R-390]R-390/URR Questions

wrote: > It is missing 1 small and 1 medium knob along with the rack handles. I see > that Fair Radio has these items for the R-390A and was wondering, are they > interchangeable?

yes they are.

> It also seems to be missing the "green gear". As I am planning on completely > tearing down and cleaning the gear train is the green gear necessary at all?

It is nice but you can get by without it.

> The power cord is missing and I have been studying Roy Morgan's diatribe on > power cords and bypassing and am leaning towards replacing the > connector/filter with a modern computer connector and line filter. Any > comments?

Well I wouldn't, I would get the appropriate connector and put a 3 wire cord on it. Fair used to sell some wierd cable that had the correct connect which you then remove and use with the line cord of your choice.

> I have copies of a couple of R-390 FAQs and the -10 -20, and -35 TMs. Are > there any R-390/URR specific web sites? I have found several for the > R-390A/URR, but none for the R-390/URR.

Is there an R-390 FAQ? Richard Loken VE6BSV

From: "tfrobase" <tfrobase@kitparts.com> Date: Tue, 24 Jan 2006 20:27:52 -0600
Subject: RE: [R-390] R-390(x) receiver shipping boxes

I bet your spouse appreciated that ... Tom, N3LLL

From: "Cecil Acuff" <chacuff@cableone.net> Date: Wed, 25 Jan 2006 07:58:16 -0600
Subject: Re: [R-390]R-390/URR Questions

Hi Mike,

Great news on the R-390. I have restored two or three but don't own one myself. I hope to at some point.

I have found them easier to work on than the "A" variant and they sound nice.

On the dreaded "Green Gear".....I can find no use for it except to keep the frequency counter display in sync with the gear train if one was to be removing the RF deck to do some minor work on the bottom side and then reassemble. If you are going to disassemble the thing for a good cleaning you will probably want to pull the veeder root counter anyway.

The rack handles and the knobs are interchangeable no problem there.

The only site I am aware of on the R-390/URR is the works of Dave Medley. www.r-390.com Be aware that Dave has retired from doing 390 work his works are kept alive on the web by others.

Any method of powering the radio that grounds the chassis is acceptable....your choice.

Good luck and let us know of any questions or of your progress.... Cecil Acuff

From: <w9ya@arrl.net> Date: Wed, 25 Jan 2006 09:24:33 -0500 (EST)
Subject: RE: [R-390] R-390(x) receiver shipping boxes

Hey Tom and the gang;

Hi Hi....

Actually she did NOT want me to pack the house stuff, as she was hiring "professionals" to do the job.

And I guess she got exactly what she paid for !! Hi .... Hi.... Vy 73; Bob w9ya

P.S... Hopefully we will get back about 1/2 of what we paid for the (botched) packing/moving job. So far we have gotten back about 30 percent. I will be happy with 1/2.

From: "Mike Crawford" <mcraw@mashell.com> Date: Wed, 25 Jan 2006 10:08:49 -0800
Subject: Re: [R-390]R-390/URR Questions

WOW! What a great response. Just like being in a room full of experts. You guys have given me enough information to keep me busy for a while.

A couple of things I have noticed about the radio which you might enlighten me on.

The front panel, which doesn't seem to have been refinished, is an unusual, at least to me, very pale pastel green color not OD at all. Anyone have any idea where it may have spent its active duty life?

It also has what appear to be thin transparent plastic discs extending out from under the KC and MC

change knobs to protect the panel from being worn by the operator's fingers. Is this a common feature?

For you guys who maintained these things in the military. It has a dymo label on one of the inner covers which says "WASHED 9 AUG 67". What would that have entailed?

Thanks again for all your help. Mike

From: R390rcvr@aol.com Date: Wed, 25 Jan 2006 13:19:37 EST
Subject: [R-390] R-390 questions

Mike:

I have seen a few dozen 390s, and hundreds of R-390As, never a green one. There does tend to be slight variations in the hue of the gray, but I don't believe there were any green ones originally.

The Racal RA17 has the plastic discs behind the main knobs, and I have seen one or two people modify the R-390 main knobs to have the same look. Again, I don't believe that was ever a factory mod. I would say this one has been carefully redone, between the paint and knobs, not original.

Is it a stamped or silk screened panel? Is the back of the panel the same green, or is it gray? Randy

From: "Mike Crawford" <mcraw@mashell.com> Date: Wed, 25 Jan 2006 12:11:07 -0800
Subject: Re: [R-390]R-390/URR Questions (Green R_290)

The plot thickens.

Upon close examination it appears the front panel has been refinished. Where the sickly green paint has been chipped you can see gray paint behind it. Also the rear of the panel is the usual gray.

It is an etched panel and the engraving has been filled very nicely. It does, however, have stickers on the panel which were applied after the refinishing that indicate it was still in govt service.

On the rear panel are dymo labels which state the following:

MB.4.3.1
MB.4.4.2
31R1.2URR.154
31R1.2URR.506
31R1.2URR.507

I assume these refer to approved modifications which have been applied to the radio. I know that TO 31R1.2URR.154 is one of the Air Force tech manuals for the radio but have no idea about 506 and 507. Can someone translate? I do have changes 1,2,3 for the 154.

For those who are interested it is a Collins, Order Number 14214-PH-51-93 SN: 1974. I did notice it has a Motorola power supply. Thanks for all the help. Mike

From: Dan Arney <hankarn@pacbell.net> Date: Wed, 25 Jan 2006 12:09:31 -0800
Subject: [R-390] RE: Handiham to be!!

Hi gang,

My friend Daren Quigel in Stockton,CA 95207 needs help in having a longwire receiving antenna put up.

Here is a chance to help a nice appreciative person.

Daren is in a wheelchair and unable to do it himself. His son is not able to help at this time either. I restored his SW R-390A and he only has a short length of wire for his SWL listening. He could also use a good Elmer to help him get his Ham ticket. He will be very happy to reimburse any out of pocket expenses incurred.

I would help but am close to 400 miles away, plus I broke my left shoulder in 2 places so am useless anyway.

Daren's addy is 5734 Linda Sue Dr. Phone number is 209-477-1084.

Anybody willing to help?? TIA es 73 Hank KN6DI

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Wed, 25 Jan 2006 19:32:18 -0500
Subject: [R-390] Long skinny screwdriver for RF deck removal

The green screws on the back of the RF deck (between the back panel and the rear of the RF deck chassis) are #2 phillips, but it's nearly impossible for me to get a long #2 phillips screwdriver onto them (especially the one almost underneath the antenna relay).

In fact the only way I've ever gotten at them with a #2 is by removing the screws from the back panel so I can tilt it out of the way.

Getting the next smaller size Phillips down there isn't so bad.

Was the "official-on-the-back-of-the-radio" screwdriver a #2 or a smaller one, and was there something special about it (super-skinny shaft? offset?) that made it possible to do the RF deck screws, or am I so mechanically disinclined that I don't see the obvious trick? Tim.

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Wed, 25 Jan 2006 19:49:19 -0500
Subject: Re: [R-390] Long skinny screwdriver for RF deck removal

wrote: > The green screws on the back of the RF deck (between the back panel > and the rear of the RF deck chassis) are #2 phillips, but it's nearly > impossible for me to get a long #2 phillips screwdriver onto them > (especially the one almost underneath the antenna relay).

I've just gotten a few answers from helpful folks but it seems I didn't describe the situation adequately:

* The problem is not that my screwdrivers are not long enough.

* The problem is that the tip/shaft of a Phillips #2 seems way too fat to get on the head of the screws (especially the one adjacent to the antenna relay).

* A long Phillips #1 sort-of works but it's obvious that the screw itself is a Phillips #2. So either I'm using the wrong size screwdriver, or there's some trick I don't know! Like I said I can remove all the screws from the back panel and tilt it out of the way, but that is not a trick - it's a rather long involved process. Tim.

From: "Jim M." <jmiller1706@cfl.rr.com> Date: Wed, 25 Jan 2006 20:34:00 -0500
Subject: Re: [R-390] Long skinny screwdriver for RF deck removal

I found a long skinny flat head driver at Ace hardware that works fine. It's not phillips, but still small enough to fit into the screw. Jim M.

From: "Don Heywood" <wc4g@knology.net> Date: Wed, 25 Jan 2006 19:55:57 -0500
Subject: Re: [R-390] Long skinny screwdriver for RF deck removal

Here is the screwdriver I have used for years in the R-390 family.

http://www.tselectronic.com/viewpage.php?filename=klein/phillipsdrvr.html&refpage=/vend_prod_list/klein.html&tse_Session=1d94fb7bf74cee0450063

It is a Klein P-18

Good Luck to all Don Heywood WC4G Charleston, SC

From: Buzz <muttman@charter.net> Date: Wed, 25 Jan 2006 21:53:45 -0800
Subject: Re: [R-390] Long skinny screwdriver for RF deck removal

Tim,

A phillips screwdriver should have a flat point. I bought a 4-way phillips screwdriver from Asia that had a sharp point like a REED & Prince, and it didn't work too well until I ground a little of the points off.
Buzz

From: "Clarence Lozano" <jeeper@netins.net> Date: Thu, 26 Jan 2006 15:16:23 -0600
Subject: [R-390] r390 wanted

Hello i am looking to trade my restored r-388 for a working r-390 or r-390a.photos on request.

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Fri, 27 Jan 2006 17:31:20 -0500
Subject: [R-390] CV133 vs 6C4

Is the CV133 the British version of the 6C4? Is it the british mil-spec version? (I'm not all that familiar with British tube numbering, I'm deeply suspicious of any tube that says "ECC" on it too!)

Or am I wrong and "CV133" is a Russki marking? Tim.

From: "Cecil Acuff" <chacuff@cableone.net> Date: Fri, 27 Jan 2006 17:26:43 -0600
Subject: Re: [R-390] CV133 vs 6C4

I'm guessing from what little I could find that the CV is Russian or another eastern block designation.

I have had good luck with the quality of most ECC marked tubes..... YMMV... Cecil...

From: "Dan Merz" <mdmerz@verizon.net> Date: Fri, 27 Jan 2006 17:02:41 -0800
Subject: RE: [R-390] CV133 vs 6C4

Hi, according to Universal Vade-Mecum, CV133 = 6C4. CV's are British Government types with commercial equivalents. Other listed equivalents are EC90, 6135, CK 6100, CK 6135, L 77, M 8080, QA 2401, and QL 77. Babani's tube encylopedia also puts CV133 = 6C4. Dan

Sorry for the dupe... Forgot to copy all the first time.

From: "Bruce Hagen" <b_hagen@sbcglobal.net> Date: Fri, 27 Jan 2006 17:40:22 -0500
Subject: RE: [R-390] CV133 vs 6C4

Tom:

FCV133 is a 6C4 but don't know country of origin. Bruce Hagen

From: "Andy Jackson G8JAC" <g8jac@btinternet.com> Date: Fri, 27 Jan 2006 23:59:10 -0000
Subject: RE: [R-390] CV133 vs 6C4

Russian? How dare you sir!

The CV stands for Common Valve (so not surprising that you guys over there don't recognise it as a "tube")!

It is a series of devices approved to a common British specification with, mostly, equivalents in the commercial world. CV133 is indeed, equivalent to a 6C4, A.K.A. in europe as the EC90. The CV2842 is the equivalent of the 6C4W.

CV5183 is the 6C4WA that also meets JAN approval specifications, and CV4058 is a 6C4WA that meets British military secs. 73, Andy G8JAC

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sat, 28 Jan 2006 17:02:17 -0500
Subject: [R-390] Progress!!! My yellow striper

Good news... Got the mainframe banged back into shape, a couple of spot welds on the aluminum strips, the broken connections from the wiring harness to the front panel mostly mended, and the RF deck cleaned up and installed. Power supply had 200-ohm resistor added (the military had upgraded it to solid state rectifiers but there's no sign they added a 200-ohm resistor). Put in audio deck, verified B+ lines with correct voltages, added RF deck and crystal oscillator deck, verified 100kHz, 17MHz, and crystal oscillator deck operation on all frequencies. VFO operation verified and endpoints within a few kHz (good enough for now).

Sometime later, gotta put in the IF deck and add a 600 ohm transformer for the speaker. Might happen tomorrow!

Still some mending necessary on the front panel etc. wiring too, have to reconnect the lights on the bezel too.

So, calendar timing: Got the yellow striper on June 17th. Made a lot of progress in the first month cleaning up chassis in general (including repaint) and the PS and AF modules. Then things slowed down, I finally cleaned up the IF deck just a few weeks ago. Then spent the past couple of days putting everything back together. With a little luck, it'll be happy and receiving after a complete realignment in the next week or two (realistically I have very little free time unless I get up at 3AM).

Obviously I'm not the quickest worker, but I do want to thank everyone here for the encouragement and words of wisdom in the past half year!

Also, corporate thanks to the wonderful world of chemistry, especially JB Weld and Caig De-Oxit! Brake cleaner and bike grease and a lot of solder wick too :-). Tim.

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 28 Jan 2006 18:11:46 -0600
Subject: Re: [R-390] CV133 vs 6C4

Well you will have to excuse us over here. The CV markings must be somewhat obscure on the world market because there wasn't much to be found on them on a Google search. The pictures I did find showed them to look much like the Russian markings and build.

We understand "Valves"...but they are usually under the "Bonnet" Cecil Acuff WB5VCE

From: Tom Norris <r390a@bellsouth.net> Date: Sat, 28 Jan 2006 19:35:53 -0600
Subject: [R-390] Take your lemons and make lemonade

Don't turn them into battery acid - http://tinyurl.com/8ye7d

Example of how not to list a radio on ebay.

Read all 18 questions/answers. Gee whiz. The guy could have gone and gotten it in person or met the seller where he could have listened to the thing before taking possession.

The fellow said he even tried to get on the list but had problems. Tom

From: Tom Norris <r390a@bellsouth.net> Date: Sat, 28 Jan 2006 22:49:01 -0600
Subject: [R-390] More ebay funnies Collins Power Cord

Item 5857812260

A power cord for the '390 and any other radio with that type of 4 pin connector... Advertised as a "Collins military power cord" $76 with much time to spare.

I need to make some of these things up. All of us should, and offer them as "rare" and "collectable."

I suppose that means my Simpson 260 meter can be a Collins meter since it's been used to troubleshoot Collins radios before? Tom NU4G

From: Tom Norris <r390a@bellsouth.net> Date: Sat, 28 Jan 2006 23:18:51 -0600
Subject: [R-390] Looky GRC-19 plus much more

http://tinyurl.com/e3wuc

This ebay seller has most of a complete GRC-19 set, R-392, T-195B, convertors, mounts, etc He also says he has quite a few other things from when he worked for John Meshna.

Interesting. And I miss places like John Meshna. Take a look. 73 Tom NU4G

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 29 Jan 2006 11:25:01 -0500
Subject: Re: [R-390] CV133 vs 6C4

wrote: > will always live on. You stirred my interest to dig out some of my custom & specialized manuals to see what they had on the subject. I know they were of UK/Great Britain origin and appear on a lot of my WWII military tube

Much much later, I notice that I have a number of JAN-labeled tubes made by Philips in the 80's. Presumably these were made in Europe but I'm guessing they carry only the JAN number because that's the contract they were made under. I wonder whether they made identical tubes but labeled with whatever the CV equivalent is for a 5814A etc.

Otherwise most of my mil/industrial numbered tubes seem to be US-made. I think I've got some non-US consumer tubes poking around in my Heathkits and Eicos.

Someone once tried to convince me that the euro EC-tube number system (e.g. ECC82) made a lot more sense than our system (filmanet voltage + letter(s) + number of terminals) but they didn't convince me. Maybe there is a rhyme and reason to the CV numbers but I don't see it.

> p.s. If any of you have Tech Data on Vacuum Tubes that you'd like to share then lets hear from you.

A website that seems to have a lot of Euro tubes in its index is at http://tdsl.duncanamps.com/tubesearch.php and if I poke around I see CV numbers into the tens of thousands! And I thought our system with "A", "B", "W", "WA" etc suffixes was out of control! In any

event they have very good links to hypertext data and often PDF's of the original spec sheet, and when they don't have specs for a specific number they cross-link to sheets for similar tubes. Tim.

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Sun, 29 Jan 2006 03:28:53 -0500
Subject: Re: [R-390] CV133 vs 6C4

wrote: > Well you will have to excuse us over here. The CV markings must be somewhat > obscure on the world market because there wasn't much to be found on them on > a Google search. The pictures I did find showed them to look much like the > Russian markings and build.

Well, Cecil, I have to agree with you. The more I look at these CV133's, the more the markings look just a half-step away from cryllic. The thick bold lines, the geometric sans-serif typeface, the squares and triangles, all add to the thought. Although to be fair most Euro tubes have those characteristics, and even some US tubes :-).

And about the lemonade thread... it really personally bothers me when someone uses E-bay auctions to complain about a deal gone bad. Not sure why. I'm sure deals go bad, and sometimes both buyers and sellers are committed to making a deal be bad. I can understand the feeling of being cheated, but at the same time airing yourself out to the world that way just isn't right. Tim.

From: "ELDIM" <eldim@att.net> Date: Sun, 29 Jan 2006 03:23:14 -0800
Subject: Re: [R-390] CV133 vs 6C4

Hello Boatanchorites

That Cecil is sure a funny guy? But true to his convictions!

Now on the serious side of an issue close to my heart. ELECTRON TUBES, VACUUM TUBES, VALVES, or what ever name they go by are of interest to me and will always live on. You stirred my interest to dig out some of my custom & specialized manuals to see what they had on the subject. I know they were of UK/Great Britain origin and appear on a lot of my WWII military tube boxes and even later on. I was surprised that they did not appear in my 1st Edition, August 1950,SECTION 16-820 CATALOG of NAVY MATERIAL, BUREAU of SHIPS SECTION- PART II, titled "ARMED FORCES CROSS INDEX of ELECTRON TUBES" which was edited & formated by Check Penson WA7ZZE. I also have A GUIDE TO SPECIAL PURPOST TUBES, published by GRAHAM ELECTRONICS SUPPLY, INC. Copywright 1955, which also has no reference to these designations. My TV-7 Set-Up Booklet, dated OCT 1957 has reference and Settings for a little over two pages of these CV numbers at the end. I'll have to dig into my older Manfacturer Data Books and see what else I can turn up. Lastly, a search of the FEDLOG DATA under "CV" turns up 16 tube types. Till later. KEEP THOSE FILAMENTS LIT! Heading for the the ole homestead soon.
73, Glen Galati, KA7BOJ Tacoma, WA eldim@att.net

p.s. If any of you have Tech Data on Vacuum Tubes that you'd like to share then lets hear from you.

From: Larry WA9VRH <wa9vrh@mtco.com> Date: Sun, 29 Jan 2006 07:45:31 -0600
Subject: [R-390] First Wednesday CCA AM Night Feb.1st!

FIRST WEDNESDAY AM NIGHT!!! Sponsored by the Collins Collectors Association.

Wednesday February 1st on 3880 kcs at 7:00 PM local East Coast time marks the start of the latest chapter of First Wednesday AM Night, drawing hundreds of vintage stations from across the country.

The event is anchored by a "tall ship" AM station in each time zone. The East Coast and Central sections will now run for 90 minutes in response to the tremendous participation in those time zones. The remaining time zones will be an hour. We encourage stations to check-in on AM using Collins and other AM transmitters, new and old. It's an opportunity to revel in this nostalgic mode, enjoy giving vintage equipment a "run," and sharing some storytelling about classic vacuum tube homebrew and commercial designs. Typically more than a hundred stations take part in the evening's coast-to-coast AM event; by the time it concludes at 10:00 PM Local PST.

LISTEN for the following anchors and stop by to say hello, won't you? You don't have to be running Collins or vintage gear to be welcomed into the group.

7:00 PM-8:30 PM Local East Coast Time Anchor: Bob W0YVA

7:30 PM-9:00 PM Local Central Time Anchor: Jim W0NKL

8:00 PM-9:00 PM Local Mountain Time Anchor: Jim WA0LSB

8:00 PM-9:00 PM Local West Coast Time Anchor: Bill N6PY

comments please to wa9vrh@mtco.com

From: "Andy Jackson G8JAC" <g8jac@btinternet.com> Date: Sun, 29 Jan 2006 17:11:55 -0000
Subject: RE: [R-390] CV133 vs 6C4

|> I wonder whether they made identical tubes but labeled with whatever |>the CV equivalent is for a 5814A etc.

5814A = 12AU7 = ECC82 = CV491
5814WA = M8136 = CV4003 = 6189

|>Someone once tried to convince me that the euro EC-tube number system |>(e.g. ECC82) made a lot more sense than our system (filmanet voltage + |>letter(s) + number of terminals) but they didn't convince me. Maybe |>there is a rhyme and reason to the CV numbers but I don't see it.

E = 6.3v heater
C = Triode
C = second triode
82 Base type (B9A)

There is no logic to CV numbers, and many exceptions to any percieved "rules", but the CV sequence started during WW2 to try and produce a common numbering system for devices used by the navy, army, and the RAF, plus other government agencies such as the General Post Office (GPO), all of which used their own numbering systems in addition to those used by US and european manufacturers. CV

numbers were also allotted to devices with tighter specifications that normal, ruggedised versions and variations for special purposes. Later, the system expanded to include semiconductors.

http://www.tubecollector.org/ will tell you everything you need to know about the CV numbering system and a whole lot more. Andy G8JAC

From: shoppa_r390a@trailing-edge.com (Tim Shoppa)
Subject: [R-390] VFO endpoint adjustment - stumped!

OK, I'm stumped.

I'm putting my yellow striper back together. Right now the VFO covers a range of 2.500MHz to 3.6MHz. At the low end it hits some sort of apparent mechanical stop. Didn't hit anything at the high end because I don't need to turn it that far :-). It is supposed to cover 2.455 to 3.455 MHz (and with 25kHz of under-run it ought to go to 2.430 MHz) just as a reminder.

Even though it doesn't span the right range, the linearity is pretty good, and in the first ten turns it is always within 0.5kHz of being on the money.

I look in the Y2K manual, but the endpoint adjustment screw illustrated there does not match my unit physically. There is a plug-screw in mine, but it's on the left hand side, outside the triangle frame as seen from the front. The one in the Y2K manual is shown as being inside the triangle frame and a bit on the other side.

Inside the plug-screw, I find some sort of slug that can be turned with a 3/8" screwdriver bit. The slug seems to be hollow and probably brass. Turning it does nothing, doesn't budge the frequency at all.

There is another access hole, inside the triangle frame, that has a bunch of little set screws in it that slowly scroll past as I turn the dial. I think these are obviously the linearization screws. I do not want to screw up the linearization of this PTO, I am very happy with it as is.

Oh, and I pulled the metal rectangular cover from the box, and found some resistors. Hmm, that 2.2k resistor looks a little suspiciously brown, better check it out.... actually 8K!!! This makes the score on this radio for a total of seven 2.2K resistors that were too high in value by hundreds of percent! (Almost all of them in the plate lines). So I fixed that.

So how do I adjust the endpoint on this PTO? No maker's label on the outside, but there is a refurb sticker from Raytheon, indicating a service date of Feb 7, 1976. At one point I brought it up and I think the suggestion was that it was a Motorola? I could be recalling that incorrectly. Tim KA0BTD

From: "Mark Richards" <mark.richards@massmicro.com> Date: Sun, 29 Jan 2006 16:19:46 -0500
Subject: [R-390] RF Deck

Anyone on the list have an idea what a reasonable cost of a non-working R-390A RF deck, with all the gearing in place, might be worth used (no crystals)? I need one... And found one... But uncertain what the market for these is like. Mark K1MGY

From: "Jim M." <jmiller1706@cfl.rr.com Date: Sun, 29 Jan 2006 16:27:47 -0500
Subject: Re: [R-390] RF Deck

Used to be able to buy non working RF decks from Fair Radio for around $35 if memory serves me correctly. Jim M.

From: DJED1@aol.com Date: Sun, 29 Jan 2006 17:09:54 EST
Subject: Re: [R-390] VFO endpoint adjustment - stumped!

Sounds like you have a Cosmos PTO with the linearization adjustment. The end point adjustment is to the RIGHT of the linearity adjustment, hidden partly behind the transformer housing. However, you're only going to move the PTO tuning range a few KHz with the endpoint adjustment. If you're off 50 KHz you either have a problem with the mechanical stops or with the PTO capacitors. Is the mechanical stop you're hitting within the PTO itself or the 10-turn stops in the radio? You can change the realtionship of the PTO and 10-turn stop simply by loosening the shaft clamp on the PTO and turning it without adjusting the radio's geartrain. Ed

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 29 Jan 2006 17:35:59 -0500
Subject: Re: [R-390] VFO endpoint adjustment - stumped!

wrote: > Sounds like you have a Cosmos PTO with the linearization adjustment. The > end point adjustment is to the RIGHT of the linearity adjustment, hidden partly > behind the transformer housing.

Ed - it's something inside the PTO. The PTO has not been reattached to the Oldham coupler since the day I got this radio :-).

But I will take your advice that it's gotta be something mechanical inside the PTO. The endpoint (I would call it the slope, but everyone else calls it the endpoint) and linearization are great, it's just that it doesn't go down to 2.455Mc but makes this mechanical scrape inside, most of a turn short.

And a word to everyone: never ever trust a 2.2K 1/2W carbon resistor you see in a R-390A. I started investigating in my other radio (which had seen much better treatment over the years) and all of its 2.2K's were too high by a couple hundred percent too! Tim.

From: DW Holtman <future212@comcast.net> Date: Sun, 29 Jan 2006 16:17:32 -0700
Subject: Re: [R-390] VFO endpoint adjustment - stumped!

Take a look at this link, it will give you an idea of the inner workings of the Cosmos PTO.

http://www.davemed.com/cosmos.html

I think most RF decks havea lot of bad 2.2K resistors. Most of the tubes in the RF Deck have 2.2K resistors as plate loads such as V202 and V204 with the plate current going through them.

73's DW Holtman WB7SSN.

From: Joe Foley <redmenaced@yahoo.com> Date: Sun, 29 Jan 2006 16:57:40 -0800 (PST)
Subject: Re: [R-390] VFO endpoint adjustment - stumped!

Tim,

If you're sure the stoppage is inside the PTO then the best course of action is to open it up, no amount of guessing is going to verify what the problem is.

You might check the run-out of the shaft just to see if there is anything to see. It may show a bend that will let you know what to expect when you get inside, maybe.

Someone mentioned in the past needing to leave the rear mount loose to accomodate movement in the shaft due to being slightly bent. Joe

From: "Jim M." <jmiller1706@cfl.rr.com> Date: Sun, 29 Jan 2006 22:57:26 -0500
Subject: Re: [R-390] VFO endpoint adjustment - stumped!

Probably a Cosmos PTO. The little coil you say doesn't change anything is the end point adjustment. Maybe a previous owner turned it too far in trying to set the end points and pushed it out of its threads. The old PTOs cores are notorious for changing permeability with age requiring more and more aggressive end point tweaking until the "tweak" coil bottoms out, then you have to go in and remove a turn from the end point adjust coil.

Is the tuning repeatable from end to end, even though you can't reach the one extreme? Or does it seem like there is a large amount (10's kiloherts worth) of hysterisis or backlash as you go up and down? If so, the little disk that holds the linearity screws could have broken loose from the shaft. Then you need to read my article posted on Medley's site (it has some bad images, I can provide originals if desired). One way or another it sounds like you are going to need to open it up and investigate. Or buy a replacement off of someone on this list. Goodluck.

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Mon, 30 Jan 2006 05:31:29 -0500
Subject: Re: [R-390] VFO endpoint adjustment - stumped!

Thanks all - I have solved the PTO range issue!

First: that brass thing I was turning with the screwdriver was the oven thermostat. Little to nothing to do with endpoint etc.! Nobody here seems to care too much about the thermostat so I won't worry much either (after I make sure that whatever I set it to doesn't make the PTO cook itself!)

Second: the pictures of the disassembled VFO inspired me to take mine apart. Took out the VFO, took off the mounting brackets, took off the outer can, took off the oven (unsoldering 4 wires), then I finally get to see the works.

No apparent bending/etc. on the inside. The two "limits" I was feeling from turning the shaft came from the core hitting the end of its travel (this is the high end, at approx 3.7 MHz) and something else I never understood on the low side (which was stopping me at 2.5 MHz). Visual inspection showed that physically there was at least 2 and probably 3 more turns that the core could go in. So all I did was crank the core to its outer end (where it emerges from the mechanism if you remove the end), take it off, and

put it back on one turn earlier. Now the PTO covers 2.4 MHz through about 3.6 MHz, which is great. Linearity is not as spot-on as it was before the intervention, but now that adjustment seems trivial with a frequency counter and whatever kind of tiny screwdriver fits those little screws.

Again, thanks everyone! Oh, and thanks for the confirmation that I am not insane regarding 2.2K plate resistors. I am still astonished that almost all of them in my radio were high by a few hundred percent, while very few of the other resistors are out of tolerance. Tim.

From: Flowertime01@wmconnect.com Date: Mon, 30 Jan 2006 14:26:14 EST
Subject: Re: [R-390] To Hank KN6DI

Hank,

Knobs arived in mail today. I am a most happy camper. Thank you for the service. Roger L. Ruszkowski AI4NI was KC6TRU.

From: "Steve Hobensack" <stevehobensack@hotmail.com> Date: Mon, 30 Jan 2006 18:57:50 -0500
Subject: Re: [R-390] VFO endpoint adjustment - stumped!

Don't confuse the brass thermostat adjustment as an end point adjustment!

I've adjusted several Cosmos pto's. I once found one end-point coil that did absolutely nothing when adjusted. Upon close examination under a lighted magnifier, the end leads on the small coil touched each other near the solder tabs. Actually one small copper wire crossed around a solder tap to get to the next solder tab. The varnish had given way to a short. It must have been a quality control defect. ...Steve...N8YE

From: "Jim M." <jmiller1706@cfl.rr.com> Date: Sun, 29 Jan 2006 22:57:26 -0500
Subject: Re: [R-390] VFO endpoint adjustment - stumped!

Probably a Cosmos PTO.? The little coil you say doesn't change anything is the end point adjustment.? Maybe a previous owner turned it too far in trying to set the end points and pushed it out of its threads.?

From: TVComlGuy@aol.com Date: Mon, 30 Jan 2006 21:34:50 EST
Subject: [R-390] R-390A dial lock wanted

Hi to the group,

I need a complete dial lock assembly for an R-390A. Anyone have one? Thanks, Ron, KB0WAR