

R-390 Reflector August '05 Edited

From sacramento.cyclist at gmail.com Mon Aug 1 01:20:49 2005
Subject: [R-390] First 390A Alignment prep and weak bands

wrote: > The signal level was fairly consistent across all bands with the 2 and 3 mc/s bands being the notable exceptions.

Thanks Tim for the reply.

I completed the first pass on the alignment tonight with generally good results. A couple things of note for the list:

Stagger tuned the fixed 455 if, and to my surprise, both top and bottom cores of T-503 were fairly far off peak. Didn't expect to see such big gains from a stage I didn't go anything to. Seems to operate normally though. Crystal deck trimmers were generally right on peak, but couldn't hear the peaks on 2-3 and 3-4. Used the upper bands for that adjustment. Both variable IFs peaked nicely with some increase in gain.

2-3 and 3-4 mc/s are deaf as stumps. In particular, the core for L-217 is all the way at the bottom of its travel with no real peak. Mechanical alignment is fine.

Haven't set the IF gain pot yet, that will be the last thing I do. I want to find the trouble with the 2-4 mc/s section first.

Looks like I need to pull T-203 again and have a look at the innards. Any idea what I should be looking for? Thanks...Dennis

From ToddRoberts2001 at aol.com Mon Aug 1 01:44:05 2005
Subject: [R-390] NOS R-390A went for \$2502.00 on the Eplace - wow

I watched the end of the auction with interest - a lot of action in the last few seconds. Congratulations to the winner! The pics of the inside of the radio looked brand new. A fair market value I believe if it is indeed a like-new radio. I am sure the seller is happy. I remember seeing the ads for the new ones from the factory back in the 60's. I think the price back then was \$1200? Counting inflation in today's dollars would that be equal to about \$12,000 or more now? 73 Todd WD4NGG.

From tshoppa at wmata.com Mon Aug 1 09:15:43 2005
Subject: <<<SPAM>>: Re: [R-390] First 390A Alignment prep and weak bands

> 2-3 and 3-4 mc/s are deaf as stumps. In particular, the core for > L-217 is all the way at the bottom of its travel with no real peak. > Mechanical alignment is fine. > Looks like I need to pull T-203 again and have a look at the > innards. Any idea what I should be looking for?

If you've got a grid dip meter, you ought to see a peak at 4 or 5 MC with the core removed, and you ought to see it somewhere between 2 and 4 MC with the core halfway in.

Take off the cover and look to see any physical evidence of burnt out inductors.

If you don't have a grid dip meter, undo the minimum number of wires to separate the L's from the C's, and check for conductivity in the L's and lack of conductivity in the C's.

If you've got some sort of capacitance meter, check the capacitors, including the variable ones under rotation. Those postage-stamp micas have been known to do some bizarre things, and I'm 99% sure there's two of them in the 2-4MC cans. IIRC there's also a small (<1 pF) ceramic cap in there. Tim.

From stevehobensack at hotmail.com Mon Aug 1 09:46:31 2005
Subject: [R-390] calibration osc

My calibration oscillator (1963 Imperial) puts out two carriers several hundred cycles apart. One is weaker than the other. It is almost as if the multivibrator is not phase locked to the main xtal oscillator. Both carriers are stable, and I have zeroed the stronger carrier to wvv. It is not a serious problem, but I would like to fix it next time I have the rf deck out. Any ideas? Thanks.....Steve....N8YE

From tshoppa at wmata.com Mon Aug 1 10:35:15 2005
Subject: [R-390] calibration osc

> My calibration oscillator (1963 Imperial) puts out two carriers several hundred cycles apart.

My suspicion would be the crystal itself. Crystals with mechanical damage and/or poor mountings and/or high ESR's can show spurs like what you're seeing.

I'm not so sure "phase lock" is the right term, I thought it was just a divide-by-two-flip-flop made out of a 12AU7 to get from 200kHz to 100kHz and make lotsa harmonics. (Yep, digital electronics in our beloved R-390A's!)

Is the spur always a few hundred Hz away? If so, I don't think it's the calibration oscillator. If it were the calibrator and it was 200 cps at 10MC, then it would be 20 cps at 1MC and 600 cps at 30MC.

One of my RF decks had several resistors in the calibrator section way out of tolerance (like 50-100%) and discolored by heat. I think it was the flip-flop parts. Strangely enough they seemed to track each other exactly (i.e. if one 10K resistor was now 18K, the other was 18K too, and the 1M was now 1.8M! There's gotta be some deep meaning there...) Tim.

From crips01 at msn.com Mon Aug 1 12:16:19 2005
Subject: [R-390] frequency counter

I have one of the long discontinued RadioShack frequency counters. It works quite well except it's a battery hog. I want to use it to work on the IF/RF module. I need some information on building a test lead for this counter. It has a Hi-Z switch on it but the documentation for making up the cord is really lacking. Ken de W7ITC

From jamminpower at earthlink.net Mon Aug 1 12:29:02 2005
Subject: [R-390] Sub 6AU6 for 6BA6?

It won't make a lot of difference, but it will make a little difference. The amplitude of the oscillation is

determined by the characteristics of the tube. In general, the oscillator will make as big a signal as it can, until the loop gain starts falling below the critical value due to it running into saturation. With the 6BA6, that is a "soft" saturation, whereas with the 6AU6, that is a "hard" saturation. You could expect the 6BA6 to produce a slightly more pure sinusoid, whereas the 6AU6 will have somewhat more harmonics. This might produce some more imaging or IM distortion. With the powerful IF filters in the 390A, it is probably a wash - you probably won't be able to measure the image feed-through, but you might on some bands in some tuning ranges (how's that for qualified? Think I could be a politician?)
James A. (Andy) Moorer

From rocket_no9 at yahoo.com Mon Aug 1 19:37:14 2005
Subject: [R-390] Out from the shadows *Revisited* ...

I wanted to take a moment to thank everyone that took the time to offer help, here on the list and privately.

I rebuilt both filter caps and replaced C553 yesterday morning (sunday). Except for sleep time radio has been left on and seems to be performing well... All functions work and radio is sensitive across all bands. Unfortunately transformer is still humming. Had a great phone conversation with Rick Mish where he patiently answered every question I could think of (and a bunch I couldn't). He's of the mind that I should simply replace power supply module. I have a couple of calls out, if these fall through do any of y'all have a *clean*, functional module you'd be willing to part with? Digging around radio it's become clear it's actually an EAC from the 67' (mid) run (even though it's tagged Imperial) with this in mind an EAC module would be too good to be true.

My near term plan is to replace module and then live with radio for awhile simply letting it run. Then I'll start thinking about alignment. Thank you again for all your help. Best regards, Mike Castellana

From mjmurphy45 at comcast.net Mon Aug 1 20:08:19 2005
Subject: [R-390] calibration osc

Steve,

I had the same experience with the way out of tolerance resistors in the calibration oscillator section of my Stewart Warner receiver and changed out quite a few with a power size larger. I suspect that this "digital" circuit stresses the resistors. This was also a common problem with early logic devices using vacuum tubes. They actually had to design the tubes to be tougher too. Mike Murphy WB2UID

From KA4PRF at peoplepc.com Tue Aug 2 07:49:58 2005
Subject: [R-390] off subject slightly

Hi all,

Is there an internet source that you know of, where I can purchase new variable capacitors. The older type we find in table top AM radios from the 50's for example and bigger ones found in the SP-600. Another example is the type that MFJ use to use in their cheaper preselectors and antenna tuners. Thank you Chuck B ka4prf@peoplepc.com

From ToddRoberts2001 at aol.com Tue Aug 2 08:55:17 2005

Subject: [R-390] off subject slightly

writes: Is there an internet source that you know of, where I can purchase new variable capacitors. The older type we find in table top AM radios from the 50's for example and bigger ones found in the SP-600

Try eBay. Just type in variable capacitor in the search box and you will usually get a couple of pages of all different kinds of variable capacitors. 73 Todd WD4NGG

From n4buq at aol.com Tue Aug 2 09:15:47 2005

Subject: [R-390] off subject slightly

< Is there an internet source that you know of, where I can purchase new> variable capacitors.

Try Antique Electronic Supply - <http://www.tubesandmore.com/> Barry - N4BUQ

From crips01 at msn.com Tue Aug 2 10:21:31 2005

Subject: [R-390] off subject slightly

Ten Tec sells air variable cap's such as they use in their antenna matchers. Ken

From crips01 at msn.com Tue Aug 2 11:25:56 2005

Subject: [R-390] off subject slightly

I just put "air variable capacitor" in as a search term in google and I have nearly a hundred hits. I looked at a few of them and what you need is available on one or more of these sites. Ken de W7ITC

From sacramento.cyclist at gmail.com Tue Aug 2 15:53:39 2005

Subject: [R-390] T203

I got into the shop last night and pulled T203 to try and discover why my 2 and 3 mc/s bands were deaf.

In order to get it out, I had to pull the two in front just to be able to grip the thing. Once I had it out, I noticed that the slug was different in appearance than the other two. It has a glossy finish, almost like it was coated with a shellac, where the other two (and all the rest) have a very flat matte finish.

Nothing was apparent on a visual inspection. No sign of burning or other evidence of too much power. Just in case, I swabbed the pins and sockets with DeOxit. Used a cotton swab on the pins and a very small brush in the sockets. Re-installed.

Powered up and now I have an *almost* normal level of Cal signal. The T-203 core is now almost at the top of its range instead of almost at the bottom, but adjusting it shows no real definite peak..just a very broad increase. The caps all show a nice peak. I did notice that with an antenna connected, where the ANT TRIM control peaks varies alot from one end of the band to another...from the far right through zero to the far left.

Next time I will go and swap cores and see if it acts differently.

I'm still don't trust T203. Is that ANT TRIM behavior to be expected on the 2 and 3 mc/s bands? The antenna is a 120ft long dipole. Dennis

From n4buq at aol.com Tue Aug 2 18:04:39 2005
Subject: [R-390] NOS R-390A went for \$2502.00 on the Eplace - wow

Not quite that much. <http://www.aier.org/cgi-aier/colcalculator.cgi> Barry - N4BUQ

From redmenaced at yahoo.com Tue Aug 2 18:24:10 2005
Subject: [R-390] off subject slightly

It would seem that most of them were proprietary, made for each specific application, especially as far as mounting goes, maybe even capacitance value and voltage as it concerns plate spacing. Joe

From k3pid at sbcglobal.net Tue Aug 2 18:38:26 2005
Subject: [R-390] off subject slightly

<http://www.cardwellcondenser.com/> has a selection of new variables made to the Johnson specs as well as neat things like roller inductors etc. K3PID Ron H.

From lwolcott at copper.net Wed Aug 3 12:41:31 2005
Subject: [R-390] Radios From Estate

Hi Everyone,

My father, Larry Wolcott (Sr.) was a member of this group and passed away a while ago; I am tending to his business. I've been keenly aware of his passion for exotic radio equipment over the years. While I do have an interest, I don't have the time or energy for another hobby, so the radios will be going for sale when I get the time. Since his passing, I have put everything in storage and won't be returning there for another 2-3 weeks. There were quite a few interesting units including a 390, 392?, tube-tester, splitter/amplifier and other items. I'll take an inventory including pictures and serial numbers on the next trip. If there is something specific any of you would like to know/see, let me know. As far as I know, there's a good chance he might have acquired some of these things from some of you. If you have any previous knowledge of my dad's radios, I would love to hear about it. Likewise, Larry Sr. was a retired officer (LTC), Inspector General and was very particular about the condition of his collectables. I can picture him running a white glove across the 390 and inspecting with care :) I know for a fact that everything is in perfect working order.

I will be watching the 390 mail group in digest mode every now-and-again, but not regularly. If you are interested in any of dad's equipment, or have any info about it, please email me directly at objectcoder@hotmail.com to be sure I read it timely. Best Regards, -Larry Wolcott Jr.

From w5or at comcast.net Wed Aug 3 23:54:55 2005
Subject: [R-390] Radios From Estate

Larry,

On behalf of the R-390 list, I offer our condolences on the loss of your father, and thank you for taking care of his equipment and finding it good homes. I like that image of your Dad running a white glove across a perfectly working R-390. We all aspire to keep our equipment in the same good order.

Feel free to contact me should you need any assistance. Best Regards, Don Reaves R-390 list manager
w5or@comcast.net

From jupete at bigpond.net.au Thu Aug 4 00:15:12 2005
Subject: [R-390] Wanted.

Would anyone that has squirrelled away a IF module for a R-390A and wants to unleash it for financial gain, pse let me know about it .-- All complete preferred.

Alternatively. a parts module with plug and BFO stuff present would be fine and a couple of filters to include a 4 kHz would be acceptable . Fair have no 4 kHz filters. Tks Pete VK 3 IZ Pete D . Williams
METUNG 3904 Australia jupete@bigpond.net.au

From joe.fallon at philips.com Thu Aug 4 05:13:09 2005
Subject: [R-390] Joe Fallon is out of the office.

I will be out of the office starting 08/04/2005 and will not return until 08/15/2005. I will respond to your message when I return.

From jclark6 at gmail.com Thu Aug 4 14:28:25 2005
Subject: [R-390] Tube Tester

I assume everyone has strong opinions about this so I will ask, what Type Tube Tester would you recommend. Make and model. I am thinking about picking up a tester and I know nothing so I will ask those who do. Thanks73 De Jim N5TJZ

If you own Collins Amp 30L-1 SN 29068 Contact me

From beerbarrel at cox.net Thu Aug 4 17:48:06 2005
Subject: [R-390] Tube Tester

TV-7....

From n4buq at aol.com Thu Aug 4 15:57:23 2005
Subject: [R-390] 1/8A and 1/4A fuses

Gang,

A while ago, I was asking for a source of inexpensive fuses for the R390A and I found it. Dave (davesexp@grics.net) will sell a 5-pack of 1/8A and a five-pack of 1/4A AGC fuses for \$6.00 shipped while quantities last. I think that's a pretty good deal for 10 fuses.

I asked him if it was okay to post this to the list and he agreed. Contact him directly at davesexp@grics.net. He takes PayPal which makes it pretty painless. Regards, Barry - N4BUQ

From djmerz at 3-cities.com Thu Aug 4 20:32:48 2005
Subject: [R-390] Tube Tester

Jim, I've owned Hickok 600a, 6000, 750 and TV-7. I got rid of the 6000 because it didn't have sockets for the older vintage tubes. I almost always use the Hickok 750 because I have more tube settings data for it than for the other two and it can put a lower plate voltage on some of the old tubes. The 600a is quite popular with users of vintage tubes and there's a lot of data for how to use it with those tubes including Western Electric tubes. I almost never use the TV-7, though I once compared mine on a number of tubes with the 600a and it indicated about the same. Of course a tube tester is mild reassurance that a tube is ok, and can find tubes with open filaments, shorts and low emission readily. Most testers do about the same unless you get into testers with other kinds of metering, different than the ones that I am familiar with. I always wanted to try a Hickok 539 (I think that's the number?) but they seem to find buyers with more money than sense. Maybe I'll stumble across one for a reasonable price someday. Best regards, Dan.
If you own Collins Amp 30L-1 SN 29068 Contact me

From wd8kdg at worldnet.att.net Fri Aug 5 00:17:22 2005
Subject: [R-390] Need straight poop on 6C4

To All,

I've got a 6C4 going soft in the RF section of my R-390A. The Y2K manual shows to use a JAN-6C4W, another source states to use a 6C4WA, the 6C4W will not work, the 6C4 will work but not quite as well.
So, need the straight poop, which 6C4 is the real deal? Got a guy 20 minutes down the road with a house full of tubes to sell. Thanks & 73's wd8kdg Craig

From crips01 at msn.com Fri Aug 5 11:15:58 2005
Subject: [R-390] Need straight poop on 6C4

I have milspec 6C4's brand new sealed in their as issued box's these are the one's called for in the original parts list for the R390A. Interestingly the boxes on mine are miss-printed 64C instead of 6C4. The Tube it's self is marked 6C4, no W, or WA, just JAN (Joint Army Navy) 6C4. Ken de W7ITC

From jamminpower at earthlink.net Fri Aug 5 13:19:20 2005
Subject: [R-390] Tube Tester

I have an EMC 215. You can get them for \$10-\$25 you-know-where. Many tube nuts poo-poo them as being crass cheapo commercial units, but I have yet to find a case where it reads anything different from my TV-7 or my TV-2.

The construction on the inside is not very rigorous - for instance, they use the infamous "flying joint" soldering technique in a couple of places. A few minutes with the soldering iron will put all these right.

The list of the tubes they test is quite complete. To do some of the transmitting tubes, you need an extension box which is a bit harder to find. I have only found a couple of tubes they won't test, and nobody else tests them either (like the 9556 UHF triode). James A. (Andy) Moorer

From chacuff at cableone.net Fri Aug 5 15:43:11 2005
Subject: [R-390] Tube Tester

The best tube tester is a working radio of course but beyond that I would stick with one of the "Mutual Conductance" type testers. (I think I got that right..)

I'm using a B&K 747. The last commercially built tube tester I'm familiar with....

It's a modern tube tester if that means anything... It won't test some of the old 4 and 5 pin tubes though.... Cecil....

From vk2abn at bigpond.net.au Sat Aug 6 20:32:11 2005
Subject: [R-390] tube testers

I have been repairing instrumentation with tubes in it since the 1960 s and have always been of the opinion that the best tube tester is the circuit that the tube is in, it is easy to check the parameters of the circuit by measuring the voltage drops in the circuit i.e.. across screen resistors ,cathode/plate resistors ect ,with the mental application of Ohms law the currents are easily seen ,if no current is flowing the resistor is open circuit or the tube has no emission its as easy as that and all you need is a voltmeter, I never substitute a tube until I find a reason for problem,in my tool box I have a selection of tube extenders ,so voltages can be read easily above the chassis ,these are all home made from plugs and valve sockets, there have always been people who had pretensions to being technicians and used to endlessly swap tubes around, in Australia we used to refer to them as valve jockeys , the large government department where I trained did have a tube tester in the lab and used to sample tubes from the manufacturer to check they were in specification , when you look at the original specification for a radio like the RCA AR88 it called for full performance from the radio if ANY or ALL of the TUBES were down to 30% EMISSION ,the reality is that well engineered equipment doesn't make great demands on the tubes , Our family acquired a television set in 1956 it had 23 tubes by 1970 , most of the tubes were original , the only tubes that had been replaced were the horizontal O/P, damper diode , eht rectifier ,Ht rectifier, and a double triode in the cascade amp in the tuner, the monochrome picture tube also was at the end of its life, lots of people these days have the idea that tubes are CONSUMABLE ITEMS that need replacing every so often ,I often here people talking about RE TUBING their rig ,, WHAT A CONSUMMATE WASTE OF PARTS AND TIME , Regards to every one , hope this is of interest .

From CRIPS01 at MSN.COM Sun Aug 7 04:00:00 2005
Subject: [R-390] tube testers

RE: [I] have always been of the opinion that the best tube tester is the circuit that the tube is in

This is a good point. I have a Sylvania tube tester and it works ok but there are times I wonder just how accurate it is. I found my tube pin straighter, now I am going to look for some tube extenders. Ken de W7ITC

From barry at hausernet.com Sun Aug 7 06:27:28 2005
Subject: [R-390] tube testers

> RE: [I] have always been of the opinion that the best tube tester is the > circuit that the tube is in

That's true, and many of the tube tester manuals say so another YMMV disclaimer.

wrote: > This is a good point. I have a Sylvania tube tester and it works ok but > there are times I wonder just how accurate it is. I found my tube pin > straighter, now I am going to look for some tube extenders.

Tube extenders are well worth having, though some are a bit too big to fit some places in R-390's. You might want to roll your own, but it's not easy to find 7 and 9-pin bases.

There are various tradeoffs in tube tester design, so they may be more accurate with some types of tubes than others and there can be errors in the tube charts. The manufacturers did not necessarily calculate the correct minimum reading for every number. Many of the entries were probably determined through extrapolation/interpolation, if that. (Or they cheated and used a conversion factor on the values from some other tube tester.) And, of course, what's good enough in one socket in a particular piece of equipment might not be in another for the same tube number. YMMV prevails.

Tube testers do have their uses, such as:

Sorting through batches of old tube finds. Pre-testing for shorts, grid emissions, burnt out filaments before installation Making relative comparisons/matching or selecting tubes such as tubes that should not be too "hot". Checking for burnt out tubes that are part of a filament string. Yeah, you could do that with an ohmmeter, moving the tube extender around from tube socket to tube socket, or pulling the chassis. In this case (like a tube Transoceanic or other series filament setup), it's a time saver.

You don't want to use a good piece of equipment to find out if a tube has a dead short that might take out a transformer. We are also learning that an NOS tube/valve is not necessarily "forever". There could be bent, shorting elements that have occurred in storage, repeated shipping around, old latent defects, etc. Long term air leakage around pins has also become more frequent, so there's something to be said for pretesting in even the simplest of emissions testers before plugging 'em into the equipment.

The reject values for mil testers such as the TV-7's seem to be set conservatively low. Good tubes generally read well over those, except for rectifiers and diodes which tend to be right on. Seems to be designed to avoid excess "tube jockeying".

If you pay enough for a tube tester (like too much), chances are, you'll be more inclined to use it to save tubes than to find ones to toss out.

Not sure how popular "re-tubing" is on this list, but if you're going to arbitrarily replace all yours, please send the castoffs to me for proper disposal ;-) Barry

From shoppa_r390a at trailing-edge.com Sun Aug 7 08:09:13 2005
Subject: [R-390] tube testers

> You don't want to use a good piece of equipment to find out if a tube has a dead short that might take out a transformer.

I'm not gonna say it's impossible to take out a IF or RF transformer or a coil or choke due to a tube short, but most all R-390A owners are lucky enough to have B+ fuses.

> Not sure how popular "re-tubing" is on this list

A while back someone was proudly stating that it's his policy to throw out every tube in each of his R-390A's every six months. Tim.

From Flowertime01 at wmconnect.com Sun Aug 7 19:17:06 2005
Subject: [R-390] T203

Dennis,

Try to swap a core from the 4-8 rack into the 2-3 rack and see how that aligns.

We know there are different cores of same size but different composite stuff. A lot of wrong cores have been dropped into receivers. If a core swap brings the 2-3 band up to par, you can go looking for a correct core. They are available.

Do not worry about the antenna trim. As you go from 2.000 to 3.999 you run across whole fractions of wave lengths and impedance matches. Also, until you feed the antenna input with a balanced input and get the first trim cap in each band octave adjusted, the antenna trim can vary a lot. Feeding an adjusted receiver from a one sided input will still give you a lot of antenna trim adjustment. Roger KC6TRU

From Flowertime01 at wmconnect.com Sun Aug 7 19:47:25 2005
Subject: [R-390] Need straight poop on 6C4

Craig,

Any good 6C4 will work in an R390. However, like every thing else all tubes were not created equal. Some are just better than others. JAN marked are OK. RCA Sylvania brands are likely OK. Other brands can also be good.

Buy what you can get and then swap them into the same tube socket and compare them for signal strength and noise. Some very strong signal tubes are also very noisy.

Plug them all in, and line them up on the bench from best to poor. Save a few extra. Plug the best ones in to the receiver. A brand new sleeve of five tubes will have each tube perform different. If they are all very close, have high output, low noise you get lucky. Sooner or later you will want some more tubes. Buy 5 for you receiver that needs 3.

Some time later (6 months at 24 x 7) the tubes will be different. Do the comparison test again on all the tubes and run the best you have. While doing 6C4's also do the 5814, 6AK5, 6AK6, and 5759 tubes. Roger KC6TRU

From pwokoun at hotmail.com Sun Aug 7 20:18:43 2005
Subject: [R-390] tube testers

and there can >be errors in the tube charts. The manufacturers did not necessarily calculate the correct minimum reading for every number. Many of the >entries were probably determined through extrapolation/interpolation, if that. (Or they cheated and used a conversion factor on the values from some other tube tester.)

I can tell you folks how I recall we college co-ops did it back at Hickok...

When the tube manufacturers introduced new tube types, 3-5 tubes were normally received along with the new design specs. Each of these new tubes was set up on a super lab tester at exactly the published specs to determine precisely how each one compared to the published specs. For example, one tube might have 104% of the rated Gm while another might have only 97% of the rated Gm.

I believe Hickok's testers usually had a fixed plate voltage but some could be set within limits. It was the bias that was adjustable with a front panel control. When one of these new tubes was set up in a particular tube tester, the bias was adjusted to approximate the plate current that was used in the manufacturers determination of Gm. When you had about the right plate current the shunt control was adjusted so that a tube with 100% of a new tube Gm would read exactly 2/3 full scale on a fail-?-pass type of scale. The bias and shunt readings that you set up would be what appeared on the next roll chart. If the tester had calibrated Gm scales, the bias would be adjusted until the meter read exactly what the lab standard read for that tube.

Note that the tube would only have to drop to about 70% of its new tube value before it reached the bottom of the "?" area and start to be rejected. That why a lot of tubes that test in the fail or reject part of the scale still work in equipment. Remember, tube manufacturers wanted to sell tubes and it was better to err on the side of conservatism (better to throw away a still usable tube than to keep a bad one).

When I was doing this back in the middle 60s, there were only about 3-4 models that had their roll charts upgrated with the new tube types. There was also that cardmatic one that got the new types. If you wanted data on a tube for an older model that didn't have it on its roll chart all you had to do was call customer service. I remember dragging those oldies out of the 'morgue' and getting the settings for a customer or two. A new cardmatic model was also being developed for the military but I don't think that ever got pass the prototype stage. I remember doing the layout on the power supply pc boards for those. By that time tubes were on their way out.

Introducing new tester models was a nightmare...you had to go and verify every tube type with the new tester settings. I spent many an hour doing that on their 'mustang' model. Kind of boring but lots of overtime. enough rambling.... pete, KH6GRT

From djmerz at 3-cities.com Mon Aug 8 02:14:38 2005
Subject: [R-390] Product detector for 390

Hi, a short report on my success constructing the product detector designed by Ed Newman/ modified with xtal control and posted by AI2Q, with reference noted earlier on this list. I deviated somewhat from the posted diagram and Ed's design by using a Hartley oscillator with a National NC-100 bfo coil but more or less the same configuration otherwise. The detector requires no mod's to the 390 (or 390a) and is an external box connecting to the diode load terminals, the i.f. output and the agc terminals on the back of the 390. With the oscillator I used, one of the buffer stages following the oscillator was unnecessary and a 300 mv signal to the 1496 IC pd was accomplished with an MPF-102 oscillator followed by the MPF-102 stage to the product detector.

The product detector improved the clarity of ssb signals and more importantly the design provides agc that works nicely with the rf gain control turned all the way up, or slightly reduced. The agc is a big improvement over what I accomplished with the simple two diode addition. The 390 noise limiter does not operate in the product detector mode. However, the unit has a single switch to revert to normal 390 operation with the 390 diode detector/noise limiter if desired. I hardly use the noise limiter so I haven't missed it yet.

I'll probably build a second one and use an R-392 bfo coil for the oscillator and make it compact enough to fit below the 390a in its cabinet. A nice unit, thanks to Ed and Alex for revealing their handiwork to the list, best regards, Dan.

From odyslim at comcast.net Tue Aug 9 20:52:17 2005
Subject: [R-390] multiple outlet strips

Does anybody know of a manufacturer that makes a multiple outlet strip that has an on/ off switch for each outlet? 120 VAC. Thanks Scott

From jpl15 at panix.com Tue Aug 9 22:07:14 2005
Subject: [R-390] multiple outlet strips (fwd)

>Does anybody know of a manufacturer that makes a multiple >outlet strip that has an on/ off switch for each outlet? 120 VAC.

You might try and look for one of those multi-outlet control boxes they used to sell in computer shops.

These were quite common for home computers - most of them were flat boxes with four to eight switches on the front, outlets on the back, that were made to fit under the base of your monitor - then you could control it's power, the printer, computer, fax machine, etc. I see them at ham swaps all the time - have a couple here that I use on the bench to turn test gear on and off. Cheers John KB6SCO

From n4tua at aol.com Wed Aug 10 06:53:04 2005
Subject: [R-390] 7 +000 alignment

Hello Friends,

I have a question concerning the mechanical alignment at 7 +000 of the cams. My Motorola has lines but they are not long enough to be seen through the holes. My question is: Does the tip or high part of the cam line up the same as the hole? In other words can I use the tip of the cam to line up with the line? Or is it that critical? I can see how the hole can be very accurate alignment, but that line is not real fine. Any help would be appreciated. I have the gear train cleaned, deburred and back together, and am working on the mechanical alignment now.

Progress at: www.hometown.aol.com/n4tua/main.html Thanks, Collin

From jupete at bigpond.net.au Wed Aug 10 07:25:22 2005
Subject: [R-390] Rolling your own R-390A

Interesting observation----if you're thinking/hoping to resurrect a R-390A from junkers or dilapidated cabinet/hardware and need a few essential modules , have a look at the score card for some of the bits based on what is coming out of the auction site in recent times. Do the additions on recent sales... a pair of meters \$240, an IF module \$230 a set of knobs \$60 and if you're really pressed for the aesthetics, a front panel \$300.

Seems more sense to by a couple of junkers more or less complete and make one good one probably all the other stuff is there..... but if you need spares, there's always the other source. 73 Pete Pete D . Williams METUNG 3904 Australia jupete@bigpond.net.au

From tshoppa at wmata.com Wed Aug 10 07:50:37 2005
Subject: [R-390] Rolling your own R-390A

> have a look at the score card for some of the > bits based on what is coming out of the auction site in recent times. > Do the additions on recent sales... a pair of meters \$240, an IF > module \$230 a set of knobs \$60 and if you're really pressed for the > aesthetics, a front panel \$300.

I know that at least one of the sales you are talking about fell through because the buyer thought he was getting a complete R-390A when the auction was only for a single assembly.

And their is a certain satisfaction to doing the "one piece at a time" (acknowledgments to Johnny Cash) approach, taking pieces and making them whole, that goes beyond any cash value.

But that said... I saw a guy selling all the parts necessary to build a R-390A but disassembled to the most ridiculous level a few weeks ago. All were claimed to be from the same working EAC serial number unit. It was truly sad... one auction was all the gears. Another was all the gear clamps. Another auction was the slug racks. One was the IF module minus filters. Four more for the filters. Another for the antenna relay. Another for the stripped chassis. Another for the side plates. Another for the back plate. etc.

Other auctions this seller had was a disassembled HW-101 in 22 different auctions. One for the dial, one for the front panel, one for the knobs, exactly the same pattern.

This seller seems to have high feedback and unfortunately seems to make more money selling the parts individually from known working radios. (The parts from the stripped HW-101 sold for 3 or 4 times what a whole functional radio commonly goes for!)

Not that I have deep emotional attachments to any particular radio, but when bags of parts have more value than a whole working rig then something has gone wrong. And I do have attachments to R-390A's and HW-100's going back several decades, so I'm not completely impartial.

I have nothing against trading around/selling parts and modules (modules especially makes sense for the R-390A) and "parts radios" to keep old rigs on the air. It's just the senseless destruction of working rigs because you can make bigger bucks by doing so that bothers me.

It doesn't seem quite so bad when it's a wholesale surplus dealer doing similar (but probably not identical, I'd like to believe that the parts come from otherwise un-restorable units) things. Don't ask me why. Maybe it's the decades I've spent looking at their Dymo-labeled catalogs! And maybe it's because deep inside I believe that they're doing a real service by making individual parts available (as opposed to "all the gears in a baggie".)

OK, that's my little rant for the morning. Time to go take my blood pressure pill to keep that vein in my forehead from popping out! Tim.

From Radiograveyard at aol.com Wed Aug 10 08:28:20 2005
Subject: [R-390] Rolling your own R-390A

Thanks to the e place you guys are seeing what the auto salvage (junkyard) business has been doing for decades. Many cars are worth more dead than alive, the sum of the parts is more than the saleable price of the whole. It is a pity these "sellers" are chopping up history in search of the buck but then that's what makes things rare and collectable. The flip side is they give so others may live (organ doners). Over the years I have found with radios and cars you are better off starting with a complete unit rather than some hulk and usually you still need something. Pete

From roy.morgan at nist.gov Wed Aug 10 08:51:48 2005
Subject: [R-390] Rolling your own R-390A

wrote: >..... I saw a guy selling all the parts necessary to build >a R-390A but disassembled to the most ridiculous level a few weeks >ago.

Similar grim scene witnessed at Dayton this year:

Visitor A: "Hey, I just saw a bunch of (Pacific Rim persons) taking a BC-610 to pieces over there by the fence! They had a whole lot of other things in pieces already."

Visitor B: "Really! That must be the BC-610 I just sold 20 minutes ago! Oh well, I got my price...."

Myself: "I wouldn't be surprised if the parts are already listed on e-Bay via satellite phone Internet hookup." Sigh. Roy

From tshoppa at wmata.com Wed Aug 10 09:01:46 2005
Subject: [R-390] Rolling your own R-390A

> Thanks to the e place you guys are seeing what the auto > salvage (junkyard) business has been doing for decades. > Many cars are worth more dead than alive, the sum of > the parts is more than the saleable price of the whole.

It's not quite the same. Fair Radio (and other surplus businesses) do a pretty good job of buying a pallets full of military surplus and getting it out both as whole units and as individual parts to us little guys. They are like a junkyard, they deal at both the wholesale (in) and retail (out) levels, and they are gonna be there with most (but maybe not all) the parts you need for some extended period of time. That is truly a valuable service, most of us wouldn't know what to do with a semi trailer filled with mil surplus.

The E-place guys who split up working radios are more like a toddler smashing a toy into pieces and getting paid to do so. (OK, maybe not paid much, the guy who took apart the HW-101 probably spent 20 hours doing so to make a hundred or two hundred more bucks, that's less than minimum wage. But maybe he's more efficient than me, cutting wire harnesses instead of desoldering, etc., since he never intends on putting the thing back together.) Come to think of it, he probably did just use wire cutters, etc., maybe he only spent two hours doing so, at \$50-\$100 an hour that's not so shabby.

Admittedly the E-place blurs the line between established businesses and little guys with stuff in their closet, and that's not all bad. And maybe the rigs would've been smelted down instead of offered up as parts otherwise. I dunno. Tim.

From vibroplex at mindspring.com Wed Aug 10 09:17:00 2005
Subject: [R-390] Rolling your own R-390A

Did you ever consider that they might be making them smaller for packing/overseas shipment. I send a lot of stuff to Australia and the U.S. Post Office has severe restrictions on size/weight. They won't accept anything over 20 kilos. Now think what you'd have to do to an R-390A to get it there. There are alternatives with private shippers but they are often horrifically expensive and don't offer many of the options that the Post Office does.

I have to rip apart practically everything I ship to Australia. I've done this at several antique radio meets in the parking lot for overseas purchasers. Frequently they have no choice.

Of course, I have no specific information on the situation you witnessed. Derek Cohn
Morse Telegraph Club - Alton Chapter

From roy.morgan at nist.gov Wed Aug 10 09:33:47 2005
Subject: [R-390] Rolling your own R-390A

wrote: >Did you ever consider that they might be making them smaller for >packing/overseas shipment. I send a lot of stuff to Australia and the >U.S. Post Office has severe restrictions on size/weight.

Derek,

No, I had not considered that. What you suggest makes good sense.

However, I got the impression at the time that the way they were taking apart the radios left no chance of putting them back together again. The fellow had said: ".. furiously disassembling..." It seemed to us that they were making profit, not trying to get a usable radio across the ocean. Roy

From n4buq at aol.com Wed Aug 10 10:32:48 2005
Subject: [R-390] Rolling your own R-390A

I have a deck with a power supply, knobs, and replacement meters for which I have thought about adding the modules as I find/restore them; however, the way the prices are going now, I think I'm just going to sell the deck (once I get it finished) and let someone else be the hunter/gatherer.

I do hate to see these things chopped up for parts the way I've seen some of them lately. A fellow in Greece has been doing this for quite some time now. Nice enough guy I suppose, but I think he's realized there's more money in individual parts than in the whole. Shipping from Greece makes buying from him is not very cost effective from the U.S. Barry - N4BUQ

From paul at pdq.com Wed Aug 10 10:52:21 2005

Subject: [R-390] Rolling your own R-390A

wrote: > I do hate to see these things chopped up for parts the way I've seen some of > them lately. A fellow in Greece has been doing this for quite some time > now. Nice enough guy I suppose, but I think he's realized there's more > money in individual parts than in the whole. Shipping from Greece makes > buying from him is not very cost effective from the U.S.

I saw this guy sell an almost unobtainable PTO for an R-389. I shudder to think what happened to the rest of the R-389. Last year, I saw a nice R-390 taken apart and sold this way, too. Made me gag. Paul

From barry at hausernet.com Wed Aug 10 11:20:17 2005

Subject: [R-390] Rolling your own R-390A

The "parting out" dynamic is nothing new and even new cars are worth more in pieces than assembled, hence targetted auto theft feeding chop shops.

Economics of parting out radios can vary - if you take into consideration the time needed to strip them down. Some are easy on a module level and might fetch much higher total prices especially if the complete radio wasn't working or missing something. However, it also takes more time and effort (and fees) to sell off individual pieces, a factor which probably keeps more gear intact thank goodness.

On the other hand, I suppose we should be thankful that some do this when we need an "unobtainium" item to complete or repair a rig. Barry

From kc8opp at yahoo.com Wed Aug 10 13:04:32 2005

Subject: [R-390] 7 +000 alignment

Collin,

This may not be too elegant, but I have done this once or twice. With a straight edge and a pencil, extend the lines to a point where you can see them.

I seem to remember that the hole in the cam is in line with the point, but that is an old memory talking!
Good Luck Roger KC8OPP

From tshoppa at wmata.com Wed Aug 10 13:19:43 2005

Subject: [R-390] 7 +000 alignment

> I seem to remember that the hole in the cam is in line with the point, but that is an old memory talking!

It's very close to being in line. If I dial the cusps of the cams so they point to the line, then on my rigs the line is visible through the hole but it's not always centered in the hole. Tim.

From ToddRoberts2001 at aol.com Wed Aug 10 13:31:58 2005

Subject: [R-390] Rolling your own R-390A

Very sad to see some R-390A chassis that have been offered for sale but with the wiring harness just

chopped off or cut off in several places, which would make the valuable harness useless. If someone was stripping an R-390A it would always be best to try to sell the chassis/front panel as one unit. Some folks just cut the harness to get the front panel off because they don't want to take the time to remove all the individual pots and controls to keep the harness intact. 73 Todd WD4NGG

From David_Wise at Phoenix.com Wed Aug 10 13:37:18 2005
Subject: [R-390] 7 +000 alignment

Don't sweat the cam alignment - it's not at all critical. As long as every cam is on its front, or active side at all frequencies for which that cam is used, it's probably fine. The cams are spiral-cut, which means that the lift is proportional to the angle. As long as the slug adjusters are able to total up the proper lift, there will be no degradation in tracking. This is very different from most radios, and comes from Art's insistence that it tune linearly. It's also documented in the Final Engineering Report, which is available on the R-390A FAQ site. 73, Dave Wise

From n4buq at aol.com Wed Aug 10 14:24:38 2005
Subject: [R-390] Rolling your own R-390A

American Trans Coil offered (offers?) wiring harnesses like that. I bought one because I wanted the connectors and it was cheaper than buying them from Fair Radio. Also, I got some extra wire of the right look-n-feel along with some clamps, etc. I guess they figured whoever bought the front panel would want the pots and switches more than whoever bought the harness, but I'm sure it was an economic issue. It takes time to disassemble the equipment from the front panel. Also, either you have to unsolder the wires from the back panel or clip them. If clipped neatly, there's plenty of wire to make new connections. Oh well, what'reyagonnado... Barry - N4BUQ

From crips01 at msn.com Wed Aug 10 16:24:50 2005
Subject: [R-390] Rolling your own R-390A

Speaking of rolling your own radio I have long used the old style type writer stands for my boat anchors. I am sure you have seen them they are the old stands which are usually painted gray, have wheels for rolling around and a lever under the table for raising the wheels off of the floor so it can't move. What is interesting is these old stands just happen to fit a rack mount style rigs exactly. Most of them have fold down side boards for extra space. The new ones are not suitable as they are too flimsy to take the weight needed. I have rolled around 155 pound plus rigs on my stands with ease. These 1950's stands can be found at state surplus property stores, Goodwill stores, flea markets, Salvation Army thrift stores etc, I have never paid over \$15 bucks for one. Ken de W7ITC

From w2bkd at junos.com Wed Aug 10 23:55:57 2005
Subject: [R-390] MECHANICAL FILTER TYPE F455J-31

DOES ANYONE HAVE A SPARE FILTER. THANKS JIM

From edhopton at yahoo.com Thu Aug 11 16:19:30 2005
Subject: [R-390] FS: R-390A Blue Stripers

Hello all,

I have three of the subject receivers for sale. I bought them for spare parts or restoration, but I'm out of space so they gotta go.

These are gen-u-wine blue stripers, which means they do not have meters and they are completely untested. Two of them had their PTOs removed when I got them, but I have PTOs to go with each receiver. You will need some Oldham coupler parts, though. They appear to be otherwise complete.

These are for pickup only in Philadelphia, PA. \$200 each or take all three for \$500. Thanks for the read and 73, Ed N3CMI

From wli98122 at yahoo.com Fri Aug 12 00:28:51 2005
Subject: [R-390] re: test gear for your R390A

Some time ago, there was a query re test gear to get started. Really all you need is the Y2K manual, a URM-type RF generator and a stable simple VTVM. But I love scopes, so today at Boeing Surplus there was this very clean Tek 2215 that I snapped up. I guess that one can not too many scopes... lots of fun!

In the shack I have a Costco roll-about plastic 48 inch high "tower" with nine transparent drawers ostensibly for clothes, that now has my small parts and tubes. Attached a three hook hat rack on the back that now holds my cables and scope probes for real easy access. It parks out of the way in a corner until it's needed. W. Li Mercer Island, WA

From rocket_no9 at yahoo.com Fri Aug 12 00:39:56 2005
Subject: [R-390] revelation and the diode load ...

Finally got around to checking out audio off diode load... I can't believe the improvement.

Going from 390A (w/ resistor/capacitor) into a Macintosh MC-40 into a single Dynaco A25 (Only had one, knew I'd need it eventually); Working the radio is SO much more pleasureable.

Inteligibility has been improved greatly. Bass response is out of the ballpark and high end has been tamed... Distinctions between selectivity settings have become more useful. And of course ... when a signal is booming in opening radio to 16kc is a ball.

Is it a good idea to remove V603 and V604 if I continue to use an outboard amp? Seems like radio might run cooler. Regards, Mike

From CRIPS01 at MSN.COM Fri Aug 12 03:18:53 2005
Subject: [R-390] re: test gear for your R390A

You know you are in a proper ham shack when you see test leads and jumpers hanging every where like Spanish moss. Ken

From chacuff at cableone.net Fri Aug 12 08:46:21 2005

Subject: [R-390] re: test gear for your R390A

Greetings,

The O'Scope is a very handy tool at times. I have found the spectrum analyzer to be a most handy tool when looking for weird problems especially in crystal oscillators. Typically expensive though...they are coming down in price for older models that HP makes. They drift around a bit until warmed up much like our beloved radio's but that's OK. I just power it all up and come back in an hour and go to work. It's nice to be able to see the purity of a signal and do comparative level checks. I've found by using the spectrum analyzer I can do a better and quicker job of aligning all the crystal oscillator trimmers in the R-390/URR's I've done. Easy to see the peaks and the harmonics to make sure the right one is being peaked.

Anyway it works for me.....If you end up with 5 or 6 hundred dollars that you want to spend on a nice piece of test gear for the bench take a look at one of the older used HP analyzers.....if you get one that goes down to cover the 455 KC IF you can do sweep alignments of the IF if your generator is capable...That's another subject.....

From roy.morgan at nist.gov Fri Aug 12 09:21:52 2005

Subject: [R-390] revelation and the diode load ...

wrote: >Finally got around to checking out audio off diode >load... I can't believe the improvement.

Mike,

Good for you. Everyone should try this.

>... Macintosh MC-40 into a single Dynaco A25

Bravo on the McIntosh amp. A nicer 6L6 amp is hard to find! (I have one here.) I found that the Dynaco 25 is a speaker. Some info and box diagrams are at: <http://www.t-linespeakers.org/classics/dynaco.html>

I have here an Acoustic Research AR-2 that may be of similar vintage. It's got an unfinished pine case and is quite beat up. I expect to try it in a setup very similar to yours.

>Is it a good idea to remove V603 and V604 if I >continue to use an outboard amp? Seems like radio >might run cooler.

It will run a bit cooler, and tube life is greatly extended by storage in a box. heheh Roy

From saglek at videotron.ca Fri Aug 12 11:07:36 2005

Subject: [R-390] re: test gear for your R390A

> You know you are in a proper ham shack when you see test leads and jumpers hanging every where like Spanish moss. >> Ken

And you never have enough OR can't find the one you knew you had. Al

From pwokoun at hotmail.com Fri Aug 12 12:02:50 2005

Subject: [R-390] re: test gear for your R390A

Obviously a newcomer to the hobby since he has only '1' rack for spare parts and extras. But, given time, inventory will grow...

From SHELLY199 at aol.com Fri Aug 12 16:25:27 2005
Subject: [R-390] Re: R-390 Digest, Vol 16, Issue 12

Hi Ed,

I'll take all 3 for 500.00 and pick em up in Phila. Hope no one else got there first. Rich WD2Q

From w2bkd at juno.com Sat Aug 13 14:37:32 2005
Subject: [R-390] CRYSTAL OSCILLATOR UNIT

THE UNIT I HAVE HAS THE FOLLOWING NUMBERS ON IT: 506 2641 003 AND S.W.E. NO. G-573071 IS THIS A R-390 OSCILLATOR UNIT ? THANKS JIM

From edhopton at yahoo.com Sun Aug 14 12:09:36 2005
Subject: [R-390] Free boatanchor test gear!

Hi all,

I have a bunch of test gear which are boatanchors and are also suitable for working on boatanchors (like the R390). They are free for the taking.

Come and get it pickup only in Philadelphia, PA. I need to make space, so the following must go:

1. Tek 545A with manual, cover (!), cart and type 1A1, K and Z plug-ins. My first good scope, I used it from 1980 until about 5 years ago when I got more modern stuff.
 2. Tek 547 with 1A4, cart and manual.
 3. Tek 535, missing fan bracket but probably otherwise complete.
 4. Two each HP-608C signal generators.
 5. Assorted 500-series plug-ins.
- 73, Ed N3CMI (215) 247-2456 (home)

From paolo.gramigna at gramigna.com Sat Aug 13 17:10:52 2005
Subject: [R-390] In search of a R-390

Hi,

I'm a newcomer to the list. I'm located in Italy, si i have very scarce sources around me. I'm in search of a good (working and complete) R-390, precisely a non-a version. Can you point me to a reliable source, or to a reliable "somebody" willing to sell? Regerds, Paolo from Italy

From wli98122 at yahoo.com Sun Aug 14 13:04:23 2005

Subject: [R-390] RE: test ger etc

Pete: Nope, been messing with gear since 1949. I only reported on the 'nicer' part of the shack! W. Li

From r390a at bellsouth.net Sun Aug 14 20:16:47 2005

Subject: [R-390] Differences in 390A IF decks

The tech manuals mention differences between older and newer 390A IF decks, and folks here have, in the past, brought up that older Collins decks were different. Indeed they are.

If anyone wants to add an additional photo to their 390A photo collections, below is a link to assorted detail photos just shot of an unmodded early Collins IF deck. No dates could be found anywhere.

<http://www.fernblatt.net/forradio/R390A/>

Just click on the files that start with collins_r390a_IF..... etc There are a few shots of a fairly late Collins 390A in there as well. I've only come across a couple of Real Live Collins 390A's, plenty of the radios made by other contractors.

Feel free to use any photo you wish, and anything else in you find stored on my server. If you click on "parent directory" then go down a bit, there are loads of other images including a directory full of photos of Fair Radio's old place.

The Collins 390A shown in the pics? It's been gone for a year, sorry guys. 73 Tom NU4G

From shoppa_r390a at trailing-edge.com Mon Aug 15 05:43:52 2005

Subject: [R-390] Differences in 390A IF decks

> The tech manuals mention differences between older and newer 390A > IF decks, and folks here have, in the past, brought up that older > Collins decks were different. Indeed they are. >
<http://www.fernblatt.net/forradio/R390A/>

I assume you're talking about the fixed rather than variable caps around the filters?

I have an IF deck that is Motorola and has the fixed caps too. Not sure if it was originally that way from the factory or was a result of parts-swapping at the depot, but I was always under the impression that many Motorola IF decks lacked the variable caps and the chassis holes. What exactly is that doo-dad in the ballast tube socket? Tim.

From bill.riches at verizon.net Mon Aug 15 09:25:40 2005

Subject: [R-390] Fw: 75A2 Cabinet

I have a 75A2 cabinet for sale - on a scale of 1 - 10 it is a 7 - \$ 125.00. Plus ups shipping. 73, Bill Riches, WA2DVU Cape May, NJ

From r390a at bellsouth.net Mon Aug 15 09:43:27 2005

Subject: [R-390] Differences in 390A IF decks

wrote: [snip] > I assume you're talking about the fixed rather than variable caps > around the filters?

Tim, you know that, and I know that. I had posted the links for the benefit of those that didn't or for those that collect photos for no good reason. Or for good reason, either one. I think there is at least one, who I forget, that likes new and different pix taken.

yup, and the fact it's a Collins [Blessed be Art, etc] AFAIR all the Motorola and Collins decks pre 1954 had fixed caps. I suppose most Mot/Col decks out there will be capless, since they weren't made past '56. An odd thing about the deck in the photo - there is no contract number marked anywhere on the thing. Just a Collins p/n and a serial. The other Collins 390A's I've had had the contract numbers, at least I think so. I may have been hallucinating at the time, though. heehee

Tom M reminded me of the different sheet metal design and other things that were used in later contracts by EAC. I may also do comparison pix showing those as well, I probably have an extra EAC module around here somewhere. (rummage rummage)

Tim asks: "What exactly is that doo-dad in the ballast tube socket?"

The doo-dad? It's a "Modified Horizontal Low Resistance Current Pass Device" Which means I have a 9-pin shorting plug underneath instead of a b*11*st. The tube shield and label are there for effect, since the radio is going out the door to someone with an odd sense of humor. I used 12BA6's for PTO and BFO. The radio is an Amelco, but it's a mutt. While it has an Amelco RF deck and P/S, the IF is Collins and the audio is Stewart-Warner. Now if the p/s were Helena-Rubenstein, we'd be all set.... hehe 73 Tom NU4G

From courir26 at yahoo.com Mon Aug 15 08:38:23 2005
Subject: [R-390] EAC and Differences in 390A IF decks

EAC pioneered a new assembly procedure to assemble IF decks and others (RF I think) "in the open" and then fold up the sheet metal. They got permission from Ft. Mom to do this. Notice how late EAC decks have different sheet metal folds than others. EAC also got special permission to make wire splices to enable this. I got this info from Robert Edwards of EAC. Interestingly enough, the Folwer IF decks were made the original "Collins" way.

The EAC mods did not stick to the drawings issued to Fowler. Everyone confused yet? Tom

From sacramento.cyclist at gmail.com Mon Aug 15 13:52:05 2005
Subject: [R-390] Needed: T203, RF Slug, Oldham spring

Hi everyone,

Swapped out the core from T203 with the adjacent (4-8) slug rack, and re tweaked the antenna coils. The different slug aligned very differently than the previous one, so I will infer that the original one does indeed not belong. The suspect core behaves has the same odd behavior in the 4-8 mc/s rack, i.e. has to be screwed ALL the way in, almost to the point where it falls into the core, without reaching an obvious peak. (signal level keeps increasing while turning the core in without peaking).

So, does anyone have a spare RF slug?

However, the proper slug does not apparently help the deafness of the 2-3 and 3-4 mc/s bands. Therefore, I'd like to swap out T203 before I decide I have to pull the RF deck again :(. Rocking the bandswitch doesn't seem to affect the deafness at all, so I'm hoping that helps eliminate the bandswitch itself. Or am I just kidding myself.

Anyone have a spare T203?

And finally, (it comes in 3's), my Oldham coupler spring went into orbit recently and I'd like to get that back on the coupler. I could use at least one, and a couple of spares if anyone has any to part with. Reasonable costs gladly paid. Thanks! Dennis

From n4buq at aol.com Mon Aug 15 14:22:50 2005
Subject: [R-390] Possible Oldham Spring source?

I wonder if the springs shown on this page would work for Oldham springs? I can't tell from the pics as to the size, but they sure look close. Might be too much tension for the application, though?
<http://www.radioverzameling.nl/repro/uk/> Barry - N4BUQ

From jonandvalerieoldenburg at att.net Mon Aug 15 14:47:31 2005
Subject: [R-390] Iola WI Military Show

I attended the Iola WI Military Show this past Saturday as I usually have for the past 10 years now. This year was unusual in the amount of radio gear for sale. There had to be at least 8 vendors with multiple rigs for sale. Prices ranged from steals to average. RT-524's ranged from \$150 to \$495, Prc-25's \$175 to \$350, PRC-77's \$200 to \$400. I purchased a T-195/GRC-19 transmitter complete with canvas cover, mic & power cord for \$80.00 ! I still need to source the MT-851 mount and the cabling to hook it up to the R-392. I also found a CW-124 antenna support kit that is complete except for the instruction manual (\$25.00). Any help in finding these items (GRC-19 cables, mount, & antenna support manual) would be appreciated. Jon Oldenburg AB9AH

"Give a man a fish and he will eat for a day. Teach him how to fish, and he will sit in a boat and drink beer all day."

From john at gumlog.net Mon Aug 15 15:09:58 2005
Subject: [R-390] Differences in 390A IF decks

Motorola's Order No. 14-PH-56 was the first order that required the order number and the serial number to appear on all modules. Partway through that order the three fuse modification was made too. John, W4NET

From r390a at bellsouth.net Mon Aug 15 15:25:28 2005
Subject: [R-390] Differences in 390A IF decks

wrote: > Motorola's Order No. 14-PH-56 was the first order that required the order number and the serial number to appear on all modules. > Partway through that order the three fuse modification was made too.

Thanks John. I was aware of the fuse mod, but not the order number and s/n information. Must have just overlooked it. Tom NU4G

From w9wis at yahoo.com Mon Aug 15 16:31:16 2005
Subject: [R-390] Iola WI Military Show

Hi Jon,

I missed you.... I was there on Saturday too. Did you see the guy selling new in the bag LS-454 speakers for \$10 each ? I picked a couple up.... he had LOTS of new parts as well. Mike, W9WIS

From redmenaced at yahoo.com Mon Aug 15 21:20:20 2005
Subject: [R-390] Possible Oldham Spring source?

I can get some made up if no one has a source. Joe

From CRIPS01 at MSN.COM Mon Aug 15 22:25:29 2005
Subject: [R-390] Possible Oldham Spring source?

will this help? <http://www.rinomechanical.com/shftcoup.htm> Ken

From hankarn at pacbell.net Mon Aug 15 22:57:44 2005
Subject: [R-390] Possible Oldham Spring source?

I have 200 +/- that I furnish with my Oldham coupler disc. New CNC of SS. for \$12.0 mailed. How about 2 for a Dollar mailed USA. limit 2 per person. Send a dollar bill in SASE to cut down on emails and all of the related hassle (being nice HiHi)

Remit to:
DAn Arney
c/o Global Pack & Mail
21315-R Saticoy St.
Canoga Park, CA 91304-5685

This is no emails required, each un required email add a buck to your order. LIMIT 2 PER ORDER.
Thanks, Hank KN6DI

From Thomas.Guest at TRW.COM Tue Aug 16 06:54:25 2005
Subject: [R-390] Replacement Meters for R-390A

Hi everyone,

The original meters for the 390A are getting hard to find and expensive. Is there a replacement that would fit the hole and work with or without mods to the unit? I am picking up one this month from Fair Radio but they don't sell replacement meters with the ones that are not fully checked. Thanks in advance. Tom

From n4buq at aol.com Tue Aug 16 09:18:41 2005
Subject: [R-390] Filter cap replacement question

For you guys who are re-stuffing your R390A's electrolytics, which caps are you using? I ordered some from Mouser with the intent of simply installing them "bare" through the holes in the octal sockets. Sadly, the octal sockets in this AF module, though, don't have through hole style sockets; therefore, I'm planning on using an octal plug. I have some old cans from another set I've gutted, but these caps are just about 0.010" in diameter too large to stuff three of them in the can so I was wondering where you are getting caps small enough to fit three inside the cans.

I have some old burned-out octal tubes and their bases are a perfect press fit in the old cans so if I can find small enough caps, this should be a cake-walk. Thanks in advance, Barry - N4BUQ

From tshoppa at wmata.com Tue Aug 16 09:44:24 2005
Subject: [R-390] Filter cap replacement question

> For you guys who are restuffing your R390A's electrolytics, which caps are you using?

For the 33 uF 3-section, I used Nichicon 33uF 400V 105C rated radials. Part number UVZ2G330MHD. I like to be conservative so I went with a 400V rating, 105 degree C rated, and Nichicon is a well-respected lytic maker. (They don't steal electrolyte formulas with missing ingredients!)

Diameter wise I get two of them in the bottom of the can and a third up top. It's a tight fit but it does work.

> [can't put wire through octal socket]

I've seen the plastic/phenolic socket drilled out to do this.

> I have some old burned-out octal tubes and their bases are > a perfect press fit in the old cans so if I can find small enough > caps, this should be a cake-walk.

I used the original can base. Drilled holes into the brass pin a little bit, inserted a wire, filled with solder. I needed extension wires to get to the cap "on top". JB-welded the can back together.

Others drill/tap a hole and use a screw to attach to the old base. If you press-fit a "new" octal base into the old can I don't think you'll have enough height to do all three caps. Tim.

From robert.boyd at sdc-dsc.gc.ca Tue Aug 16 09:52:29 2005
Subject: [R-390] Filter cap replacement question

For you guys who are restuffing your R390A's electrolytics, which caps are you using?

Barry:

I obtained mine from Digikey, but all the 33uf capacitors appear to be a "standard" size. I got around the size by epoxying two caps together, then epoxying the third on top of the other two thus creating an assembly which I wired to the base. The base-another nightmare! I didn't waste

time attempting to solder aluminum wires, instead I drilled out the original wire and drilled/tapped the pins (2/56), inserted brass screws and soldered the assembly to them! Robert, VE3BE

From n4buq at aol.com Tue Aug 16 10:17:35 2005
Subject: [R-390] Filter cap replacement question

Robert,

Not sure, but I think these are too tall to do that. They are axial lead caps. Maybe if I get radial lead caps, that would work. Thanks for the suggestion. Barry - N4BUQ

From sacramento.cyclist at gmail.com Tue Aug 16 10:20:28 2005
Subject: [R-390] T-203 still needed and Thanks

Thanks to all who responded with springs and slugs...I should have both on the way.

I still need a T-203 (2-4 mc/s antenna coil) if anyone has one laying around. I'll probably give Fair a call today as well. Thanks, Dennis

From robert.boyd at sdc-dsc.gc.ca Tue Aug 16 10:23:43 2005
Subject: [R-390] Filter cap replacement question

Barry, I used radial lead caps Robert

From odyslim at comcast.net Tue Aug 16 11:01:02 2005
Subject: [R-390] Wanted to buy.

I am in need of the aluminum face plate for simpson VU and carrier meters. It took months to find a meter and I am very happy to have that. Now just the cosmetics :-). Does anybody have one to sell or trade? Thanks, Scott W3CV

From jpl15 at panix.com Tue Aug 16 11:07:47 2005
Subject: [R-390] Wanted to buy.

wrote: > I am in need of the aluminum face plate for simpson VU and carrier meters. > It took months to find a meter and I am very happy to have that. > Now just the cosmetics :-). > Does anybody have one to sell or trade?

Ummm - size? Model? Vu is "B" Scale I'd perhaps assume? enquiring minds.... Cheers John KB6SCO

From wd8kdg at worldnet.att.net Tue Aug 16 11:29:33 2005
Subject: [R-390] Filter cap replacement question

I ordered from Mouser, Xicon 140-XRL350V33 and 140-XRL350V47. These are radial lead

electrolytics. A dremel tool with a cut-off disk made a quick job of neatly removing the lip on the old cans. Apply some heat with a propane torch to loosen the uckumpucky and pull out the old guts. Clean the inside of the old cans with some type of solvent. Drill and tap the pins of the base. I think I used 4-40 stainless screws with solder lugs. For the can with three 33uF caps, I stacked one on top of two, had to lengthen the leads on the top cap. A little heat shrink on the leads, some RTV to hold things in place, slide the cover back on with a dab of super glue. Looks good, lasts long time. Craig,

From dhallam at rapidsys.com Tue Aug 16 12:16:08 2005
Subject: [R-390] Wanted to buy.

I certainly am glad that those of us who own the non A version don't have these problems. David C. Hallam KC2JD

From jpl15 at panix.com Tue Aug 16 12:29:32 2005
Subject: [R-390] Wanted to buy.

Apologies owed - I was thinking Simpson meters for something other than an R390.... I have a bunch of meters hanging about - of various sizes, etc. D'Oh!

Sorry about that - too many mailing lists with overlapping subjects - this comes up all the time when rebuilding broadcast transmitters.

I believe the R390 meter faces exist in .pdf format ready to be printed and pasted.... Cheers John KB6SCO

From dhallam at rapidsys.com Tue Aug 16 12:31:58 2005
Subject: [R-390] Filter cap replacement question

Sorry about the previous reply to the wrong message. This is message, filter cap replacement question, to which I meant to reply.

I certainly am glad that those of us who own the non A version don't have these problems. David C. Hallam KC2JD

From glennmaillist at bellsouth.net Tue Aug 16 12:48:31 2005
Subject: [R-390] Filter cap replacement question

A word of caution on the use of RTV. It comes in at least two types. If it smells of acetic acid, do not use it around anything metallic that you do not want to corrode. I learned this the hard way. I potted the VCO in my first GLB synthesizer just as the instructions said. About two years later it quit. When I troubleshooted the problem, I found all the copper leads in the potted area were dissolved. The RTV when it cures, by the moisture in the air, releases acetic acid. This dissolved the copper.

There is another type of RTV that is listed as "Oxygen sensor safe". This is available at auto parts stores. This type is also available from industrial supply houses. This cures with an alcohol and does not cause any issues with the electronics. 73 Glenn WB4UIV

From wd8kdg at worldnet.att.net Tue Aug 16 15:44:58 2005
Subject: [R-390] Filter cap replacement question

Guess I've been lucky with the RTV. In most cases I've used a dab to stick things together, let the RTV harden and move on to the next step. Years ago I had a power transformer fail in an old DX-40. Had to put a steam hose to the beast to soften up the uckumpucky and pull the windings out of the metal can. Found the open/broken wire on the first wrap and potted the transformer with RTV. Didn't have any problems while I owned it. But if someone out there with a DX-40, its transformer potted with white RTV..... Oh well, something to keep in mind. Craig,

From vk2abn at bigpond.net.au Tue Aug 16 17:58:07 2005
Subject: [R-390] Electro s

The octal mounted caps can be easily replaced by axial lead caps that can be soldered under the audio module chassis ,modern caps are much smaller physically ,for the purist I suggest disconnecting the octal socket underneath and retaining the old cans , much simpler and quicker than restuffing the cans regards to all Bernie N

From redmenaced at yahoo.com Tue Aug 16 21:12:25 2005
Subject: [R-390] Electro s Nah relay base/plug!

wrote: > The octal mounted caps can be easily replaced by > axial lead caps that can be soldered under the audio > module chassis ,modern caps are much smaller > physically

+++++++

Nah, The simplest way is to solder the new caps to an octal relay base and plug them in! The cover is optional. Joe

From future212 at comcast.net Wed Aug 17 07:40:14 2005
Subject: [R-390] R-390A front Panel Meters

Hello,

I'm new to collins gear and just brought home two R-390A's from Fair Radio Sales, my first collins type gear. They are a little rough, but very restorable. The biggest problem is they do not come with front panel meters. Does any one have a set for sale or trade, or know someone making some type of reproduction?

Thank you in advance for all of your help. 73's DW Holtman WB7SSN

From n4buq at aol.com Wed Aug 17 11:26:52 2005
Subject: [R-390] Electro s Nah relay base/plug!

Joe,

Good method. Do you have a source for relay plugs and covers? I found some ideal-looking candidates

at <<http://www.keyelco.com/pdfs/p102.pdf>> but I can't find anyone who stocks them for online retail sales. Barry - N4BUQ

From redmenaced at yahoo.com Wed Aug 17 11:43:48 2005
Subject: [R-390] Electro s Nah relay base/plug!

Yup, same here, cut the corners off on a bandsaw 'til it's round. Joe

From n4buq at aol.com Wed Aug 17 11:52:42 2005
Subject: [R-390] Electro s Nah relay base/plug!

Hmmm, I didn't think about that. I was assuming the housings would be oriented so that they would fit properly, but if I recall correctly, the octal sockets are not mounted at right angles to the sides of the AF deck. Maybe I'd better stick with my tube bases... Thanks, Barry - N4BUQ

From hankarn at pacbell.net Wed Aug 17 12:43:33 2005
Subject: [R-390] RE: R-390A

I have for starters 10 R-390A frames with harness, antenna relay, Power supply, front panel with handles, panels are straight, missing the 2 large knobs, panels show normal wear and tear These units come with "THE ORIGINAL METERS" THE UNITS ARE SOLD "AS-IS" READ IT AGAIN THEY ARE SOLD AS-IS. SOME HAVE TAGS and some panels are stamped. SOLD AS-IS No returns, no warranty SOLD AS-IS No tags and silk screened panels \$325.00 plus UPS estimate max. of \$30.00 for shipping in lower 48. With original tags and stamped panel \$350.00 plus UPS same as above. NO CHOICE!! NO! Except choice of panels.

THESE UNITS WILL REQUIRE A BUNCH OF TLC AND MODULES. I HAVE MODULES BUT HAVE CHECK THEM OUT BEFORE I QUOTA PRICES

TO give everyone a fair chance I will not except any orders until 2000 PDT or 0400/18/05.

Any emails time stamped prior to the above stated time will be deleted. I have no answers to the above information and any email asking questions will drop to the bottom of the list

Terms: USPS Money order or Paypal with confirmed use/address Paypal ID is my email addy..

MY Address is: Dan Arney c/o Global Pack & Mail 21315-R Saticoy St. Canoga Park, CA 91304-5685

Sold AS-IS Thanks, Hank KN6DI

From n4buq at aol.com Wed Aug 17 12:43:44 2005
Subject: [R-390] Electro s Nah relay base/plug!

Never mind, I found them. I was looking for the Lexan version. DigiKey (and others) have the polystyrene versions. Thanks, Barry - N4BUQ

From ToddRoberts2001 at aol.com Wed Aug 17 17:27:08 2005
Subject: [R-390] Electro s Nah relay base/plug!

writes: Good method. Do you have a source for relay plugs and covers? I found some ideal-looking candidates at <<http://www.keyelco.com/pdfs/p102.pdf>> but I can't find anyone who stocks them for online retail sales.

Barry,

One thing to keep in mind about the square-base Octal Relay plugs and covers. If you notice on the R-390A audio chassis the keyways in the octal sockets for the filter caps are offset at a 45 degree angle from the 12 o'clock position. If you plug in the square-base Octal Relay plug the whole thing will be at a cockeyed angle on the audio chassis and the corners of the relay covers will bump into the choke on one side and the bandpass filter on the other side of the octal sockets. Unless you rotate the octal sockets on the chassis I don't see how the square relay housings can fit in-between the choke and bandpass filter on the chassis? It doesn't look like there is enough room on the chassis to drill new mounting holes to rotate the original octal sockets? If someone else has done this how did they get the square relay covers to fit square on the chassis? I suppose someone could replace the octal sockets with ones that have the snap in ring mountings and rotate them so the relay plugs will fit square. Sounds like a lot of work to get them to fit though. 73 Todd WD4NGG

From n4buq at aol.com Wed Aug 17 17:33:20 2005
Subject: [R-390] Electro s Nah relay base/plug!

Todd,

That's right and something I hadn't considered until earlier today. One thing I thought might work is to remove the "spline" from the octal stem. You'd have to be very careful to plug them in with the correct orientation, but given that interference issues are already present, it might not be too much of an issue.

They used to make octal adapters that fit on older tubes where the orienting stem had broken off. The adapter has 8 holes which slide over the tube's pins and you can choose from 8 different "orientations". A little epoxy to hold it in place and that might be a workable solution albeit an expensive one considering the cost of the relay holder, replacement stem, and caps. But, hey, it's just money. They'll print more. Barry - N4BUQ

From ToddRoberts2001 at aol.com Wed Aug 17 17:46:38 2005
Subject: [R-390] Electro s Nah relay base/plug!

writes: That's right and something I hadn't considered until earlier today. One thing I thought might work is to remove the "spline" from the octal stem.

Barry,

That is an option to use the octal keyway repair items - they are still available from Antique Electronic Supply. You would have to take off the entire keyed stem on the relay plug down flush to the base of the pins, then slip the new keyway over the pins with the orientation offset 45 degrees then glue it to the base. Problem would be the best way to get the old keyway stem off the octal relay plug. Might be hard to get it off cleanly if it is made of brittle phenolic. If it is softer thermoplastic you might be able to drill it out from the topside using a drill-press and a step drill or by stepping drill sizes. Don't know how you

could cut it off flush at the base - how would you get some kind of a saw down in there between the pins? Would be an interesting project! 73 Todd WD4NG

From redmenaced at yahoo.com Wed Aug 17 20:19:47 2005
Subject: [R-390] relay base/plug!

If you're going to take the key off from an octal socket to use the spline repair method you should remember that you might want to take off four of the pins, too. You don't need them and it will give you more room to saw out the center pin, hacksaw, bottom to top.

Jan Skirrow used to have the nice square relay boxes for this job but I don't know if he has any more, we may need to look for a supplier of those.

A 40mm shell casing is the right diameter for this, and is SO appropriate! It just EXUDES mil-surplus class!!

If all else fails; rip the bottom off from an old rectifier tube, it can be done, sometimes by hand. The 40mm shell casing should fit nicely over that! Joe

From ToddRoberts2001 at aol.com Thu Aug 18 02:08:33 2005
Subject: [R-390] relay base/plug!

writes: If you're going to take the key off from an octal socket to use the spline repair method you should remember that you might want to take off four of the pins, too.

Just took another look at the octal sockets on the R-390A audio chassis. Looks like the easiest way to get the square relay plugs to fit would be to just take a miniature round or square file and carefully file out a new keyway in the audio chassis octal sockets at the 6 O'clock position. Probably wouldn't take ten minutes to do and no drilling, sawing or cutting off the keyway or removing the original octal sockets - just spend a few minutes with a small file! The square relay plug would only fit in the chassis one way so no worry about the plug going in the wrong way and this would safely align the new square plug-in filter cap assembly for the correct wiring to the socket. This would be a "soft" mod and not even visible once the new square relay cap housings are plugged in! Also the original metal cans could still be plugged in if you paid attention to the keyway orientation. I checked the wiring to the sockets and if the new keyway was cut at the 6 O'clock position - if you plugged the original cans in the wrong way all the pins would end up in blank positions on the sockets so no worry about possibly shorting something out if you plugged the original cans back in the wrong way - it just wouldn't work and you would get no filtering probably just lots of hum but no fireworks to worry about! But if the original holder bracket is still on the original cans it would be a no-brainer to plug them back in correctly! 73 Todd WD4NGG

From hankarn at pacbell.net Thu Aug 18 11:09:21 2005
Subject: [R-390] RE: Frames

I forgot to specify the date and that the 0400 was UTC, GMT of the 18th. 73 Hank

From RIKKA3TXR at aol.com Thu Aug 18 17:11:46 2005
Subject: [R-390] Filter can repacking

On the subject of repacking filter cans...I found that when you drill into the pins (used a drill the size of the cap leads) of the filters through the aluminum "rivet" that you will hit brass.. tell tale yellow shavings start to show.. I just dabbed flux into the small drill holes and filled them with solder.. then heated again and inserted the cap leads.. it was much easier than tapping the holes and setting brass screws.. I like quick and easy stuff ...RIKK KA3TXR

From shoppa_r390a at trailing-edge.com Thu Aug 18 21:12:06 2005
Subject: [R-390] Filter can repacking

> when you drill into the pins of the filters through the aluminum "rivet" that you will hit brass..

If you cut the can at the right place (immediately above the place where it goes from wide to narrow at the bottom) you see brass right away. It solders to quite nicely (using a Weller 40W temp-controlled iron) after you drill a hole. Tim.

From future212 at comcast.net Thu Aug 18 23:22:00 2005
Subject: [R-390] Hollow State News

Hello,

Does anyone know the web link to the Hollow State News? I tried to Google and could not find it. Thank you in advance for all of your help. 73's DW Holtman WB7SSN

From natcolls at msn.com Wed Aug 17 11:06:32 2005
Subject: [R-390] power connector

hello, i am a member doorbar61@tiscali.co.uk but this address wont go thru so i am trying my other address. just bought 392 on the e-place, anybody got a spare power connector they can sell me, many thanks brian

From CRIPS01 at MSN.COM Fri Aug 19 00:22:25 2005
Subject: [R-390] Hollow State News

all I could find is this: Hollowstate News

Ralph Sanserino
PO Box 1831
Perris CA 92572-1831

Kenneth A. Crips, W7ITC, Cheyenne,

From barry at hausernet.com Fri Aug 19 01:14:40 2005
Subject: [R-390] Hollow State News

Here's Ralph's current email address: r.sanserino@worldnet.att.net

Contact him for available reprints. I reserved two domain names for the eventual website and will be getting a webhost for it in a couple of months.

The plan (somewhat delayed) is to put up most of the old issues on the site and publish new material there from time to time. Meanwhile, email Ralph for whatever you're looking for. Barry

From roy.morgan at nist.gov Fri Aug 19 08:57:50 2005
Subject: [R-390] Hollow State News

wrote: >Here's Ralph's current email address: > >r.sanserino@worldnet.att.net

URM-25D Owners,

While you are at it, find out if Ralph can still supply copies of:

"URM-25D Overhaul Notes" by Dallas Lankford 11-88, revised. 1-94, with copy of HSN Supplement from Issue 41 about the "Terminal Board". (The Overhaul Notes themselves did not appear in HSN, only a notice that they were available separately.. There are about 18 pages if I remember correctly. Dallas has not made a similar set of notes for the -F model, unfortunately.) The original cost of these notes was VERY modest, and no URM-25D owner should be without one.

Additional articles about the URM-25 are:

HSN Issue 34 Winter 1994-95. Short Subjects: "Balky Modulation Oscillator in the URM-25, by Allan Douglas (about the R-C "T network" and padding a capacitor to make it work again.)

HSN Issue 41, Spring 1997

- URM-25D Rebuild Notes Supplement (a drawing of the Terminal Board, Courtesy of Ray Mote) this issue also includes:
- Captain Lee's Product Detector for the R-390/R-390A - Revisited - Part 2
- "SSB Adapter" - Revisited (see HSN #10 for Lankford's initial report): bridge rectifier and 6Uf capacitor only found inside. Roy

From g4gjl at btopenworld.com Fri Aug 19 14:12:07 2005
Subject: [R-390] Hollow State News

Keep us abreast of developments, Barry. there may well be more online interest than paper copy interest! Pete G4GJL

From Radiograveyard at aol.com Fri Aug 19 21:28:11 2005
Subject: [R-390] New 390A

Its Baack the mint "Collins" on Epay Item number: 5800781583

From k4kwm at hotmail.com Fri Aug 19 21:47:19 2005
Subject: [R-390] New 390A

Yeah, and he is doing what got him kicked off ebay the last time. Listing the cabinet as an "option to the buyer". Ebay then doesnt get their cut of the price. They just dont like that. John

From u453902 at hotmail.com Fri Aug 19 21:52:59 2005
Subject: [R-390] New 390A or Why not this one

>Its Baack the mint "Collins" on Epay Item number: 5800781583

5799784113

From bill at iaxs.net Fri Aug 19 22:05:12 2005
Subject: [R-390] New 390A or Why not this one

What tube or tubes would fetch \$200? Bill Hawkins

From u453902 at hotmail.com Sat Aug 20 00:53:53 2005
Subject: [R-390] New 390A Gone @ Buy It Now \$3500

Title says it all. John

From CRIPS01 at MSN.COM Sat Aug 20 01:37:32 2005
Subject: [R-390] New 390A Gone @ Buy It Now \$3500

You know something as much as I enjoy my R390A if it came to a point where I could sell it for enough to get a Harley Davidson soft tail deluxe it would be gone. I can dream can't I :^) Ken

From courir26 at yahoo.com Sat Aug 20 08:51:39 2005
Subject: [R-390] R-725/URR on ebay

Real deal. 5799784113 Tom

From ToddRoberts2001 at aol.com Sat Aug 20 10:42:47 2005
Subject: [R-390] R-725/URR on ebay

writes: Real deal. 5799784113 Tom

Thanks for the alert on the auction - might never have found that on a search using the keyword R-390A. Scary to think the seller was thinking about parting out the radio. Sure looks nifty seeing the R-390 style IF deck sitting in an R-390A chassis! I bet the seller will be surprised when the bidding might go up to the \$1000 range. That is a rare radio! 73 Todd WD4NGG

From w9ran at oneradio.net Sat Aug 20 12:52:06 2005
Subject: [R-390] New 390A Gone @ Buy It Now \$3500

John Kidd wrote: > Title says it all.

And the same guy is now offering the R-725 with what appears to be identical pictures and text? Well no one would know that unless they searched under "Vintage Military Receiver SPY Radio SERVO CORP No/Res"

Twilight Zone alert: When I went to the page the counter said I was visitor number 390... 73, Bob W9RAN

From future212 at comcast.net Sat Aug 20 20:22:55 2005
Subject: [R-390] R-390A questions

Hello,

I finally picked up two R-390A's Used/Repairables from Fair Radio. They are a little bit rough, but I think very restorable. My first question is with the front ID plates removed from the front, how can I determine the make and year they were made? I know most if not all of the modules are not original. They both have Cosmos PTO's. One has one fuse in the rear panel the other one has 3 fuses (newer?) in the rear panel.

Second question, CR102, mounted on the inside rear panel is a Selenium Rectifier. Doesn't it have to be changed? Every other radio, that I worked on, one of the first things that I did was change out the Selenium and add a resistor for the additional voltage drop of a Silicon diode.

I have already gone through the Audio and IF modules. It receives from 14 to 32 MHZ, nothing below 14. But, the good news is it does receive. Before doing any additional troubleshooting, next I'm going to remove the RF front end, clean all connections, check tubes and clean the gear, shafts and make sure all mechanical alignments are correct. Thank you in advance for all of your help. 73's DW Holtman

From iangallimore at rogers.com Sun Aug 21 00:24:01 2005
Subject: [R-390] R-390A restoration Questions

I am working on an R-390A which I purchased from Fair, and I wonder if I could trouble you with three questions which would help me greatly.

- 1) When I select the 4 kc bandwidth, there is no signal. There is signal at all other settings, with the results that one might expect as the bandwidth is changed. Is it correct to assume that the 4 kc filter is faulty and should be replaced?
- 2) I have noticed that the RF Gain seems to function only in the last 10 degrees or so of clockwise rotation - that is, there is no signal below about 8 on the dial, and then the signal rapidly peaks as the pot is turned fully clockwise. Is this normal? If not, what should I be checking?
- 3) The carrier meter seems to be at Maximum regardless of the signal. Any suggestions most welcome. Thanks for you help! Ian Gallimore VA3ODA

From jlkolb at jlkolb.cts.com Sun Aug 21 01:57:06 2005
Subject: [R-390] R-390A restoration Questions

wrote: > I am working on an R-390A which I purchased from Fair, and I wonder if I could trouble you with three questions which would help me greatly.

While I would be happy to sell you a replacement filter :) <http://jlkolb.cts.com/site/fs_mf.htm> there are other possibilities - there could be problems with the bandwidth switch or the shunt capacitors, either fixed or variable.

Measure across the terminals at each end of the filter with an ohmmeter. The two coils should measure between 40 and 60 ohms. None of the 4 terminals should read zero ohms to gnd. If the terminals read open circuit at either end, the filter is defective and needs to be replaced. A short circuit to gnd from any terminal might be inside the filter, in which case, replace, but might be external also. Disconnect the wiring to the filter and measure again.

There have been reports of foam inside the filter degrading to cause a high insertion loss. If that's the case, I would expect the 4 kHz position to have a much weaker signal than the other filter positions, 30 or 40 db weaker, but not completely dead. In this case, a few hardy souls have managed to open the filters and clean them, restoring them to proper operation. No reason not to try if the filter's bad anyway. John

From stevehobensack at hotmail.com Sun Aug 21 10:07:45 2005
Subject: [R-390] R-725

Ebay 5799784113

From CRIPS01 at MSN.COM Sun Aug 21 10:49:27 2005
Subject: [R-390] R-725

How does the R-725 differ from the R-390A. I can see the RF/IF deck is different is that It or are there other differences. Ken

From westerman at cableone.net Sun Aug 21 11:02:30 2005
Subject: [R-390] Collins R-390A on epay - 5801088053

Ref: <http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5801088053>

I requested bigger pictures from the owner as what is shown on his auction didn't show much detail. He sent the following images. I'm posting them for those interested in bidding on it.

<http://www.r390files.com/images/082105-1.jpg>

<http://www.r390files.com/images/082105-2.jpg>

<http://www.r390files.com/images/082105-3.jpg>

<http://www.r390files.com/images/082105-4.jpg>

<http://www.r390files.com/images/082105-5.jpg>

Disclaimer: I am not affiliated with this auction and do not know the owner. Posted only to help potential future owner know what it looks like. -- Craig westerman@cableone.net

From CRIPS01 at MSN.COM Sun Aug 21 11:36:12 2005
Subject: [R-390] Collins R-390A on epay - 5801088053

Judging by the rust on the visible counter sunk screw I wonder what the rest of it looked like before it was cleaned up.

I still can't believe my luck on my R390A it is complete with covers and meters and I picked it up along with a Hammarlund HQ-129X for 50 bucks. I would imagine this R390A started it's life in a Minuteman launch control bunker somewhere in Southeast Wyoming. My R390A came from a Air Force MARS member here in Cheyenne who would have checked it out from F.E. Warren AFB. Ken

From future212 at comcast.net Sun Aug 21 12:32:47 2005
Subject: [R-390] R-390A Springs

Looking for help again. The two receivers that I aquired from Fair Radio, have no Oldham coupler springs. Where can I get the specs/dimensions for these springs to get replacements?

Also several of the springs on the RF deck to the slug racks have a lot of rust. Where is a good place to get these springs and find the specs?

Thank you in advance for all of your help. 73's DW Holtman WB7SSN

From barry at hausernet.com Sun Aug 21 16:45:27 2005
Subject: [R-390] Hollow State Newsletter

Hi gang,

I finally got to set up the web site for HSN. It's in place but the domain names have not "propagated" yet. They should be operational in a day or two.

As of now, issues 38-53 are up on the site (except 51-52, for which I have the files and have to scrounge around to find 'em). I also put up the four "Best of HSN" compilations that Reid Wheeler, the previous editor, put together.

I will be back to you with the URL's for it in a day or two -- they don't work yet as I just today hooked 'em up with Network Solutions.

I have some old copies of the older issues and the plan is to have all the old issues up on the site. Some of my copies are not so good -and it's possible you might have better ones. Also, I could use a hand getting them scanned. So if a few of the listmembers could divvy up the scanning chores, we could have complete archives sooner rather than later.

Access to old and new issues will be free of charge. (The old snailmailed version was at a sub price that barely covered paper, printing and postage, anyway.)

We will be taking paid ads at very low rates, but not one-shot classifieds as this has to be, for the time being, a low-maintenance proposition.

New issues will be published on an ad-hoc basis. We need contributions of new material, or updates, reprises, etc. The web site will be much more flexible so issues can vary in number of pages and contain graphic elements and color photos. This was a stumbling block with one or two of the issues that were in progress before the long hibernation and are yet to be published. (I will try to contact the authors to finish those up.)

Again, I'll be back to you with the URL's in a day or two. Barry

From mhuss1 at bellatlantic.net Sun Aug 21 17:07:40 2005
Subject: [R-390] R-725

Basically an R-725 is an R-390A modified for HF DF using an array of vertical antennas and measuring the phase delay of the wavefront. **Because of the phase shift in the mechanical filter across its response curve, they substituted an R-390 IF deck for the R-390A IF deck, then added a whole s***pot full of ferrite beads to suppress leakage normally present in the R-390A. the result is the quietest and most sensitive R-390A made. In the shop I worked in, they always had at least 6dBm better signal to noise ratio.**

wrote: >How does the R-725 differ from the R-390A. I can see the RF/IF deck is >different is that It or are there other differences.

From CRIPS01 at MSN.COM Sun Aug 21 17:37:09 2005
Subject: [R-390] R-725

Cool well maybe I'll get lucky and on of these will come my way. Ken

From chacuff at cableone.net Sun Aug 21 18:29:34 2005
Subject: [R-390] R-725

then added a whole s*pot full of ferrite beads to suppress leakage normally present in the R-390A. the result is the quietest and most sensitive R-390A made. In the shop I worked in, they always had at least 6dBm better signal to rnoise ratio.**

Is it documented anywhere as to where the ferrite beads were placed....might be an interesting thing to try. Cecil...

From courir26 at yahoo.com Sun Aug 21 19:14:25 2005
Subject: [R-390] R-725, How To Make Your Own

Ferrite beads, where? I have the R-725 drawings and there are no ferrite beads rto be found.

Also the tuned circuit IF decks were specially made for the R-725. They did rnot use decks from the R-390 (although I have done that myself and it works rgreat).

Here are the simple steps necessary to roll your own R-725 style IF deck form a junker R-390. Winter is coming. Everyone needs a good project.

----- cut here -----

The main difference between a R-725 and the R-390A is that the R-725 utilizes a custom built IF deck that is very similar in construction to the R-390 IF deck. It has tuned circuit selectivity instead of mechanical filters. The mechanical filters of the R-390A created distortion when that radio was employed for radio direction finding use.

Motorola was awarded a contract in 1956 (476-PH-56-91) to prototype the R-725. I know of a couple of these Motorola sets existing today. Packaging of modified sets for quantity DF use were handled by Arvin Industries and Servo Corporation of America. Approximately three hundred R-390A's were modified to the R-725 configuration. New IF decks were manufactured by the modification companies (actually salvaging some of the components from the now junker R-390A IF decks) and installed in existing R-390A's. The new IF decks were named "SERIES 500 IF STRIP ASSY." They looked almost just like R-390 IF decks except that the IF connectors were relocated to match the cables and connectors in the R-390A chassis. The circuits were designed to plug and play in the R-390A instead of the R-390. The R-390 IF decks are not interchangeable in the R-390A (until now that is, after performing the modification described herein).

Notwithstanding DF capabilities, a side benefit of the SERIES 500 deck is that it provides a smoother sound than does the stock R-390A IF deck. Mechanical filters are said to "ring" and after a while can be fatiguing to the listener. The purpose of this procedure is to describe how one may "roll his own" SERIES 500 IF deck from a surplus R-390 IF deck. Please note that I don't advocate trashing of a good R-390 to do this mod. The IF deck I started with came from a Motorola junker. I would urge you to likewise find a junker R-390 as a source of an IF deck for this project. Make sure that the deck is in working condition prior to beginning the modification.

The R-390 IF deck was designed to operate with one 25V filament supply (unfortunately the 25V supply available in the R-390A is insufficient to power all of the filaments in the R-390 IF deck). The R-390A deck was designed to operate with a combination of 6.3V and 25V filament supplies. The task involved in this conversion is to rewire the R-390 filaments to comply with the voltages available in the R-390A and provided at the main IF deck connector, plug and play, without the addition of any new power transformers. Each of the twelve tubes in the R-390 IF deck must be addressed for full compliance with the voltages available from the R-390A. We will also drop the B+ a bit.

Plug P112 of the R-390A shall be plugged-in to the R-390 IF deck at jack J517. There is much commonality here, except for the connections mentioned herein. In general, you will be converting 25V series connections into 6.3V (herein referred to as 6V) parallel connections for most tubes, and moving the connections of the BFO/PTO/ballast tube series to a different connection point in jack J517. The 6V filament supply shall be provided to the R-390 deck by pin 20 of P112 from the R-390A.

General instructions: Refer to the schematic for the original R-390 as the "before" schematic. Use the best soldering technique you can in this limited access space. Don't insulate or bind any wires until instructed to do so. You will be utilizing some of the new 6V supply connections more than once. Make sure you can recognize your new wires. I used black wire for the 25V supply, red wire for the 6V supplies, and green wire for new grounds. The first task is to install a B+ dropping resistor to better match the 180V B+ that the R-390 IF deck is expecting. To do this, locate inductor L503 under the IF deck. This will be found snapped into a holder right above pin 2 of J517. Disconnect one end of the coil, and install in series with it (the equivalent of) a 470 ohm 2 watt resistor. This will tame the B+. The first tube circuit we'll work on is the ballast tube circuit.

V508 (5749) and RT512 (3TF7) These must be supplied by the R-390A 25V filament supply. To do this, sever the connecting wire at pin 8 of jack J517 (underneath the deck) to free this slot up (hint: save access to the connector end of the wire as you will use it to wire supply to V509). Then, sever the connection at pin 2 of RT512 and wire this pin to pin 8 of J517 of the R-390 deck with a long piece of new wire. The filament return connection remains unmodified. This modification will make the BFO/PTO/ballast tube series connections identical to the R-390A 25V filament supply connections. As mentioned above, this 25V supply is insufficient to supply the remainder of the tube filaments, thus the need to employ the 6V supply for this task.

The following 6V tubes shall have filaments wired from the 6V R-390A supply. The filament pins of these tubes are pins 3 and 4. Don't sever any connections unless instructed to do so. The modification will use as much existing R-390 IF deck wiring as possible (and thus may seem a bit screwy to you until finished).

V504 (6BJ6) 6V will come from its existing connection at pin 4. Ground will come in the next step.
V503 (6BJ6) Wire pin 3 of V503 to pin 4 of V504 for 6V supply. Ground V503, pin 4.
V502 (6BJ6) 6V supply will come from an existing connection at V503, pin 3. Ground V502, pin 3.
V501 (6BJ6) Sever ground connection at V501, pin 3 and wire pin 3 to V502, pin 4.
V505 (6AK6) 6V supply will come from existing connection at pin 4. Ground will come in the next step.
V506 (6AK6) Ground pin 4 of V506. Wire pin 3 of V506 to pin 4 of V505 for 6V supply.
V509 (6BJ6) Locate the free wire which was cut from underneath J517, pin 8, and connect it to the 6V filament supply at J517, pin 20.

The following tubes are 12AU7's wired in various series schemes in the R-390. They must be rewired according to their 6V option for use in the R-390A. Note two of the connections require dropping resistors on the 6V source of V507 and V510 to obtain the desired 5.3V filament voltage.

V511 Sever ground connection at pin 5. Connect pins 4 and 5 together for 6V supply, ground pin 9.
V507 Sever connections at pins 4, 5 and 9, including the two resistors (one 120 ohm and one 22 ohm). Wire 6V supply from your previous work at V505, through the deck opening for variable capacitor C525, to pins 4 and 5 through a 3.9 ohm, 1 watt resistor. Ground pin 9.

V 510 Sever connections at pins 5 and 9. Ground will come from existing pin 4 connection. Remove 120 ohm resistor between pins 4 and 9. Wire pin 5 to pin 4. Wire 6V supply from J517, pin 20 to V510 pin 9 through a 3.9 ohm, 1 watt resistor.

There are no changes to any of the other connections in the R-390 deck. Prior to installing the modified R-390 deck in your R-390A, you must check your work.

Perform continuity checks from J517, pin 8, with RT512, pin 2.

Perform filament supply and ground continuity checks as follows. Note: There will be more than one ground connection at various tube sockets, but the filaments should have continuity exactly as shown.

Filament supply is checked from J517, pin 20.

V501, filament, pin 3; ground, pin 4.
V502, filament, pin 4; ground, pin 3.
V503, filament, pin 3; ground, pin 4.
V504, filament, pin 4; ground, pin 3.
V505, filament, pin 4; ground, pin 3.
V506, filament, pin 3; ground, pin 4.
V507, filament, pins 4 and 5; ground, pin 9.
V509, filament, pin 4; ground, pin 3.
V510, filament, pin 9; ground, pins 4 and 5.
V511, filament, pins 4 and 5; ground, pin 9.

Now insulate any bare connections, and use mini-tie wraps to secure the new wires to sturdy nearby points.

To enable final installation of the deck in your R-390A, you'll need to make two adapter cables. These cables shall consist of jumpers (RG-59 is OK, approximately eight inches in length) with BNC's on each end. You'll also need two adapters of the type found on the back of the frame of the R-390A at the IF OUT jack (AMPHENOL 47200). This will provide crossover from MB connection (R-390A standard) to BNC (R-390 standard). Connect P-218 of the R-390A to J-526 of the R-390 IF deck with one of the cables. Connect P-213 of the R-390A to J-525 of the R-390 IF deck with the other cable. It is a good idea to label these cables.

Install the deck in your R-390A. You will notice that the screw holes are the same as for the R-390A IF deck, however the screws of the R-390 deck are of larger diameter. I did not change these screw as they are captive into the deck. The BFO, BANDWIDTH, and power connector of the deck will hold it in place, however I would not install it in a Jeep this way. Changing these screws is optional.

When you turn on the power, make sure your dial lamps light up normally. If they don't, you have a filament supply problem so turn off the set immediately and troubleshoot.

For great sound, instead of using the built in audio deck, I prefer to tap the audio from the diode load jumper at the back of the set. Through a 0.1 uF or larger capacitor, feed this signal into your line audio amp of choice, and enjoy the tuned circuit audio of the new R-725, errrr, R-390A with tuned circuit IF. You'll get the smooth sound of the R-390 and R-725, but have the parts availability and support common to the R-390A for the balance of the set. I've used my modified IF deck in two different R-390A frames, and it worked equally well in both. In my opinion, it makes the long term listening experience much more enjoyable. If you have any questions about the mod, please feel free to write. 73 DE N5OFF

From ToddRoberts2001 at aol.com Sun Aug 21 20:21:13 2005
Subject: [R-390] R-725, How To Make Your Own

writes: Ferrite beads, where? I have the R-725 drawings and there are no ferrite beads to be found. Also the tuned circuit IF decks were specially made for the R-725. They did not use decks from the R-390 (although I have done that myself and it works great). Here are the simple steps necessary to roll your own R-725 style IF deck form a junker R-390. Winter is coming. Everyone needs a good project.

Tom, Thanks for the great step-by-step directions to convert an existing R-390A into an R-725 "clone" using an R-390 IF deck. I have a spare R-390 IF deck I have been saving for just such a project so it will be a breeze using your instructions for the conversion. This will make a good late-summer project

also. Thanks again! 73 Todd WD4NGG

From Llgpt at aol.com Sun Aug 21 20:34:33 2005
Subject: [R-390] R-725, How To Make Your Own

writes: Ferrite beads, where? I have the R-725 drawings and there are no ferrite beads to be found.

I never had any ferrite beads on the R-725/URR I had, it did have the mu metal shields around the pto though. Mine was an Arvin Industries version, s/n 95 Les Locklear

From jgolden365 at aol.com Sun Aug 21 21:49:41 2005
Subject: [R-390] R725 or R390A or what?

For a few months I had what I recall was an R725 but maybe it wasn't. It had an LED readout in place of the Veeder-Root counter, and a small aluminum box full of electronics hung off the rear apron of the receiver. If it wasn't an R725 what was it?

From mhuss1 at bellatlantic.net Sun Aug 21 21:58:46 2005
Subject: [R-390] R725 or R390A or what?

wrote: >For a few months I had what I recall was an R725 but maybe it wasn't. It had an LED readout in place of the Veeder-Root counter, and a small aluminum box full of electronics hung off the rear apron of the receiver.

It is a Pollyanna, and I really would like to know how you got one!

From future212 at comcast.net Sun Aug 21 22:04:21 2005
Subject: [R-390] R725 or R390A or what?

> It is a Pollyanna, and I really would like to know how you got one!

What is a Pollyanna? Best, DW Holtman

From dave_faria at hotmail.com Mon Aug 22 00:09:24 2005
Subject: [R-390] R725 or R390A or what?

I did not get the entire receiver just the main chassis. It had the aluminum box on the back and notes on the unit indicated it was a modified AGC control unit. Is this the box that he has and I wonder how it hooks up?? It is all discrete transistor. What is a Pollyanna???

From mhuss1 at bellatlantic.net Sun Aug 21 22:12:05 2005
Subject: [R-390] R725 or R390A or what?

A Pollyanna is an R-725 modified by a government agency to have an LED digital readout because it was needed. JGolden, you should have kept it, it was probably the only one left in existence. They

usually 'Thermite' classified equipment.

From r390a at bellsouth.net Sun Aug 21 22:19:29 2005
Subject: [R-390] R-390A's at the 'bay? There's more

5801259552 They seem to keep popping up like weeds this week. Tom NU4G

From k4kwm at hotmail.com Sun Aug 21 22:39:36 2005
Subject: [R-390] R-390A's at the 'bay? There's more

\$3500 will do that. JOhn John Page K4KWM Hollow State since 1953 (ex W8PKU,N8BLB,NA8O)

From RLucch2098 at aol.com Sun Aug 21 22:59:52 2005
Subject: [R-390] FS: Collins R-390A Meter replacement with pics

Hi All;

I have this meter for sale that fits into an R-390A hole. It is probably not from an R-390A but the movement shows "kick" with a vom. Appears to be "glow in the Dark" type Made by Bulova. Price is \$24.00ppd. PICS:

<http://www.myradioroom.com/loadmeter1.jpg>

<http://www.myradioroom.com/loadmeter2.jpg> tnx & 73 Rich WA2RQY

From muttman at charter.net Mon Aug 22 00:17:13 2005
Subject: [R-390] FS: Collins R-390A Meter replacement with pics

Rich, That is a aircraft DC buss load meter that is conected to a 50 Mv shunt near the aircraft load center. Buzz

From ToddRoberts2001 at aol.com Mon Aug 22 00:56:13 2005
Subject: [R-390] Yet Another R-390A on the 'Bay

There's more R-390A's on the 'Bay than peas in a pod this week! Looks like this one has a Curry 500Hz filter installed in place of the 2KHz filter. Miltronix restored. Have fun looking at this one!
5801417205 73 Todd WD4NGG

From SRosenberg at nyiso.com Mon Aug 22 08:41:01 2005
Subject: [R-390] IF module C553

Hi Guy's,

I have a two R390a's. One is a EAC 67 vintage. I was checking the IF module for "Black Beauties". The C553 is a silver hermetically sealed cap made by West. Are these risky to be left in place??

The other R390a is an original Collins single fuse model. I'm going to

install the separate B+ fuses but the question is does this effect the value of the radio? I was thinking of putting the fuses on a bracket inside the radio as opposed to drilling holes in the rear panel. Steve, WA2TTP

From tshoppa at wmata.com Mon Aug 22 10:48:31 2005
Subject: [R-390] IF module C553

> I have a two R390a's. One is a EAC 67 vintage. I was checking > the IF module for "Black Beauties". The C553 is a silver > hermetically sealed cap made by West. Are > these risky to be left in place??

I don't think any manufacturer ever put a black beauty in for C553.

Your Westcap is spec-wise just the same as the Sprague hermetic cans that I've seen in other IF strips, and should be replaced with a new high-quality conservatively-rated cap. I like the orange drops but physically much smaller polyester caps ought to be fine too.

> The other R390a is an original Collins single fuse model. I'm > going to install the separate B+ fuses but the question is > does this effect the value of the radio? I was thinking of > putting the fuses on a bracket > inside the radio as opposed to drilling holes in the rear panel.

Usability and safety-wise, the fuses are a way good idea. Without it a tube arc/short can take out some chokes and, worst case, start a fire. But they'll reduce the rarity of a completely-non-modded radio.

It'd be interesting to know this history of this radio. Most of the ones in military use got modded to three fuses when they went through the depot many decades ago. But maybe this was a MARS or non-military (embassy, contractor equipment, ?) unit from the get-go? Tim.

From David_Wise at Phoenix.com Mon Aug 22 17:31:40 2005
Subject: [R-390] R-725, How To Make Your Own

I want to apologize in advance if I am bringing up something that was resolved in the past. If it was, just say so and summarize the result.

Tom mentions below that most of the mod consists of rewiring the '390 deck for 6.3V heaters because "the '390A can't handle the 25.2V load". Might that not be an issue if you didn't run the ovens? As we all have sworn :) never to do? I haven't done the math. If you think this is viable, how about an abridged procedure that leaves the deck series-wired? It would be a LOT less work. 73, Dave Wise

From David_Wise at Phoenix.com Mon Aug 22 17:37:50 2005
Subject: [R-390] R725 or R390A or what?

Thanks for the clarification. For the first couple of posts I figured it was shorthand for "I pulled his leg and it came off in my hand". <snicker>73, Dave Wise

From RLucch2098 at aol.com Mon Aug 22 22:07:58 2005
Subject: [R-390] FS: Last of my FL-8-A Audio Filters(6)>Cheep w/pic

Hi All;

I once had about 20 of these, slowly but surely I've sold all but the last 6 units. All the others were new, I have'nt opened these to check but the one missing its cover sure is. There are 6 of the FL-8-A and one of the FL-5-C types. All made by UTC in NYC for US Army Signal corps, during WWII. Dates are #1575-WF-43 for the FL-5-C and #1094-NY-41 for the 6)-FL-8-A. Price is \$25 + UPS(18# from 11758)
Pic: <http://www.myradioroom.com/7fl-8-afilters.jpg> tnx & 73 Rich WA2RQY

From paul at pdq.com Tue Aug 23 10:24:32 2005
Subject: [R-390] R-725, How To Make Your Own

>> circuit IF. You'll get the smooth sound of the R-390 and R-725, but have the parts availability and support common to the R-390A for the balance of the set. I've used my modified IF deck in two different R-390A frames, and it worked equally well in both. In my opinion, it makes the long term listening experience much more enjoyable. 73 DE N5OFF

All R-390 decks are very hard to find now - removing more IF decks from the pool means fewer complete R-390's. It would really be a shame to do that. Paul

From RLucch2098 at aol.com Tue Aug 23 10:51:29 2005
Subject: [R-390] FS: 5 NEW RCA 6K6GT tubes w/pic

Hi All;

I found another 5 tubes that I have no need for. Good for many older tube radios. 5 new RCA 6K6GT's with 9-60 date code. Price is \$30.00ppd Pic: <http://www.myradioroom.com/5rca6k6gt.jpg> tnx & 73 Rich WA2RQY

From barry at hausernet.com Tue Aug 23 11:35:31 2005
Subject: [R-390] Hollow State News Web Site

Greetings to the list ...

The HSN web site is now up and running. No, don't go to that hsn.com site ... ;-) Here are the URL's:

<http://www.hollowstatenews.com> <http://www.hollowstatenewsletter.com> 73's Barry

From courir26 at yahoo.com Tue Aug 23 11:44:16 2005
Subject: [R-390] R-725, How To Make Your Own

My R-390 IF deck came from a junker. It was pretty humble. I don't share in the shame. Tom

From ToddRoberts2001 at aol.com Tue Aug 23 12:48:24 2005
Subject: [R-390] Hollow State News Web Site

writes: The HSN web site is now up and running. Barry

Hi Barry,

Thanks for the swell job you have done with the new Hollow State News website - it looks great! I used to subscribe to HSN but let it run out sometime in the late 90's. I missed issue 53 - I highly recommend the shipping issue 53 as proper packing and shipping still remain a big problem especially for folks that buy things off eBay. Issue 53 should be required reading for anyone buying or selling an R-390A or similar boatanchor on the 'Bay. 73 Todd WD4NGG

From drewmaster813 at hotmail.com Tue Aug 23 18:01:54 2005
Subject: [R-390] RE: IF module C553

wrote: <snipped> The other R390a is an original Collins single fuse model. I'm going to install the separate B+ fuses but the question is does this effect the value of the radio? I was thinking of putting the fuses on a bracket inside the radio as opposed to drilling holes in the rear panel.

The easiest installation for the added fuses would be to wire pigtail-style leaded fuses on unused terminals on the filter capacitor sockets under the audio deck. Neither hole drilling nor mainframe wiring harness hacks would be necessary.

The audio deck would have to be removed to replace those fuses but that should pose little hardship because changing B+ fuses should be a rare event indeed. Drew

From mbalaw at optonline.net Tue Aug 23 19:48:33 2005
Subject: [R-390] R-390A fuse installation

The easiest place to put a B-plus fuse on an single-fuse R-390A is at the cathode of the rectifiers (tube or solid state) underneath the power supply sub-chassis. In fact, if you clean up the ends of the fuse cartridge with steel wool and are reasonably quick with the soldering iron you can just pigtail the wiring onto the fuse itself without bothering with a fuse post. Just be sure to cover the whole thing with an insulating sleeve -- my choice cambric "spaghetti" tubing but shrink tubing will work fine. That way, you don't have to open the wiring harness or bore a hole in the back panel. The second B-plus fuse, which is on the drop side of the filter capacitors is really unnecessary. Miles Anderson, K2CBY 16 Round Pond Ln Sag Harbor, NY 11963

From r390a at bellsouth.net Tue Aug 23 20:40:57 2005
Subject: [R-390] OT - R-392 SS Audio Module Eb*y

Item 6555304197 full url <http://tinyurl.com/btqbt>

Listing claims it is NOS. The picture shows it to have a few scuffs and a bent pin, though. Starting price was what Fair was selling their last few for. No connection, interest, etc Tom NU4G

When did Ebay go to making the item urls so impossibly long??? Seems counterproductive.

From jonklinkhamer at comcast.net Tue Aug 23 21:05:41 2005
Subject: [R-390] Trouble shooting the R390A

To the Group:

I have been going thru the IF and audio stage with respect to recapping, taking resistance measurements, checking tubes, cleaning, etc, being very careful and taking notes along the way. I recently just received the front panel back from painting it and I decided before I continue to go thru the RF, xtal and PTO stages, I wanted to put it all back together and make sure I didn't break anything. (I really wanted to see how the panel looked.) Well, as of tonight, I fired it up and noticed right away no audio.

Immediately, I played around going from 1 to 20 Mhz and I also switched in the CAL but noticed again no audio. The lamps however lite up. I turned the receiver off and checked the fuses and notice the 1/8 fuse has blown. My thinking is to first see if it blows again and if so then take out both the Audio and IF stage and power cycle again. I'm hoping to isolate it to one of these stages with the assumption I mess something up. I'm just shooting this out to see if the group has another preferred way of debugging or knows the cause(s) when this particular fuse blows.

I would like to thank everyone in advance for their comments. I am as always much indebted. 73's, Jon, KB1DC

From n4buq at aol.com Tue Aug 23 23:03:30 2005
Subject: [R-390] Trouble shooting the R390A

I had a similar thing happen. After the fuse blew, I hooked up an ampmeter across the fuse and monitored the current, making sure it didn't exceed 125mA while bringing the radio up with a variac. Oddly, the current never went much over 80 or 90mA. I replaced the fuse and it has worked okay ever since.

I suspected one or both of the filter caps may have been drawing excess current, but if I remember the circuit correctly, the 1/8A fuse comes "after" the caps so I don't know what was causing the current draw. Maybe the fuse was old? Don't know.

Did the radio work before you worked on the front panel? Barry - N4BUQ

From pwokoun at hotmail.com Wed Aug 24 00:25:48 2005
Subject: [R-390] Trouble shooting the R390A

**If anyone needs a schematic showing the current levels throughout a R390A I have one on my website in a .pdf format that you can download. Great for troubleshooting. It's at:
<http://www.qsl.net/kh6grt/page4/r390aschematics/r390aschematics.htm> pete KH6GRT**

From shoppa_r390a at trailing-edge.com Wed Aug 24 05:35:34 2005
Subject: [R-390] Trouble shooting the R390A

> the 1/8A fuse comes "after" the caps so I don't know what was causing the current draw. Maybe the fuse was old? Don't know.

Was the wire in the fuse just broken or was there vaporized metal deposited inside the glass?

If just broken, it could've been an "old" fuse. I put "old" in quotes because if you look at fuse specs,

they are allowed to blow occasionally while carrying rated current.

If there was vaporized metal deposited inside the glass, I think the most likely cause would be an arc/short inside a tube that cleared itself (mostly...) after the event. **Sometimes you can find a charred 2.2K plate or cathode resistor too. Note that B+ divided by 2.2K is nearly 1/8A itself!**

Every R-390A I ever worked on had a charred/swollen 2.2K resistor or two. Tim.

From barry at hausernet.com Wed Aug 24 11:07:39 2005
Subject: [R-390] Reid Wheeler?

Hi Gang. Anybody have Reid's current email address? reid@olywa.net doesn't work. Barry

From r390a at bellsouth.net Wed Aug 24 12:01:05 2005
Subject: [R-390] More! Trouble shooting the R390A

wrote: checked the fuses and notice the 1/8 fuse has

For folks doing troubleshooting you can narrow down the module where the trouble by which fuse is blown - if you have a chassis with 3 fuses.

If the 1/4 amp fuse is blown, it is most likely a problem with bad rcapacitors, the audio deck, or very rarely shorted rectifiers. The r1/4 amp fuse protects *all* the B+ in the radio, so if you've checked rThe Usual Suspects and it still blows (or measures wonky per Pete's rchart) you can track it down to each module by disconnecting IF, rCrystal, and RF decks first. If it's still a problem, it's in the raudio deck most likely, or you overlooked on of The Usual Suspects.

If the 1/8 amp fuse is blown, the problem is either in the IF or RF rmodule. The IF module, crystal deck, and RF deck may all be runplugged independently to help isolate the trouble.

Using that method along with Pete's troubleshooting chart, you can track down the problem almost without taking the radio apart. [note "almost"] Tom NU4G

From wli98122 at yahoo.com Wed Aug 24 13:13:43 2005
Subject: [R-390] Re: HSN web site

Barry: Thank you so much for the work and time to put up this reference source for all of us! It is a gold mine! W. Li Mercer Island, WA

From gregorymengell at comcast.net Wed Aug 24 15:35:10 2005
Subject: [R-390] Thank you

Thank you Barry for giving us such a great site for Hollow State News. What a great service. What edition of Adobe are you using.I cannot download the PDF s? Great site though. 73 Gregory

From barry at hausernet.com Wed Aug 24 17:02:04 2005
Subject: [R-390] Thank you

Hi Greg --

Thanks for the thanks ...

I have Acrobat 7.0 on this particular machine and it works. The pdf's were generated with a conversion program that works like a printer driver. Not sure what version of Acrobat it assumes.

Some other guys mentioned having some trouble with scrambled text, etc. I was assuming pdf files would be pretty consistent and less trouble prone than other formats. regards, Barry

From mikea at mikea.ath.cx Wed Aug 24 17:11:48 2005

Subject: [R-390] Thank you

wrote: > I have Acrobat 7.0 on this particular machine and it works. The pdf's were> generated with a conversion program that works like a printer driver. Not> sure what version of Acrobat it assumes.

On my Windows box, running Acrobat 6 Reader, it works fine. My FreeBSD boxen, running xpdf 3.00, display mostly hollow boxes (generally a sign that the font wasn't found).

For me it's not a bad problem, as I can always use a Winbox to view and print the files. Thanks _very_ much for all the work you've put into this; I (for one) greatly appreciate and value it, and you have justification for pride. 73, de Mike Andrews, W5EGO

From shoppa_r390a at trailing-edge.com Wed Aug 24 17:18:53 2005

Subject: [R-390] Thank you> [PDF files on HSR website don't open correctly for some users]

wrote: > Some other guys mentioned having some trouble with scrambled text, > etc. I was assuming pdf files would be pretty consistent and less> trouble prone than other formats.

I would suggest that those who have trouble viewing in the browser save the PDF to disk, then view it from disk. Certain webserver/browser combinations do not correctly convey the "application/pdf" MIME type and can cause this difficulty.

Barry, the PDF's look fine to me viewed on several different platforms with PDF software going back to Acrobat 4.x and several non-Adobe-brand PDF readers too. In fact, I swear that the electronic copies look superior to my much dog-eared paper copies that have seen much use and passing around over the years. I would estimate that for each copy of Hollow State Newsletter that you guys sent out, that there were at least a dozen readers. Having them on the web is way more convenient than waiting for a loaned-out copy come back, let me know what help you need in getting older editions scanned in!

At this point in time, PDF is without a doubt a very good choice for publishing. If you can convert it to HTML reasonably that'd be a fine choice too. Tim.

From eldim at att.net Wed Aug 24 17:35:38 2005

Subject: [R-390] READING PDF FILES

Hello Fellow BOATANCHOR Enthusiasts,

I'm also looking for some advice as I have problems downloading manuals from the BAMA Site. Some I can open, read and print, while others just search and search and never open anything.

Are there some glitches with the contents? I also recall trying to download the TV-7 SET-UP manual (the large one with all the supplements), and could not get it to work. Of course, I'm not very computer savy at all. I think I'm going to give Tom's suggestion a shot and see what happens. By the way is there another location to download the TV-7 Set-Up Manual? 73, Glen Galati, KA7BOJ TACOMA, WA

From john at gumlog.net Wed Aug 24 17:54:18 2005
Subject: [R-390] HSN Thank you

Barry,

I have Acrobat 5.05 and Acrobat Reader 7.02. The files open OK in both applications. THANKS for the great job and the good service. 73, John, W4NET P.S. Still looking for a handle for your R-105/ARR-15? If so, please let me know.

From w9ya at arrl.net Wed Aug 24 19:58:27 2005
Subject: [R-390] Thank you

Hey Barry and Greg and the gang; Well there are conversion programs, and then there are other conversion programs. Some are much better than others.

My favorite way to generate pdf's is to use something called Open Office. It is available for Macs, Unix, Linux, and of course Win32.

I usually just import stuff into Open Office by either a direct import or a cut and paste or a "open" file dialog. Then I do the export OR save to whatever format I want. In this case pdf. Vy 73; Bob w9ya

From w9ya at arrl.net Wed Aug 24 20:09:37 2005
Subject: [R-390] Thank you

Hey gang; Well I thought there would be a problem with these files after reading the email today.

BUT....not so !!

I have opened the pdf file for issue # 53 in Mozilla, Konqueror, Kpdf, Acrobat 7 for Linux, and finally good 'ol xpdf 3.01. It looks just fb in *all* of them.

So, I would suggest to Barry to just keep using whatever it is you are doing the conversion with. Seems to be working very fine according to what I see here on issue no. 53. Vy 73; Bob w9ya

From barry at hausernet.com Wed Aug 24 21:14:12 2005
Subject: [R-390] Thank you

Hi Bob

I just put up more issues -- #1 through 12 and #37 plus a combo file highlights of issues 1-4 in it -- all thanks to Brian Jeffrey, VE3UU who scanned them to pdf. The pdf conversion is built into his software and may be somewhat different than #38-53 -- though I don't see any difference with Acrobat 7.0.

So you might want to try some of the lower numbered ones and make sure they work out for you. Just click on the "Older Issues" link under Archives and then on the link on the page that pops up. These are handled with a database gimmick to make it quicker and easier for me to add files. Barry

From wa9vrh at mtco.com Wed Aug 24 21:31:25 2005
Subject: [R-390] WTB Small Knobs for R-392 & Power & audio connector

Hi All,

Does anyone have any extra small knobs for an R-392? I need a whole set. Also looking for power connector and audio out connectors. Thanks Larry WA9VRH Shipping to 61559

From robert.boyd at sdc-dsc.gc.ca Wed Aug 24 21:32:00 2005
Subject: [R-390] Thank you

Barry,

The site's great and I haven't even looked at the newer stuff provided by the other VE. This is what Hamming is all about, Thanks again! Robert, VE3BE

From r390a at bellsouth.net Wed Aug 24 22:05:30 2005
Subject: [R-390] Thank you Barry

Well, all the cool kids are going to the site, so I did so today. Thanks so much for putting things together and online for folks. Very good job!

I have a Mac OS 10.4.x system, and the files open fine in Adobe 7, Adobe Reader 7, and at least a couple others. No problems with any files. 73 Tom NU4G

From future212 at comcast.net Wed Aug 24 22:24:27 2005
Subject: [R-390] Pto Question

Hello,

I'm looking for information again, grateful that this group is around.

I'm doing my first R-390A tear down, and I screwed up. My PTO is lost, I did not note the frequency that I removed the RF Module. I reinstalled the RF module tonight and set up the PTO for 3.445 MHZ (using a Frequency counter). Is this the correct frequency for 10 MHZ on the RF Module read out (Am I understanding the Y2K manual correctly)? Thank you in advance for your help. 73's DW Holtman WB7SSN

From future212 at comcast.net Wed Aug 24 22:28:10 2005
Subject: [R-390] SSB adapter for R-390A

Hello,

Would a 455 KHZ Central Electronics Sideband Slicer Model B, do a good as a product detector on a R-390A? Thank you, DW Holtman WB7SSN

From redmenaced at yahoo.com Wed Aug 24 22:56:15 2005
Subject: [R-390] Pto Question

wrote: I'm doing my first R-390A tear down, and I screwed > up. My PTO is lost, I did not note the frequency > that I removed the RF Module. I reinstalled the RF > module tonight and set up the PTO for 3.445 MHZ > (using a Frequency counter). It this the correct > frequency for 10 MHZ on the RF Module read out (Am I > understanding the Y2K manual correctly)?

+++++

Nope, you're making it too difficult!

Just loosen the Oldham coupler set screw and turn the shaft until the frequency comes in. Loosen the screw on the shaft going out to the knob so you can get a hold on the coupler itself. Joe

From pwokoun at hotmail.com Thu Aug 25 00:20:48 2005
Subject: [R-390] Sept 2 special event from the USS Missouri

Greetings R390 enthusiasts,

September 2, 2005 marks the 60th anniversary of the signing of the Japanese surrender papers on board the battleship USS Missouri in Tokyo Bay, formally ending World War II. The USS Missouri, currently located at Pearl Harbor, Hawaii, will be holding extensive ceremonies on board September 2, and the ship's club station KH6BB will be on the air as well. On CW we will be using the original Vibroplex key that was used on board in 1945 to send the first news of the surrender signing; the key has been loaned to KH6BB for the event by the Maritime Museum of Monterey CA, with permission to use the key on the air.

First operations from KH6BB will take place on September 2 at 0000Z (note that this is the afternoon/evening of September 1 in the US), because this time corresponds to 0900 September 2 in Tokyo Bay, the time and date that the papers were originally signed. At this time we will re-transmit the exact message that was sent from Missouri in 1945 reporting the signing. Since Missouri's hull number is BB-63, the primary operating frequency will be 14.063 MHz CW. Depending on propagation, alternate frequencies will be 18.073 and 21.063 MHz. There may be combined SSB/CW operations on 14.263, 18.163, or 21.363 MHz. Operations will continue until approximately 0600Z depending on propagation.

KH6BB will also be operating on September 3 and 4 from about 0000-0600Z (Friday September 2 and Saturday September 3 local time in the US), possibly earlier depending on propagation. There may be operations on September 2 and 3 around 1600-1800Z, again depending on propagation. Check the KH6BB web page event calendar at <www.kh6bb.org> for last minute details on times and frequencies.

This special event developed so quickly that we were unable to submit it to ARRL for publication in

QST which is why we're putting the word out on these mail lists. So, warm up your boatanchors and look for KH6BB during these special event days. Hope to talk with many of you on the air! pete, KH6GRT

From jonklinkhamer at comcast.net Thu Aug 25 07:47:52 2005
Subject: [R-390] Trouble Shooting R390A/Backlash

Hi Folks,

Just wanted to update the group on my restoration of the R390A. The 1/8amp fuse was replaced and the radio came up singing. It was like an old Toyoto commercial "Oh, what a feeling". Apparently it was a weak fuse, most likely from the mid Sixies. Thank you for all your comments.

I'm focusing my attention now to the RF Stage and have a question concerning backlash. I noticed a certain amount of backlash while turning the KC knob counter clockwise. The lower and upper frequency ends seems to move about 1 to 2 clicks while the mid freq range, approx 300 to 500 appears to move as much as 4 clicks. Can anyone point me in the right direction as far as adjustment(s) to correct this? Hopefully nothing is warped. 73's Jon,KB1DC

From tshoppa at wmata.com Thu Aug 25 08:23:04 2005
Subject: [R-390] Trouble Shooting R390A/Backlash

> The lower and upper frequency ends seems to move about 1 to 2 > clicks while the mid freq range, approx 300 to 500 appears to move > as much as 4 clicks. Can anyone point me in the right direction as > far as adjustment(s) to correct this? Hopefully nothing is warped.

Check the Oldham coupler (between the kc knob and the PTO) and the split gear that drives the counter for missing springs. From the bottom you can see where the springs are supposed to go.

If the gears are rusted or burred then it may not matter if they've got the springs or not. Without taking apart the geartrain you ought to be able to wiggle the two halves of a split gear just a tiny fraction of a tooth and feel/see them snap back.

If turning the kc knob causes neither a change in frequency or movement of the counter, then it's likely the Oldham coupler spring. If turning the kc knob does cause a change in frequency but doesn't cause the counter to turn, then it's likely the gears that drive the counter.

Also the two bevel gears that do the right-angle thing to drive the counter may be not close enough, that would cause some counter backlash too.

Not sure exactly why the backlash would depend on position of the kc dial. The springs pulling down the cams do exert some torque backwards through the geartrain.

Oh, wait, if one of the two springs on a split gear was missing, then you might see the effect you see, although it would depend not on kc display but on the angular position of the kc knob. Tim.

From Thomas.Guest at TRW.COM Thu Aug 25 08:34:47 2005
Subject: [R-390] Need Pictures of R-390A Meters

Hi everyone,

Would anyone have close-up pictures of the meters for the R-390A.

I have two Simpson meter I would like to make new faces for and can't find a good picture of the meters so I can create a new ones. Thanks in advance. Tom

From barry at hausernet.com Thu Aug 25 08:50:18 2005
Subject: [R-390] Trouble Shooting R390A/Backlash

wrote: > Just wanted to update the group on my restoration of the R390A. The 1/8amp > fuse was replaced and the radio came up singing. It was like an old Toyota > commercial "Oh, what a feeling". Apparently it was a weak fuse, most > likely from the mid Sixties.

Fuses can be funny things. They aren't fully sealed and subject to wear and tear as well as corrosion. Sometimes they fail where the fuse wire is soldered to the end caps and it will look like the wire is intact. Sometimes the glue fails and the end caps will twist as you open the fuse holder to check the fuse -- or weakened enough to fail shortly after power-up. (On the principle that no good deed goes unpunished.) They also vary in quality.

> I'm focusing my attention now to the RF Stage and have a question > concerning backlash. I noticed a certain amount of backlash while turning > the KC knob counter clockwise. The lower and upper frequency ends seems to > move about 1 to 2 clicks while the mid freq range, approx 300 to 500 > appears to move as much as 4 clicks. Can anyone point me in the right > direction as far as adjustment(s) to correct this? Hopefully nothing is > warped.

Seems familiar. If you look at the cams and slug racks as you're turning the KC knob, you'll probably see that the backlash occurs as one or more racks are raising up and it's the pull of the rack springs pulling the cams backward. It was mentioned recently that the exact position of the cams was not critical -- i.e. when lining up the holes in the cams with the scribe marks on the deck. Not sure about that. I seem to remember doing a mechanical alignment where I had one cam off a bit and correcting it fixed the backlash. Also possible you may need a bit more tension on one or more of the split gears.

Oh... one more thing -- a slipping gear clamp. Hmmmm .. it's coming back to me now. I had correctly aligned the cams, but one clamp was not holding, so in the alignment position (-7.000KC?) all the cams were OK, but didn't stay that way through the full cycle. Carefully observe the works as you turn the KC knob from lock to lock -- several times -- and if that's the case, you'll eventually spot it. Look for hairline cracks in the clamps. Even if slipping or split, the clamps can hold for most of the rotation -- except where the reverse tension is at its strongest -- i.e. more of the slug racks are being lifted. And the devilish thing -- they act like automatic clutches -- when the KC knob is turned back, they start grabbing again and "re-synch". The loose/split clamp also caused the backlash action. Tighten up any suspect clamps -- but don't overdo it - that's how they split and these problems often surface after a "tweaking" -- on that good deed principle.

Yup, a slipping clamp can turn this mechanical marvel into a Rube Goldberg contraption. Barry

From barry at hausernet.com Thu Aug 25 09:18:06 2005

Subject: [R-390] Trouble Shooting R390A/Backlash

Hi Tim

Jon wrote: >> The lower and upper frequency ends seems to move about 1 to 2 >> clicks while the mid freq range, approx 300 to 500 appears to move >>as much as 4 clicks. Can anyone point me in the right direction as >>far as adjustment(s) to correct this? Hopefully nothing is warped.

Tim wrote: >Check the Oldham coupler (between the kc knob and the PTO) >and the split gear that drives the counter for missing springs. From >the bottom you can see where the springs are supposed to go.

Doubtful that the extreme backlash would be due to a missing Oldham coupler spring -- that mostly serves to reduce slop and rattle and maintain "reset-ability". A rubber band will do in a pinch.

>If the gears are rusted or burred then it may not matter if they've >got the springs or not. Without taking apart the geartrain you >ought to be able to wiggle the two halves of a split gear just >a tiny fraction of a tooth and feel/see them snap back.

Possible - or insufficient or no offset on the split gears. But more likely a broken or slipping gear clamp somewhere.

>If turning the kc knob causes neither a change in frequency or >movement of the counter, then it's likely the Oldham coupler >spring. If turning the kc knob does cause a change in frequency >but doesn't cause the counter to turn, then it's likely the gears >that drive the counter.

I think Jon is telling us that the whole business is cranking back on him -- won't stay put over some range of the KC setting. More like recoil than backlash. Sounded like everything -- counter etc. -- is turning, but spins back at certain points. I suspect a clamp is not holding at maximum tension points.

>Also the two bevel gears that do the right-angle thing to drive >the counter may be not close enough, that would cause some >counter backlash too.

>Not sure exactly why the backlash would depend on position of the >kc dial. The springs pulling down the cams do exert some >torque backwards through the geartrain.

The tension is not constant through the full range of the KC tuning. Sometimes more racks are being raised up through part of the cycle and stretching more of those slug rack springs, or stretching one further. If a clamp is slipping, it may just slip on the most extreme upswing, then starts grabbing again on the downswing. It's difficult to see when it happens - and maybe so hard to see that it just pays to inspect for cracked clamps, snug them all up and try again.

>Oh, wait, if one of the two springs on a split gear was missing, >then you might see the effect you see, although it would depend >not on kc display but on the angular position of the kc knob.

Usually even one spring is enough for the split gear to work sufficiently. Perhaps, if the deck had been reassembled without offsetting several of the split gears, I could see that happening. Again, though, after re-thinking and recalling a similar extreme backlash/spinback situation, I'd strongly recommend checking the action through the full cycle of the KC train and looking for a cracked or loose gear clamp.
Barry

From stevebyan at mac.com Thu Aug 25 09:33:39 2005

Subject: [R-390] Thank you Barry

wrote: > I have a Mac OS 10.4.x system, and the files open fine in Adobe 7, > Adobe Reader 7, and at least a couple others. No problems with any > files.

Would you mind trying them with Preview? The newer issues open fine for me in Acrobat 4.0 and 5.0 on OS X 10.3.9, but the text shows as either scrambled or open boxes in Preview. I haven't tried the older issues yet. Regards, -Steve

From r390a.urr at gmail.com Thu Aug 25 09:37:59 2005
Subject: [R-390] Need Pictures of R-390A Meters

wrote: > Would anyone have close-up pictures of the meters for the R-390A.

This may help: <http://webs.lanset.com/buzz/meters/faces.html> 73, /dave N9ZC

From future212 at comcast.net Thu Aug 25 10:06:58 2005
Subject: [R-390] Pto Question

The reason that I'm trying to set my PTO up this way, is because I just started on it and it only receives above 14 MHZ and the sensitivity is very bad, vell above 50 uV. I'm not sure that I can hear the receiver well enough to align the PTO by listening. It does not have any meters installed yet.

So I want to make sure that the PTO is installed properly. Looking at the Y2K manual, 10 MHZ (A frequency that I picked at random) the PTO should either be 3.455 MHZ, or 2.545. I think that it is 3.455 but not sure. Any help on this matter would be greatly appreciated. Thank you, DW Holtman WB7SSN

From roy.morgan at nist.gov Thu Aug 25 11:49:16 2005
Subject: [R-390] SSB adapter for R-390A

>Hello, >Would a 455 KHZ Central Electronics Sideband Slicer Model B, do a good as >a product detector on a R-390A?

Yes, but you may have to reduce the IF signal going into the Slicer.. the signal from the IF OUT of the R-390A may overload the Slicer. Especially if your slicer has the little amplifier module on it. Roy

From richardlo at admin.athabasca.ca Thu Aug 25 12:54:08 2005
Subject: [R-390] Trouble Shooting R390A/Backlash

I like the subject line and, although I know what he is REALLY talking about, I have images of angry old SP600 owners roaming the streets and beating up suspected R390 afficianado. Richard Loken VE6BSV

From r390a at bellsouth.net Thu Aug 25 14:10:30 2005
Subject: [R-390] Steve and List, Here's How I View HSN

wrote: wrote: >> I have a Mac OS 10.4.x system, and the files open fine in Adobe 7, >> Adobe Reader

7, and at least a couple others. No problems with any >> files. >>> Would you mind trying them with Preview? The newer issues open fine > for me in Acrobat 4.0 and 5.0 on OS X 10.3.9, but the text shows as > either scrambled or open boxes in Preview. I haven't tried the > older issues yet.

Yes, Preview was one of the "couple others" and Graphic Converter was the other. Do you have all your fonts installed? I'm not sure what additional fonts you'd need, though, especially with the scanned files since they're just graphic images. See the list below. Using the programs below I was able to view both the electronic and scanned versions of HSN.

So here's a list of programs that will open HSN on my Mac System is OS 10.4, 2.5 gb memory G5 dual.

Adobe Professional v7.01

Adobe Reader v7.01

Preview (v3.0)

Graphic Converter (v5.5)

Appleworks (v6)

Quicktime Player (v7.0)

Mail.app (v2.0) Composition window

And.. using Palm Reader on my ancient Handspring Visor, I can view the electronic versions. I can't view the scanned issues, unfortunately. Tom NU4G "I'm not trying to be a showoff, I promise. Really"

From wd8kdg at worldnet.att.net Thu Aug 25 14:38:45 2005

Subject: [R-390] HSN on line

Thank You Barry! I've taken some time and searched through the back issues. No problem with Adobe Reader, so far every file has opened.

This service has answered one of my questions pertaining to tube shields for the R-390A. After finding the post on which tube really need shields, (V201,V206,V505,& V701)I removed the remaining shields. Four IERC shields will cost much less than 26 shields. Great Job, outstanding! Regards, wd8kdg Craig

From hankarn at pacbell.net Thu Aug 25 15:09:03 2005

Subject: [R-390] RE OLDHAM coupler Springs

I have the springs 2 for a dollar plus SASE which in English means Self Addressed Stamped Envelope. Out of 12 orders, 3 with SASE, 4 with addressed envelope NO STAMP, 2 with other orders and three with just the buck. The posting asks for SASE. No more blanks please. The CNC disc comes with one spring \$12.00 plus mailing. \$1.00 USA Hank KN6DI

From Llgpt at aol.com Thu Aug 25 15:16:13 2005

Subject: [R-390] RE OLDHAM coupler Springs

Maybe you should ask for help from the VOA in "Special English" for the Ebonics challenged "Non A" crowd???

Need I say anymore? Les Locklear Professional curmudgeon, equal opportunity annoyer.

From jpl15 at panix.com Thu Aug 25 16:26:06 2005
Subject: [R-390] RE OLDHAM coupler Springs

wrote: > Maybe you should ask for help from the VOA in "Special English" for the> Ebonics challenged "Non A" crowd???

Okay, so: I have one of each. Does that then make me "Half-A"???;} Cheers John KB6SCO PS: Wouldn't be the first time somebody suggested I was 'half-a'...

From n4buq at aol.com Thu Aug 25 16:27:54 2005
Subject: [R-390] RE OLDHAM coupler Springs

One "A" short of a full set, perhaps? Barry - N4BUQ

From gregorymengell at comcast.net Thu Aug 25 17:32:03 2005
Subject: [R-390] Thank you

wrote: > I have Acrobat 7.0 on this particular machine and it works.

I installed Adobe 7.0 and everything works fine now. Thank you for making the Hollow State News available to all of us. 73 Gregory

From ToddRoberts2001 at aol.com Thu Aug 25 18:33:56 2005
Subject: [R-390] R-725 up to \$921 on the 'BAY

Ends Thursday evening 18:30PDT. Looks like it will break the \$1000 barrier - 73 Todd WD4NGG

From r390a at bellsouth.net Thu Aug 25 18:38:22 2005
Subject: [R-390] RE OLDHAM coupler Springs

wrote: > Maybe you should ask for help from the VOA in "Special English" for > the> Ebonics challenged "Non A" crowd???

laugh Sure, make me laugh and break my 6082s, won't ya! hehe Tom NU4G

From chacuff at cableone.net Thu Aug 25 18:42:54 2005
Subject: [R-390] R-725 up to \$921 on the 'BAY

[R-390] R-725 up to \$921 on the 'BAY

I guessed \$1200 a few days ago...all things considered I think I'd rather have the 725 than the \$3500 390A....of course that's probably a no brainer....I've been called worse! Cecil...

From r390a at bellsouth.net Thu Aug 25 18:53:45 2005
Subject: [R-390] RE OLDHAM coupler Springs

wrote: One "A" short of a full set, perhaps?

What's two pair + two aces worth in a game of R-390* poker? Tom NU4G

From chacuff at cableone.net Thu Aug 25 19:07:05 2005
Subject: [R-390] RE OLDHAM coupler Springs

I dunno but I'm sure if we keep it up we'll all get the "Royal Flush" Cecil...

From FraserBonnett at adelphia.net Thu Aug 25 23:12:42 2005
Subject: [R-390] Dead 6MHz and 10MHz

Turned my R-390A on tonight for the first time in a few months and spent some time tuning around. 6MHz and 10MHz are completely devoid of signals. There's some hiss but nothing else, and there are signals there since I check on another receiver. So ... any pointers on what to look for might have "broken"73, Fraser

From Flowertime01 at wmconnect.com Fri Aug 26 10:27:07 2005
Subject: [R-390] Trouble shooting the R390A

Pete KH6GRT,

Thank you for doing all the work and getting the PDF files up on the web. My copy of the PDF files look good. Thank you for the current information Roger L. Ruskowski

From n4buq at aol.com Fri Aug 26 10:26:40 2005
Subject: [R-390] Dead 6MHz and 10MHz

If all other bands work, it would almost have to be in the crystal oscillator section. I don't know if 6mhz and 10mhz share the same crystal, but I don't think so. It would also be odd that two crystals go out at the same time; however, you might not have listened to one or the other of those bands in a while so if it is crystals, they could have died at different times. Good luck with it, Barry - N4BUQ

From N4TUA at aol.com Fri Aug 26 10:32:39 2005
Subject: [R-390] Some questions?

Hello Friends,

I have been changing the brown beauties out in the R-390A. I have tested these and seem to all be leaky by my testing which consists of applying variable DC to one side of the capacitor and with the DC milliamp meter checking the current through the capacitor. Is this a good indication of the leakiness?

I use cheap solder wick and have some solder flux called NOKORODE. It is a paste in a can. A little of

this on the wick makes it really pick up well. My question: Is this acid flux? Is it OK to use? There is no indication on the can that it is acid. It says (the can) it contains zinc chloride. Thank you, Collin

From dhallam at rapidsys.com Fri Aug 26 10:42:44 2005
Subject: [R-390] Some questions?

I use cheap solder wick and have some solder flux called NOKORODE.

Collin,

Any flux that contains zinc chloride is corrosive to electrical circuits and should not be used. Its use is for plumbing joints. David C. Hallam KC2JD

From roy.morgan at nist.gov Fri Aug 26 11:28:05 2005
Subject: [R-390] Some questions?

wrote: >I have been changing the brown beauties out in the R-390A. ... applying >variable DC to one side of the capacitor and with the DC milliamp meter >checking the current through the capacitor. Is this a good indication of >the leakiness?

Yes, indeed. It's a fine indication. A more sensitive method is to use a DMM instead of your milliamp meter, set to voltage. It likely has a 10 meg-ohm input resistance so a ten volt indication is one microampere. If your caps are leaking milliamps at rated voltage or less, they are VERY leaky.

>I use cheap solder wick and have some solder flux called NOKORODE.

What that stuff does not corrode (not too much anyway) is copper pipes. Use it in plumbing not electronics. There is paste flux meant for electronics. Roy

From FraserBonnett at adelphia.net Fri Aug 26 12:15:29 2005
Subject: [R-390] Dead 6MHz and 10MHz

Upon further investigation I have no Calibration signals on 6, 10, 23 and 28MHz bands.

(This is some sort of electrical retribution for not using the radio for 6 months!) Fraser, W3UTD

From chacuff at cableone.net Fri Aug 26 12:56:51 2005
Subject: [R-390] Dead 6MHz and 10MHz

6, 10 and 23 mc all make sense....they share a common crystal in the crystal osc. Y407 13mc. 28 mc maybe needs to be confirmed. It uses a different crystal...Y415 15.5 mc. Maybe a combination of things. Dirty contacts on the crystal osc. switch and dirty contacts on the Y407 crystal.....

I would switch the bandswitch around quite a few times onto and off of 28 Mhz....and pull the cover on the crystal deck and clean the pins on Y403. Maybe do all of them while in there. DeOxit works wonders... Hope that helps... Cecil..

From ToddRoberts2001 at aol.com Fri Aug 26 14:59:39 2005
Subject: [R-390] Info on Shipping R-390As via FedEx Ground

I just learned this today - a man at FedEx said all packages must be packed to withstand a 4-foot fall. This is because the rail system they use to move packages in their warehouses is that high off the ground. I can also say I have seen the rail system in a UPS warehouse and it was also about 4 feet off the ground. Anyone planning to ship an R-390A or similar receiver please keep this in mind. Can the radio inside the box withstand a 4-foot drop without the front panel getting bent or a corner of the chassis getting crushed or bent? If you don't think it will then you need to rethink your packing methods. An inch of foam rubber around the radio or throwing it into a single-wall box with some noodles ain't gonna do it. At the bare minimum consider using a double-boxing method with double-wall premium cardboard boxes with room for padding in-between the boxes and plenty of stiff padding not foam rubber around the radio in the inner box. 73 Todd WD4NGG.

From Llgpt at aol.com Fri Aug 26 15:12:31 2005
Subject: [R-390] Info on Shipping R-390As via FedEx Ground

Hank Arney has preached about this for years as have many others. It doesn't pay to use cheap thin boxes. I have successfully shipped many, many R-390, R-390A (see, that is how you do the Non A thing), SP-600's, etc. over the years with no damage. Buy one of Hank's boxes, they will make multiple trips with no damage. It doesn't make sense to spend a great deal of money on a vintage receiver and ship it in a mailboxes etc. box. I recently shipped an empty box to a person who sold me a RCA CR-88A, it cost \$20.67 to ship the empty box, but it paid off when it arrived back to me unscathed.

You get exactly what you pay for, so be careful when shipping the big heavy receivers, etc. Les Locklear Professional curmudgeon, equal opportunity annoyer.

In a message dated 8/26/2005 2:00:48 PM Central Daylight Time,
ToddRoberts2001@aol.com writes:

I just learned this today - a man at FedEx said all packages must be packed to withstand a 4-foot fall. This is because the rail system they use to move packages in their warehouses is that high off the ground. I can also say I have seen the rail system in a UPS warehouse and it was also about 4 feet off the ground. Anyone planning to ship an R-390A or similar receiver please keep this in mind. Can the radio inside the box withstand a 4-foot drop without the front panel getting bent or a corner of the chassis getting crushed or bent? If you don't think it will then you need to rethink your packing methods. An inch of foam rubber around the radio or throwing it into a single-wall box with some noodles ain't gonna do it. At the bare minimum consider using a double-boxing method with double-wall premium cardboard boxes with room for padding in-between the boxes and plenty of stiff padding not foam rubber around the radio in the inner box. 73 Todd WD4NGG.

From barry at hausernet.com Fri Aug 26 15:22:58 2005
Subject: [R-390] Info on Shipping R-390As via FedEx Ground

Also -- see issue #53 on the Hollow State Newsletter site.

Another thing - I noticed recently that what was about a 30-35% savings on Fedex vs. UPS ground

doesn't exist any more. They are now within a dollar or two of each other. Maybe DHL is still cheaper. Fedex is running the commercial with the pirate at the employment office who can only say "AAAAARRRDDDD!" -- stressing how easy it is to ship.

The commercials promoting the price haven't been running in a while -- If anyone remembers there was the nerdy guy trying to ship a package to "poe-hee-nix" - in Arizona, the guy who wanted to ship something anywhere to take advantage of the deal, and the guy behind the counter with the clear plastic raincoat or bag who got sprayed when the customer who was drinking something let go with it when he was shocked by the low price.

I have read somewhere that UPS has some conveyor/package handling equipment that's 30 feet off the (concrete) floor. There may still be somewhat of an advantage to Fedex in terms of lower risk of damage. I suspect they have less in the way of mechanization of package handling than UPS, but not sure. Pack defensively ... Barry

From barry at hausernet.com Fri Aug 26 15:42:40 2005
Subject: [R-390] Info on Shipping R-390As via FedEx Ground

Hi Les

That was a pretty good shipping rate (\$20.67), but be aware that you will get charged "dimensional weight" rates for packages over a certain size. If one times the length, plus the "girth" (2 times the sum of the height and width) comes to more than 108 inches, you'll be charged the 70 lb. dimensional weight rate, even though the empty carton weighs much less. There is another trip-wire somewhat below that -- 43 lb. equivalent. You can fill in the empty weight, dimensions, from and to address on the UPS/Fedex web sites to see what it comes out to.

The trick might be a telescoping shipper, but then you need some props that ship flat on the way out and vertical -- supporting the top -- with the payload in it. Otherwise the package won't protect the goods from the ton of stuff stacked on top.

Of course, the rate depends on zone difference. Most of what I want is on the wrong coast. ;-(Barry

From dhallam at rapidsys.com Fri Aug 26 15:42:43 2005
Subject: [R-390] Info on Shipping R-390As via FedEx Ground

One place where FedEx is a savings. Their minimum charge for an oversize 2 package is 50 pounds while UPS is 70 pounds.

I don't know how good DHL is but I recently had a Johnson Invader shipped to me from Dallas to Tampa by DHL for about \$21. It arrived in excellent condition. David C. Hallam

From Llgpt at aol.com Fri Aug 26 16:07:18 2005
Subject: [R-390] Info on Shipping R-390As via FedEx Ground

Barry & Group,

It wasn't shipped too far away and I have an account, so that helped. The main point is don't use cheap

boxes, use lots of rigid foam to make the shipping box stronger. Those RCA's weigh more than a R-390 series or SP-600.

Hank will say most of the cheapskates get what they deserve when they ship on the cheap and cut corners. I have to agree. Cecil Acuff and I have shared those Hank Arney Shipping boxes and they are highly recommended. Cost is \$45.00 plus shipping to your home/business. Hank will configure the inside to whatever radio you are shipping. Mine cost \$30.00 to ship, so I have \$75.00 invested in one container, but it has made eight trips with no damage yet. Les Locklear

In a message dated 8/26/2005 2:43:06 PM Central Daylight Time,
barry@hausernet.com writes:

Hi Les

That was a pretty good shipping rate (\$20.67), but be aware that you will get charged "dimensional weight" rates for packages over a certain size. If one times the length, plus the "girth" (2 times the sum of the height and width) comes to more than 108 inches, you'll be charged the 70 lb. dimensional weight rate, even though the empty carton weighs much less. There is another trip-wire somewhat below that -- 43 lb. equivalent. You can fill in the empty weight, dimensions, from and to address on the UPS/Fedex web sites to see what it comes out to.

The trick might be a telescoping shipper, but then you need some props that ship flat on the way out and vertical -- supporting the top -- with the payload in it. Otherwise the package won't protect the goods from the ton of stuff stacked on top.

Of course, the rate depends on zone difference. Most of what I want is on the wrong coast. ;-(Barry

From barry at hausernet.com Fri Aug 26 16:46:52 2005
Subject: [R-390] Info on Shipping R-390As via FedEx Ground

Hi Les & packing crew

I was just pointing out that shipping empty shippers can be pricey, just so people will be prepared.

I also have a Dan Arney shipper. It's a piece of work -- not doublewall, not triplewall, but quadruplewall, with about 4 different kinds of foam in it. It arrived on the rebound with a radio in it that I bought -- I think from one of the listmembers. It didn't pay to ship back, so I bought it. That can be a solution to avoid return shipping of an empty box. Offer the buyer an option to return or buy the carton -- or charge up front and refund upon return. If he has room to store the box, it's good to have a good one on hand. To save space, you can store a radio in it that's valuable, but awaiting restoration, or whatever -- or maybe the family jewels. ;-)

Yes -- it's worth some investment to avoid damage. You won't long remember the additional bux, but you will wince every time you see that bend in a panel or worse -- if there has to be a claim or some unpleasant aftermath.

Especially important if your seller wants to have the gear "professionally packed" by a UPS store -- head that off at the pass or you'll get a big beanbag with a broken radio in it. You can follow the trail of bleeding peanuts all the way back to the depot. Barry

From shoppa_r390a at trailing-edge.com Fri Aug 26 17:10:33 2005
Subject: [R-390] Some questions?

> applying variable DC to one side of the capacitor and with the DC milliamp > meter checking the current through the capacitor. Is this a good > indication of the leakiness?

Well, a milliamp of leakiness at 200V is way more than spec (that's equivalent to a 200K resistor in parallel) so I think you'd like something sensitive to the microamp level.

Many of the brown beauties are installed in places where leakiness is almost a complete non-issue. For example, the bypasses on the crystal oven on the RF deck, or the bypass on the IF deck for the ballast tube chain. If the capacitor was so leaky that it was like a 1K resistor then it wouldn't matter in those applications. In other places, where it's a screen bypass or B+ bypass, a milliamp of leak will substantially disturb the intended operation of the circuit (although the radio will probably seem to work fine still.)

Because the brown beauties are installed in rather non-critical areas, you might want to check out the capacitors that usually are Vitamin Q's/ Westcap hermetically-sealed-cans as well for leakage. In some of these circuits a microamp of leakage might be too much, so upgrading your test scheme to be more sensitive would be necessary before getting to these. Tim.

From shoppa_r390a at trailing-edge.com Fri Aug 26 17:16:49 2005
Subject: [R-390] Info on Shipping R-390As via FedEx Ground

A thought on shipping:

My only experience with shipping R-390A's is the yellow striper I got from Fair Radio. It was packed in a nice heavy box, with a few inner partitions of cardboard/thick foam, but far and away the packing material used was wadded newspaper.

I think that Fair ships the R-390A all in one box (rather than pulling the power supply and shipping it separately) because UPS treats all extra-heavy packages (>70 lbs) by not using the automated conveyer lines but by a more manual (and presumably more gentle) method.

I can tell you that despite the weight (probably 90lbs in total) of the box from Fair Radio, the outside was pristine and unscarred. I contrast this with far smaller and lighter boxes I get through UPS that look like they were run over by trucks.

Again, this is just a thought. By no means can I personally guarantee that UPS will handle any extra-heavy (> 70lbs) package with kid gloves. But it's my observation. Tim.

From shoppa_r390a at trailing-edge.com Fri Aug 26 17:19:44 2005
Subject: [R-390] Info on Shipping R-390As via FedEx Ground

On the subject of FedEx Ground:

I'm 99% sure that the bulk of the FedEx Ground network is what they got when they bought Roadway. Roadway was traditionally a business-to-business delivery service, dealing with large quantities/large

boxes at a time. Since Fedex expanded the service to also cater to residential customers maybe this expertise with large packages is not applicable to home delivery, I don't know. Tim.

From barry at hausernet.com Fri Aug 26 17:20:11 2005
Subject: [R-390] Info on Shipping R-390As via FedEx Ground

That's not typical of a UPS Store, previously MBE - Mailboxes Etc. After they take his money and the seller leaves, they pack it in a large flimsy box - usually \$8.00 or more, bubblewrap and often, used peanuts. The box is so soft, if marooned somewhere, you could probably eat it and not suffer indigestion. Easily torn or crushed. New bubblewrap, while inadequate, is expensive, so they try not to use too much of it. They don't even attempt to bag the peanuts or compress them and they don't put enough in, but what does it matter. The price for all this is usually high, what with the materials and labor charges.

Not sure how they get these to the drivers. When you try to pick up one of these abominations - typically by the far corners -- the corners crush just under the weight of the package. The payload shifts around until it's right up against 2 or 3 sides of the carton. Out of balance, with corners that crumple when you try to lift them, they're also more prone to being dropped. Very difficult to hand-truck, unless part of the radio is sticking out with skid marks already on it and that would be the bottom and the place to jam the hand truck under.

Finally, on this particular diatribe, UPS Stores are franchises and the shipper of record -- unless something has changed recently. Any claim has to go through the seller, then through the UPS store as the shipper and then through to UPS itself. (Unless they've streamlined something.) It's not the same thing as shipping something from a regular UPS staffed "customer counter". The only good thing -- under the franchise arrangements, they have to charge the regular retail UPS rate -- not the 10-100% markup of the MBE days. There are some UPS centers that do packing and have sturdy double-wall cartons that say UPS on them. They also do in-place foam with double boxing. But, if you call the 800 number, the reps know nothing about it. Not all of them do it, but it is an alternative and I think they do it while you wait. To find out, you have to visit or somehow get the phone number of the local depot. Two sellers have shipped me gear this way - one in the Orlando area.

The UPS Stores have this commercial -- which I haven't seen in a while -- where they're promoted as the packing experts .. I think it showed them crating a grandfather's clock. Yeah, right. Barry

Frank wrote: A brief word about the dear folks at UPS. Several years ago I bought a R-390 from W3INK. He took to a "ups subsidiary store" where they packed it for him. I don't recall what they charged but it was a lot.

When it arrived here in SW Missouri the driver who knew me well said "I think we have big trouble today."

The box presented was the most worn out old large TV cardboard box you can imagine. The packing was phone books, old clothing, wood shavings, you name it. A mile of string held it together. Every corner was smashed in.

He wasn't allowed to take it back since we had opened it.

The right end of the front panel was bent completely into an "L" with the rack handle torn off and in the box. And that was just the beginning.

Took weeks before their inspector from near KC made it down here and looked at it and was not going to honor the claim because of packing..... I showed him a photocopy of the so called UPS store where it originated from. He turned pale. Especially at the \$2000 value insurance. He took it to his van.

W3INK battled with them for months. He sent my money back to me right away but we kept in touch via his BBS on the slow progress of getting that claim settled. He finally won.

Oh for the days of Railway Express. My first KWS-1 was in two wooden crates, one had been dropped (the PS of course) and splintered the crate on two sides. The steel banding was broken. No sweat. Within 48 hours another one was enroute from Harrison Radio and we were all happy.

As for HDL... only one thing came in so far from them. A box of new hard drives. I saw the deliver guy toss the box up onto the concrete porch from a distance of about fifteen feet and scurry back to his beatup old truck. All drives were DOA. That was a few months ago and I understand the dealer still is waiting for his money...he shipped me another batch via Fedex in the meantime.

The prefab shipping crate sounds good, very good in fact. 73, Frank Gilmore K0JPJ ex-W5PVX

From Llgpt at aol.com Fri Aug 26 17:29:37 2005
Subject: [R-390] Info on Shipping R-390As via FedEx Ground

Several years ago, I bought one of the John R. Leary SP-600's from a Dr. in South Dakota, he had it foamed in place at his local ups center. I have checked periodically over the years to see if that service is being offered. No luck yet. You would think it would be a benefit to them to install the equipment and offer the service, as it would be a profit maker for them. Les

In a message dated 8/26/2005 4:20:36 PM Central Daylight Time,
barry@hausernet.com writes:

There are some UPS centers that do packing and have sturdy double-wall cartons that say UPS on them. They also do in-place foam with double boxing. But, if you call the 800 number, the reps know nothing about it. Not all of them do it, but it is an alternative and I think they do it while you wait. To find out, you have to visit or somehow get the phone number of the local depot. Two sellers have shipped me gear this way - one in the Orlando area.

The UPS Stores have this commercial -- which I haven't seen in a while -- where they're promoted as the packing experts .. I think it showed them crating a grandfather's clock. Yeah, right. Barry

From chacuff at cableone.net Fri Aug 26 18:13:54 2005
Subject: [R-390] Info on Shipping R-390As via FedEx Ground

Nice radio....I still have it!

My last experience with FedEx was on a radio purchase. The box which was quite heavy was nearly round and had the side ripped out and the delivery guy was hauling the thing to the front door on a cart and scattered parts all the way up the walk way to the front door. I was not impressed!

I've had better luck with UPS but any of them can screw up a perfectly good vintage radio if it's not

packaged properly!

The flip side is any of them can get it to you in one piece if it's packaged properly! Hanks boxes rule.....I hear the Miltronix fast packs are great too! Cecil....

From n4tua at aol.com Fri Aug 26 21:36:37 2005
Subject: [R-390] zinc chloride NO NO

Thanks Group,

I have received the answer I was hoping not to get. The paste flux I used on the solder wick is BAD for my radio. I only used it in a few places and I think I can remember which ones... Is there anything I can do to salvage what I have worked on? Thanks, Collin

From muttman at charter.net Sat Aug 27 00:50:37 2005
Subject: [R-390] zinc chloride NO NO

Several years ago I bought a bottle of liquid flux used on PC boards from an electronics store. I make my own solder wick using the shielding from coax or audio cables, then dip it into the flux. I have some small size military coax that uses silver plated wire, MAN, does that work great as solder wick. BTW it seems to me that (again) years ago I saw the tip on making solder wick in one of the ham mags, then shortly there after it appeared on the market. Buzz

From future212 at comcast.net Sat Aug 27 07:51:15 2005
Subject: [R-390] R-390A jProgress

Thank to all of those who helped me with info on the re-installation of my lost PTO. After quickly going through all of the modules (changing paper caps, out of tolerance resistors, cleaning connectors etc) this receiver nows received on all frequencies. The sensitivity is not great but much better than before.

The big problem that I have now is distorted audio. I'm hoping that doing an alignment will help with distortion. Any suggestions are welcome.

After I get this unit playing close to where it is suppose to, I'm going to go through each module with a fine tooth comb.

I have found 1 bad crystal Y411 (16.0 MHZ) and the Function rotary switch is bad. I'm leaving it on and not turning the knob for now, using a variac to turn it on and off. I have changed the crystal from my second set, and get by with the switch problem until I can get a replacement. The biggest problem is I cannot switch over to the CAL position. The contacts on the switch are bent and ready to break. I had to play with it to get it to operate at all. Thanks & 73's DW Holtman WB7SSN

From ToddRoberts2001 at aol.com Sat Aug 27 09:00:02 2005
Subject: [R-390] Fw: Shipping R-390As , Rick Mish Group Buy, anyone game?

writes: Rick Mish has the ultimate shipping cartons. There is a shipping > standard called V73C which I think is a military requirement. > Anyhow, his uses that.

Hi Scott, sounds like a good idea. Do you know if the cartons have the inside padding specifically cut to fit the R-390A? A one-size-fits-all padding may not be the best solution. The R-390A has the rack-handles protruding from the front and unless the padding was tailor-made to fit the R-390A chassis exactly it may not afford maximum protection if the box was dropped several feet. The R-390A should be rock-solid inside an exact-fit cut-to-size padding, no room for slop or shifting inside the box. 73
Todd WD4NGG

From r390a at bellsouth.net Sat Aug 27 09:45:39 2005
Subject: [R-390] 390A IF Filter Cover Needed - EAC Ceramic Filter IF Deck

Anyone have an IF Filter cover just lying around? Ran across a deck this morning that appears to be complete other than that. Uses later style cover with dimple.

This is a "rare" 1960 EAC deck with ceramic filters. Someone at one time asked for photos of one of these critters for the archives - contact me off list to if you still need them and I'll take a few when I clean it up. 73 Tom NU4G

From w9wis at yahoo.com Sat Aug 27 11:57:28 2005
Subject: [R-390] Fw: Shipping R-390As , Rick Mish Group Buy, anyone game?

Like Scott I also bought one of these shipping boxes about 4 years ago from Rick. They are great.

These boxes are made for the GSA on a Gov't contract by several organizations of the blind. The Fort Worth, TX Lighthouse for the Blind has made these "Fast Pack Cushioned Shipping Boxes" for the Gov't for 20 years. If you want to see what they are here is a link:
<http://www.lighthousefw.org/boxinfo.html> Mike

From saglek at videotron.ca Sat Aug 27 14:13:24 2005
Subject: [R-390] Fw: Shipping R-390As , Rick Mish Group Buy, anyone game?

Hi Scott, Todd & All,

Scott purchased an R-390 from me this past spring. He sent me the shipping container and I can tell you that it is superbly designed and built . The R-390 and the R-390A will certainly fit without relative movement within the container. The R-390 and the R-390A both have the same dimensions or footprint.

For those of you who routinely move these radios should seriously consider this container or one similar to it. What should be included in the total shipping cost is the cost to move the empty container.

I also sold an R-390A at the same time. I can tell you that finding the proper size, double walled boxes that will fit inside each other including two or three inches of rigid foam is a real chore. Whatever type of container you use the main thing to keep in mind is there must not be relative movement within the containers, radio and box OR box to box.

I took photos of Scott's empty box and the one I used for the R-390A. If Scott does not mind I will Email the photo to those that want them. Al

From odyslim at comcast.net Sat Aug 27 14:50:06 2005
Subject: [R-390] Fw: Shipping R-390As , Rick Mish Group Buy, anyone game?

Hi Al & group.

Please do share the pics with anybody that would like to see. I cant say enough good about Ricks "Fastpacs". BTW, Fedex charges me \$19.00 to ship the empty container from Baltimore to Toledo where Rick lives.

If we do get 6 takers, I suggest that everybody send payment directly to Rick Mish along with postage. Rick can determine that price for you. At this time we have 2 interested. 4 more needed. The cost is \$125.00 plus shipping. Thanks agian Al for the wonderful R390. It is being used every day and works perfectly. I love it. Regards, Scott W3CV

From chacuff at cableone.net Sat Aug 27 15:57:52 2005
Subject: [R-390] Fw: Shipping R-390As , Rick Mish Group Buy, anyone game?

Not sure about the Mish boxes but I know the boxes Hank Arney delivers is setup specifically for the R-390x series... Cecil...

From wli98122 at yahoo.com Sat Aug 27 16:41:26 2005
Subject: [R-390] RE: HSN on the Web

I have just spent many happy hours re-reading those old HSN Newsletters.. thanks to Barry and Brian et al. What struck me was that years ago, many of todays issues have been addressed already, PLUS a few novel ideas as well. That said, current posts often contain more insights from our vantage point in the 21st C. This project serves as a superb complement to "Pearls" on Al's Web site by adding an important historical dimension.

This site also adds a simple way to dessiminate complex articles to the group, as now we (who do not have our own URL's) can add schematics and other graphics to longer posts. W. Li Mercer Island, WA

From gregorymengell at comcast.net Sat Aug 27 17:18:48 2005
Subject: [R-390] KPH

On the air now Coast station KPH broadcasting CW 426 kc Fire up those R 390 rx. 73 Gregory

From wabate at dandy.net Sat Aug 27 17:29:59 2005
Subject: [R-390] KPH

wrote: > On the air now Coast station KPH broadcasting CW 426 kc Fire up those

Don't hear that right now but hear NXX on mcw on 385. Near Philadelphia. 73,

From jupete at bigpond.net.au Sun Aug 28 02:11:18 2005
Subject: [R-390] Wiring ID

G'day.

R-390A has a wiring color code/chart for the internal loom which isn't replicated in the modules. Having the rainy day job of replacing a missing J112 plug on the IF module and not knowing what went where on the 20 pin plug, it would have been useful to have a wire colorcode for each of the pins. Yeah, I've traced it with the DMM, but assuming they were consistent, the job can be a bit easier next time if there was a chart.

Anyone done/know about this ? Probably same for the audio module. Pete D . Williams METUNG
3904 Australia jupete@bigpond.net.au

From federico at dottorbaldi.it Sun Aug 28 07:38:03 2005
Subject: [R-390] Fw: Shipping R-390As , Rick Mish Group Buy, anyone game?

Hi to All my friends,

I got from Rick an R-390/URR and an R-389/URR shipped from the States to Italy in MILITARY FASTPACK (that is the box that you described before) in both cases they reached me without any damages and I still have the box that I employ to storage or ship heavy radios like R- 274/FRR. 73 to all my Friends de IZ1FID

From FraserBonnett at adelphia.net Sun Aug 28 09:35:35 2005
Subject: [R-390] Dead 6MHz and 10MHz

>Upon further investigation I have no Calibration signals on 6, 10, 23

OK, so these bands share the same crystal in the Crystal OSC module. Is it possible to get the cover off the crystal oven, without going through the steps outlined in the Tech manual involving removing the from panel, playing w/ the gears etc? Fraser

From roy.morgan at nist.gov Sun Aug 28 11:45:42 2005
Subject: [R-390] Dead 6MHz and 10MHz

Quoting: >>Upon further investigation I have no Calibration signals on 6, 10, 23 OK, so these bands share the same crystal in the Crystal OSC module

Fraser,

Yes. The cover has three screws: one at the front visible from the top, and two at the rear, not so easy to see. These two at the rear are accessible from the back of the radio if you have a LONG phillips screw driver. They are able to fall down into the radio and be hard to retrieve but with care you can capture them as they are loosened.

Note: the cover of the crystal oven has a heater element in it (along with some fiberglass insulation). The heater is fed power by two pins that engage corresponding contacts in the base of the unit. SO...Pull straight up once the cover is loose. Get all three screws out before you remove the cover. All this is easy to see and manage once you've done it once.

It's ok to run the radio with the crystal oven cover off. You MAY find that just removing and replacing the crystal will solve the problem. You should do this for all the crystals to make sure they all have nice connections. More likely, the crystal is bad, but let's hope it's just a bad connection. Good luck. Roy

From barry at hausernet.com Sun Aug 28 11:49:50 2005
Subject: [R-390] Dead 6MHz and 10MHz

Hi Fraser

Your earlier post mentioned that this is an R-390A, right?

There's no need for major disassembly. The crystals are right on top of the crystal oscillator module under the cover. I think it's one screw to remove on top of the rectangular box - which is the oven, -- and there may be one along the side -- facing the rear panel. I forget if there's an access hold through the rear panel to get at that screw which may just be into an open slot whereby it just needs to be loosened so the thing lifts off. Be careful as there are the leads to supply current to the oven which is built into the top that you will be removing. Some versions may have a plug disconnect, but if not there's about enough slack to lay it to one side. If there is no access hole for the side/back screw, you can get at it with an offset screwdriver or possibly one of those mini-ratchet handles with a phillips bit in it. It might already be loose. I'm going from memory. It's been a while.

Have no idea what you mean about removing the front panel, gears etc. You don't have to remove the crystal oscillator module to work on the crystals -- or the trimmers -- everything is right on top.

Sometimes it's just a bit of oxidation on the crystal pins or socket terminals. Some contracts have a rather poor style of terminals made of dimpled stampings and may be loose. (found this with the '67 EAC's) Remove the xtal and stake the loose terminals with a sharp, small blade screwdriver lightly, so as to reduce the pin opening a bit. Use some DeOxit on the pins and sockets. Make sure the pins are clean and not hazed over with oxide.

The problem might also be the trimmers on the top of the xtal deck -- in front of the oven (rectangular box). The one crystal that's not operative may have oxidation in/on the associated trimmer. Just turn a bit and turn back. If one is frozen, use some DeOxit and let it sit. You can either refer to the manual or the labeling of the trimmer caps to ID the correct trimmer and xtal.

You should have the slotted switch on the rear panel labeled "ovens" set on off. You can operate the receiver with the cover off and tap lightly on the crystals to localize any intermittents. It's not a bad idea to remove, De-Oxit and re-insert all of the crystals while you have it opened up. Actually, they're one of the easiest things to get at. hope this helps Barry

From barry at hausernet.com Sun Aug 28 13:03:54 2005
Subject: [R-390] Dead 6MHz and 10MHz

wrote: > Yes. The cover has three screws: one at the front visible from the top, and two at the rear, not

so easy to see.

In my description, I think I was confusing the oven/xtal cover with the cover for the mechanical filters. Yes, screws are on the side for the xtal cover only -- not the top .

Not all of them are "plug 'n play" design -- that much I remember. Many are as Roy describes -- integral contact pins. Others are hard-wired with a pair of leads. This may be a modification to ensure good connection to the heater element in the cover. Just watch for that as you lift the cover.

> It's ok to run the radio with the crystal oven cover off. You MAY find that > just > removing and replacing the crystal will solve the problem. You should do > this > for all the crystals to make sure they all have nice connections. More > likely, > the crystal is bad, but let's hope it's just a bad connection.

It's sometimes difficult to get a good connection if the sockets are of the "cost reduced" type I described. You might notice that the crystals are rather wobbly and there's hardly any tension on the pins when you remove or insert them. If so, then try staking them if they are of the type I described. They look like dimpled plated stampings with pinholes and two or maybe 4 cuts in the metal radiating out from the holes for the pins. Staking them closes up the pin holes a bit - enough to dig into the pins and make a better connection. Don't do it unless there's clearly a lot of slop.

They may be of a better design, more like a conventional crystal socket -- The above does not apply to that type. Barry

From redmenaced at yahoo.com Sun Aug 28 13:14:56 2005
Subject: [R-390] Gulf Coast?

Looks like a big one this time! Joe

From N4BUQ at aol.com Sun Aug 28 13:45:42 2005
Subject: [R-390] Gulf Coast?

Looks like a big one this time! Joe

Just returned from Panama City yesterday. On Friday, the waves were almost calm and very, very nice and clear. Yesterday morning, the waves were already picking up 2 to 3 feet crests. Not sure if that was storm-related, but they were meaner looking waves than we'd seen all week. Barry - N4BUQ

From Llgpt at aol.com Sun Aug 28 13:44:47 2005
Subject: [R-390] Gulf Coast?

Yep, Got my family off to Florida to safety. I am considered a "Mission Essential" DOD Civilian worker, so I'll go in to work this afternoon for the duration. Probably 23-26 hours or more. That is the norm anyways. But, this is the worst hurricane since Camille in 1969 which devastated the Gulf Coast. New Orleans will be history in some areas, they are approximately 12 ft. below sea level in the central business area and french quarter. Les Locklear Professional curmudgeon, equal opportunity annoyer.

From roy.morgan at nist.gov Sun Aug 28 13:45:20 2005
Subject: [R-390] Wiring ID

Quoting> R-390A has a wiring color code/chart for the internal loom which > isn't replicated in the modules. ... > Anyone done/know about this ? Probably same for the audio module.

Pete, What you are looking for *may* be in "The R-390A Drawing Set).

There is a set of drawings for the R-390A that someone obtained from The Government some time ago. It's called "The Fort Monbmouth Drawing Set" or some such. (EDMICS stands for Engineering Drawing Management Information Control System, or something like that.)

You need the particular viewer software for it, and the index is essentially unusable. Someone in the community created a useable index for the drawings.

The whole package may well be online some where. It appears that Radio Era Archives offers this on DC ROM: <http://www.radioera.com/mall/cds.asp>

The Collins list archives from February 1998 has some info. see <http://www.collinsradio.org> for info on the archives.

This guy also offeres a CD with the drawings on it: <http://users.erols.com/eengineer/CD.html> "R389 R390 R390A R391 R392 SP-600 CD ROM" it's \$10.00

I found the index at: <http://209.35.120.129/faq-refs.htm#Drawings> This is on the "R-390A Frequently Asked Questions Page" <http://209.35.120.129/> and it lists

"SM-D-31963 WIRING ASSY - POWER SUPPLY - I/C GAGE" but that's not what you want.

But this one may be: "SM-E-249141 30-MAR-65 RCVR R-390A/URR WIRING ASSY (MAIN FRAME)"

Maybe some one with the drawing set can look that up and see what it says. Roy

From N4BUQ at aol.com Sun Aug 28 14:35:02 2005
Subject: [R-390] Wiring ID

Awww, Roy, the indexes aren't *completely* useless. I worked on a project a few years ago that generated and manipulated those indexes. When properly built, they were a decent roadmap to the file(s) you were looking for; but, I'll agree, that unless you know how to "read between the pipes", they're not very much help.

Do they sell AC ROMs with those DC ROMs? :-) Barry

Pete,

What you are looking for *may* be in "The R-390A Drawing Set).

There is a set of drawings for the R-390A that someone obtained from The Government some time ago. It's called "The Fort Monbmouth Drawing Set" or some such. (EDMICS stands for Engineering

Drawing Management Information Control System, or something like that.)

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The Collins list archives from February 1998 has some info. see <http://www.collinsradio.org> for info on the archives.

This guy also offeres a CD with the drawings on it: <http://users.erols.com/eengineer/CD.html> "R389 R390 R390A R391 R392 SP-600 CD ROM" it's \$10.00

I found the index at: <http://209.35.120.129/faq-refs.htm#Drawings> This is on the "R-390A Frequently Asked Questions Page" <http://209.35.120.129/> and it lists

"SM-D-31963 WIRING ASSY - POWER SUPPLY - I/C GAGE" but that's not what you want.

But this one may be: "SM-E-249141 30-MAR-65 RCVR R-390A/URR WIRING ASSY (MAIN FRAME)"

Maybe some one with the drawing set can look that up and see what it says. Roy

From dsmaples at comcast.net Sun Aug 28 16:36:14 2005
Subject: [R-390] Gulf Coast?

All: I worked at NASA's Stennis Space Center (between I-10 and I-59 on the MS-LA border) from 1990 to 1999. I just talked to a friend of mine still there; he's on his way in to work there today. I think my former home (in Slidell, LA) is going to be history, as will a good portion of Slidell.

I saw on the news this afternoon that there are 100,000 folks stuck in New Orleans for various reasons. I hope like crazy that most of them survive.

Les: Where do you work? I was a DoD contractor in the 80s... Dave WB4FUR

From shoppa_r390a at trailing-edge.com Sun Aug 28 16:49:53 2005
Subject: [R-390] 16kHz filter and SWL/BC listening

To my ear when listening to SW and BC broadcasts (voice, music, whatever) the 16kHz filter setting always sounds pretty much just like 8kHz just with more hiss.

On a really super-strong station the hiss seems to be not so noticable.

This is a R-390A (so mechanical filters), a Hammond 600:8 ohm transformer, and a couple different bookshelf/hi-fi speakers I've tried.

I've got both an EAC and a Motorola IF deck and they sound the same.

I have "upgraded" several of the capacitors in my audio decks to enhance bass response (I did hear an improvement on the bass end) but between my audio decks the sound is the same.

Is this a fundamental limitation of the AF chain, or is my hearing just wacky, or is there some simple technical fix?

If I tapped off the diode load and fed into an outboard amp would 16kHz suddenly sound good?

I rarely use 4kHz for SW/broadcast listening unless there's a lot of QRM to be removed. Maybe I'm just getting old and have lost the top end of my hearing? I've always been bothered by tape hiss and to me the hiss on the 16kHz setting is even more bothersome. Tim.

From llgpt at aol.com Sun Aug 28 16:51:31 2005
Subject: [R-390] Gulf Coast?

Les: Where do you work? I was a DoD contractor in the 80s...

EMCS operator at Keesler AFB. In fact, I just arrived at work. Was told they will shut down the base at 1000pm. So, I'll be here for probably 28-36 hrs.

this will be my last hurricane working for the Government unless we have another this year. I'm getting too damn old for this crap! Les

From CRIPS01 at MSN.COM Sun Aug 28 17:45:29 2005
Subject: [R-390] Gulf Coast?

Go here for frequencies to listen to. <http://www.hwn.org/> Kenneth A. Crips, W7ITC, Cheyenne,

From CRIPS01 at MSN.COM Sun Aug 28 17:55:18 2005
Subject: [R-390] Gulf Coast?

The Hurricane emergency net is active on 14.235 mhz here is another useful link, <http://www.saturn.org/> Kenneth A. Crips, W7ITC, Cheyenne,

From jmiller1706 at cfl.rr.com Sun Aug 28 18:05:10 2005
Subject: [R-390] Gulf Coast?

> The Hurricane emergency net is active on 14.235 mhz

14.325 not 14.235

From FraserBonnett at adelphia.net Sun Aug 28 18:59:29 2005
Subject: [R-390] Dead 6MHz and 10MHz

Fortunately, some years ago, someone on this list sold a very long Philips screwdriver and a wrench that fits on the back panel. I was able to use the screwdriver through two access holes in the back panel, to

remove the cover of the crystal oven.

I removed each crystal, cleaned the pins, and put Deoxit on them. I inserted each one back into it's slot, fired her up, and those previously dead bands are working again.

Phew! Thanks everyone for the pointers! Regards, Fraser, W3UTD

From jonklinkhamer at comcast.net Sun Aug 28 21:11:59 2005
Subject: [R-390] backlash on R390A

Hi Folks,

This weekend was a crash course on the RF Deck. After reviewing the manual(s) and Chuck's video, I finally got enough nerve to take out the deck. Two things I immediately noticed. First the spring for the Oldham Coupler is missing - gone. No I did not do it - really. Also on one of the slug racks a tension spring is also missing. These especially the former might be the perpetrator of why I'm seeing so much backlash. I'm now at the mercy of finding parts. I don't necessary like that feeling but it goes along with repairing/restoring boatanchors I guess. I noticed www.atc-us.com <<http://www.atc-us.com>> is selling a deck for \$35. I'm thinking I might need the gears and clamps depending on what I find. Does anyone have much experience dealing with this company? Is there anybody in the group that could sell me an anti-backlash and tension spring(s)? Being always the optimism, I feel good that this may solve the problem.

PS: While cleaning the dirt off the chassis where the RF deck was I noticed a message scribed into the metal. It read "Bud was here 30 Nov 69" Bud if you're out there thanks for serving and God bless you!
73's Jon,KB1DC

From jonklinkhamer at comcast.net Sun Aug 28 21:22:41 2005
Subject: [R-390] RE OLDHAM coupler Springs

Hi Hank,

I was wondering if you were selling Oldham coupler springs. I really in need of one. Thanks,
Jon,KB1DC

From barry at hausernet.com Sun Aug 28 21:44:38 2005
Subject: [R-390] backlash on R390A

Hi Jon

I might know a thing or three about ATC -- I took over the R-390A (and some other type) parts inventory on consignment. While you can order through the ATC website, better to just directly email me as it avoids delay.

The RF decks are as pictured -- missing all the coils, slug racks and a lot of other parts, but virtually all the gears and clamps are there. Some have a few slugrack springs still hanging on. They also have (mostly) good Veeder-Root counters, however the thin aluminum masks are a bit mangled on most all of them.

I doubt if either the missing Oldham coupler spring or slugrack spring has anything to do with the backlash you previously described. The spring on the coupler just takes up some residual slop between the gear train and the PTO and is basically an anti-rattle spring. The missing spring on one slug rack might tend to cause that slug rack to hang up on the downstroke, but unlikely to be the culprit. If anything the backlash originates from the pull of the backlash springs, so one less ...?

Did you check for a broken or loose gear clamp as I/we described?

You have to work the KC through full cycle and watch two or three things at a time as you do, especially at the points where that backlash occurs. I think what you told us was that the KC knob actually spins back a bit, right? That's more of a recoil (as in recoil starter) than backlash, which is a slight creeping off the set frequency. Barry

From ba.williams at charter.net Sun Aug 28 21:49:07 2005
Subject: [R-390] Gulf Coast?

> Yep, Got my family off to Florida to safety. writes: > Looks like a big one this time!

Les,

Hope you get this before the power goes out. Take care of yourself. We are breathing a gigantic sigh of relief for our area, to be honest about it. The radar shots and predictions look very bad. I was here in 1995 when Opal went through here and it was bad enough then. This one is going to make Opal look like nothing. Let us hear from you when you are able. Barry

From jonklinkhamer at comcast.net Mon Aug 29 07:44:03 2005
Subject: [R-390] backlash on R390A

Hi Barry,

Yes you're right it's more of a recoil as you described. I have not checked for broken clamps but I will. I may have to clean a little there is lots of dry up grease. I have a busy schedule this week but hope to get back on it soon. Will definitely use your procedure and see what turns up.

As far as the RF Deck. If you let me know the shipping cost and address I'll get something out this week to you for sure. Thanks for all your help and the groups, Jon,KB1DC

From stevebyan at mac.com Mon Aug 29 09:03:35 2005
Subject: [R-390] 16kHz filter and SWL/BC listening

wrote: > To my ear when listening to SW and BC broadcasts (voice, music, > whatever) > the 16kHz filter setting always sounds pretty much just like 8kHz just with more hiss.

On SW and BC broadcasts, the transmitted signal is bandwidth-limited, so there isn't much more bandwidth to let through with the 16 KC filter, especially if the 8 KC filter is tuned off to the side a bit. On SW broadcast, you're lucky to get 5 KC of transmitted bandwidth. Regards, -Steve

From stevebyan at mac.com Mon Aug 29 09:08:27 2005
Subject: [R-390] zinc chloride NO NO

wrote: > I have received the answer I was hoping not to get. The paste flux I > used on the solder wick is BAD for my radio. I only used it in a few > places and I think I can remember which ones... Is there anything I > can do to salvage what I have worked on?

Clean off the greasy residue with lacquer thinner, then neutralize the acid residue with a paste of baking soda and water, then flush with lots of clean water? Worth a try, anyway.

From tshoppa at wmata.com Mon Aug 29 09:16:43 2005
Subject: [R-390] 16kHz filter and SWL/BC listening

wrote: wrote: the 16kHz filter setting always sounds pretty much just like 8kHz just >> with more hiss. > On SW and BC broadcasts, the transmitted signal is bandwidth-limited, > so there isn't much more bandwidth to let through with the 16 KC

Good point, Steve.

I suppose the 2/4/8/16 kc bandwidth progression represents somebody at Collins liking powers-of-two. (Note the 1-2-4-8-16 Mc bandswitching...) For my usual purposes of CW listening it'd be nicer to have the mechanical filters at 1/2/4/8 but I'd need a time machine to fix that!

Do any other receivers have the power-of-two progression in IF filters? Almost all the other ham, commercial, ex-military radios I use have less mathematical and more one-for-each purpose approach, e.g. narrow for CW, wider for SSB, widest for AM, with maybe an option for an additional one for somebody who likes really-wide AM or really-narrow CW. Tim.

From tshoppa at wmata.com Mon Aug 29 09:22:01 2005
Subject: [R-390] zinc chloride NO NO

suggested: > Clean off the greasy residue with lacquer thinner, then neutralize the > acid residue with a paste of baking soda and water, then flush with > lots of clean water? Worth a try, anyway.

OK, a stupid chemistry question (I was trained as a physicist, I deal with falling objects, not with stinky chemicals!): Zinc Chloride must be a salt. Why is it called "acid paste flux"?

Chloride probably isn't the nicest thing to metals either.

Does Zinc chloride magically turn into hydrogen chloride (hydrochloric acid) when heated in use/exposed to moisture maybe?

I do agree with the other posters that flux pens/flux for SMD soldering is a really magical stuff. Tim.

From paul at pdq.com Mon Aug 29 09:25:03 2005
Subject: [R-390] oldham springs, long screwdrivers

The oldham coupler springs should be available in a real hardware store, as are the long phillips

screwdrivers needed to get behind the RF deck. Check your local "real" hardware stores! (i.e. avoid Lowes, etc).

The only tools that are odd are the spline wrenches, which you can readily find by searching <<http://www.mcmastercarr.com>> for the 6 spline .096 inch wrench. Paul

From tshoppa at wmata.com Mon Aug 29 09:36:54 2005
Subject: [R-390] Oldham and other springs

By my measurement the Oldham coupler springs are 1/8" diameter, 0.016" diameter wire, and about 0.65" or 0.75" long unextended between hooks.

The springs used for the split gears are 1/8" diameter, 0.016" diameter wire, and about 3/8" long between hooks unextended.

The springs used to pull down the slug racks are 3/16" diameter, 0.020" diameter wire, and about one and a half inches long between hooks unextended.

These are all fairly vanilla springs, with the exception for the split gear springs which are a bit shorter than you'll find in standard packages.

It is fairly easy to wind your own springs or take a long spring and make it shorter. See for example <http://home.earthlink.net/~bazillion/intro.html>

I think the original R-390A springs must've been stainless if you want to be really picky. Tim.

From sdaitch at ibb.gov Mon Aug 29 09:38:02 2005
Subject: [R-390] 16kHz filter and SWL/BC listening

I can only discuss IBB transmitters, not other SW broadcasters, but our transmitters will all pass 5 kHz audio, unless there is something wrong with them. Our proof of performance requirement for MW and SW transmitters is:

"Audio Frequency Response - The audio frequency response of the transmitter shall be measured over the range of 100 Hz and 5000Hz. Within the range, the level of the demodulated test tone shall not deviate more than +/- 1.0 dB with respect to its level at 1 kHz and 85% negative modulation of the carrier."

In fact, the Orban audio processors will allow up to 20-dB boost at 5 kHz, although we don't run that amount of high frequency boost.

In the "old" days, when we had limited bandwidth audio circuits, i.e. phone lines or microwave circuits, those circuits, too, had a minimum of 5 kHz bandwidth. Today, IBB uses satellite systems for program distribution and almost all the circuits have at least 15 kHz bandwidth. It is overkill for HF and MW broadcasting, or course. In many cases we are also using FM transmitters, and we need the extra audio bandwidth for technically quality programming.

Your observation of simply more hiss is essentially correct. In theory, there should be a slightly better audio response in the 16 kHz position, as the 8 kHz filter should roll off transmitted audio in the 4 to 5 kHz range, which the 16 kHz filter should pass.

I think if you look at the historical use of the R-390 family, the 16 kHz filters were designed when the receiver was used for 4 channel point to point communications networks, which required the full 16 kHz. 73 Sheldon WA4MZZ

From stevebyan at mac.com Mon Aug 29 11:00:06 2005
Subject: [R-390] 16kHz filter and SWL/BC listening

wrote: > I can only discuss IBB transmitters, not other SW broadcasters, > but our transmitters will all pass 5 kHz audio, unless there is > something wrong with them.

Sorry, I shouldn't have made unwarranted aspersions. I was thinking of the tropical band broadcasters that I usually listen too, and situations like Egypt's english language programming, which is famous for its muddy audio. The major broadcasters have well-maintained equipment and better audio. Regards, - Steve

From dmetz at ntelos.net Mon Aug 29 11:35:36 2005
Subject: [R-390] 16kHz filter and SWL/BC listening

wrote: wrote:>>To my ear when listening to SW and BC broadcasts (voice, music, whatever) >>the 16kHz filter setting always sounds pretty much just like 8kHz just >>with more hiss.

If my recollection is right, the reason for the 16 KC was to copy the mulit-channel broadcast which had 16 channels that could be broken down in the "black" and then sent to individual TTY decryption machines such as the KWR 37's. Each channel could have it's own keycard depending upon the use, Hicom, Intelligence, broadcast, supply, security group, etc. Never used for voice, only data. dave

From stevebyan at mac.com Mon Aug 29 13:09:38 2005
Subject: [R-390] 16kHz filter and SWL/BC listening

wrote: For my usual purposes> of CW listening it'd be nicer to have the mechanical filters at> 1/2/4/8 but I'd need a time machine to fix that!

Dallas Lankford had a series of articles (I think in Hollow State News, but maybe they were in the NRC's DX News) on replacing the 16 KC filter with something more useful. I think he tried some 6 KHz ceramic filters and the new 6 KHz Collins torsional filter. Maybe you could do something similar with a Rockwell/Collins 500 Hz or 300 Hz mechanical filter. (They don't seem to offer the 1.2 KHz torsional filter as a stock item anymore.) Regards, -Steve

From KA4PRF at peoplepc.com Mon Aug 29 13:31:11 2005
Subject: [R-390] Off topic again - Sorry

Hi all,

I like to fiddle around with projects as I listen to my R-390A. In days past if I wanted to etch a circuit for a project, I could go to Radio Shack and purchase a blank circuit board and some etching solution. It seems that these materials are no longer available. I even tried Mouser. So I have given up on making my own circuits. What I'd like to do now is find a commerical entity that does this type of work, but

someone who will understand that my circuits are for personal use. Does anyone out there have a source they can pass along? I'd appreciate it. Chuck Bolland ka4prf@peoplepc.com

From n4buq at aol.com Mon Aug 29 14:34:04 2005
Subject: [R-390] Off topic again - Sorry

I could go to Radio Shack and purchase a blank circuit board and some etching solution. It seems that >these materials are no longer available

These folks do that sort of thing. <http://www.farcircuits.net/index.htm> Barry - N4BUQ

From roy.morgan at nist.gov Mon Aug 29 14:41:56 2005
Subject: [R-390] Off topic again - Sorry

wrote: >...blank circuit board and some etching solution. It seems that >these materials are no longer available.... I'd like to do now is >find a commerical entity that does this type of work... Does anyone out there >have a source they can pass along? I'd appreciate it. Chuck, Copy to Gil Smith

There are many places that do one-off and low number runs of circuit boards.. they accept digital files of the design and the whole thing is automated.

I don't know any particular places, but I know a fellow who does. He has made some projects for the Teletype guys on the greenkeys email list. He is: gil smith <gil@vauxelectronics.com>

It may be that his company does this, but in any case he's familiar with the whole process of prototype and small runs of circuit boards, and a very helpful fellow.

Also: Far Circuits: <http://www.farcircuits.net/> "Welcome to FAR Circuits! FAR Circuits is exclusively a manufacturer of Printed Circuit Boards for electronic projects that are used by the Amateur Radio and electronic hobby enthusiast. We supply boards in any quantity, but are geared toward low volume and individual circuit board users. "

(These guys have a wide array of boards available with article reprints for many many projects that have appeared in ham and electronic magazines...) Roy

From jpl15 at panix.com Mon Aug 29 14:46:08 2005
Subject: [R-390] Off topic again - Sorry

**www.expresspcb.com Have used them commercially and privately - very nice place, also they have thier own (free!) CAD software - once your design is finalized, press a button on the keyboard and your finished boards arrive a few days later, ready to be stuffed and soldered.
Cheers John KB6SCO**

From future212 at comcast.net Mon Aug 29 14:54:04 2005
Message-ID: <001601c5accb\$072d1220\$61c3b643@dw2q2am1a08eq5>

Chuck,

Radio Shaft still sells blank circuit boards and etchant. They have a complete kit for \$15.49 with everything needed for simple boards. You are not going to make dense layered boards, but for most one off type circuits it will work. The link is
<http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=&product%5Fid=276%2D1576>

Hopt this helps. 73's DW Holtman WB7SSN

From future212 at comcast.net Mon Aug 29 14:56:39 2005
Subject: [R-390] Off topic again - Sorry

Hello,

I fully agree with John, the Express PCB systems works well. The software is very user friendly. You can check the price at anytime in the development of the board, it directs you to their site. 73's DW Holtman WB7SSN

From KA4PRF at peoplepc.com Mon Aug 29 14:02:49 2005
Subject: [R-390] Off topic again - Sorry

Thanks everyone. There should be someone in your lists that I can use. I am not looking for anyone elaborate. Chuck

From tshoppa at wmata.com Mon Aug 29 15:06:00 2005
Subject: [R-390] Off topic again - Sorry

> find a commercial entity that does this type of work, but > someone who will understand that my circuits are for > personal use. Does anyone out there > have a source they can pass along? I'd appreciate it.

I've used ExpressPCB <http://www.expresspcb.com/> on several occasions and am very satisfied. They even give you for free their PCB layout software - which isn't the best in the world (no autorouting etc.) but it's more than adequate for what I do. Tim.

From N8LKA1 at peoplepc.com Mon Aug 29 16:02:24 2005
Subject: [R-390] monitor scope

Ok here is the deal,I just got a r390a and would like to hook up a monitor scope to it so I can look at the incoming signals, the scope is a yaesu yo 301. Thanks

From shoppa_r390a at trailing-edge.com Mon Aug 29 17:25:49 2005
Subject: [R-390] monitor scope

> hook up a monitor scope to it so I can look at the incoming signals, the scope is a yaesu yo 301

Most straightforward way is probably to hook the IF out to the y axis.

To the x-axis you can hook up either a 60Hz source (I think the yo 301 has this as one of the x-axis selections) or hook it to the 600 ohm line output. Not sure exactly why you'd want to do the latter but you ought to see the modulation trapezoid if you do.

There's probably some way to hook up a sweep generator and detector to turn the yo-301 into a spectrum scope at the IF frequency but it takes some electronics.

Hooking the R-390A, a sweep generator, and the scope together would be a handy way to do IF and some RF alignments. Tim.

From KA4PRF at peoplepc.com Mon Aug 29 19:16:37 2005
Subject: [R-390] Off topic again - Sorry

Tim,

I down loaded their software and have been trying to layout a schematic. Don't think it's that easy. But I will keep trying for a little while more. Chuck

From jpl15 at panix.com Mon Aug 29 20:44:13 2005
Subject: [R-390] Re: CAD Programs

wrote: > I down loaded their software and have been trying to layout a schematic. > Don't think it's that easy. But > I will keep trying for a little while more.

As with a lot of electronic CAD software (of the simpler kind anyway) it helps immensely to have a good idea in mind (or much much better, on paper) of what you want to do first - then use the ePCB CAD tools to refine that.

Have a schematic done already - one that you've "dry tested" and are pretty sure is going to work. Then, try to visualize the layout of the parts. Then it might be easier to make some sense of the program.

Note that, as with every EE CAD proggy I've used, from ACNAP to ProTel and onward - there's always a very frustrating, steep learning curve to get over.

But once things 'click' - you might find it quite enjoyable. Do give it a bit of a chance to become more familiar - especially if this is your first foray into Desktop Design. And especially if you're an Old Fart like me, whose brain left the cranium some years ago, never to return... ;} Cheers John KB6SCO

From future212 at comcast.net Tue Aug 30 09:47:57 2005
Subject: [R-390] R-390A Panel Lights

Hello,

What are the lights for the cover to the Mechanical counter on the front panel of a R-390A? Thank you for your help. 73 DW Holtman WB7SSN

From tshoppa at wmata.com Tue Aug 30 10:01:59 2005
Subject: [R-390] R-390APanel Lights

> What are the lights for the cover to the Mechanical counter on the front panel of a R-390A?

Qty 2, #328 bulbs, 6V, 0.20 Amps.

From saglek at videotron.ca Tue Aug 30 10:49:36 2005
Subject: [R-390] R-390APanel Lights

Mouser has them. I used #381, same voltage and current, Life (MTBF) is 20,000Hrs. Slightly less light intensity. The #328 has Life 1,000 Hrs. Al

From Flowertime01 at wmconnect.com Tue Aug 30 15:53:53 2005
Subject: [R-390] After The Storm

Les,

Is all your estate still within the property lines? I sure hope you did not loose anything. Roger L. Ruszkowski

P.S. I do not know how many other of you R390 fellows live in these storm paths, but I pray that all of you who do, survive dryly and in good health.

From brookbank at triad.rr.com Tue Aug 30 15:57:43 2005
Subject: [R-390] After The Storm

> Is all your estate still within the property lines?

I second that....Pat

From llgpt at aol.com Tue Aug 30 16:37:19 2005
Subject: [R-390] After The Storm

Yeah, got very lucky! Only lost a few shingles, no leaks, no water damage. Lost two trees, a 80+ ft. pine in the back yard, it landed on a 15 ft. smaller tree. The house next door lost most of the plywood roof sheathing and all the shingles, go figure..... It looks like a bomb exploded in some areas. Les

From barry at hausernet.com Tue Aug 30 17:07:56 2005
Subject: [R-390] After The Storm

What a relief -- I was afraid to ask.

Very upset about N.O. -- one of my favorite places. Big mess. That really tars it -- downtown mostly

spared, but now Lake P. is spilling in. Can't they use some of those heavy lift helicopters and drop some big pieces of stuff in there, like cargo containers filled with something? Or some kind of empty caissons, such as were used to make those temporary docks at Normandy and then fill'em and sink 'em? Seems it should be possible to plug that leak or minimizing it. Now they have to evacuate all the rest of the NO folks. No more beignets 'n coffee at Cafe duMonde for a while. <sigh> Not to mention points East. This is bad. Very very bad.

The news keeps getting worse and worse and they still can't get into some areas - combination of flood and non-flooded areas in the way so can't do it with boats and can't do it with ground vehicles. I would hope they're deploying amtracks -- or 'copter lifting boats into the areas. Are there other list members in harm's way? Take care. Barry

From courir26 at yahoo.com Tue Aug 30 20:25:07 2005
Subject: [R-390] After The Storm

Les, Your house is very stud-like surviving so many storms. Hope the bottles didn't get broken!

Non event here. My office in N.O. is closed, basically moved to here. Tom Lafayette

From jlkolb at jlkolb.cts.com Wed Aug 31 00:17:11 2005
Subject: [R-390] monitor scope

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

From rocket_no9 at yahoo.com Wed Aug 31 00:39:09 2005
Subject: [R-390] Cosmos PTO and compensator stack ...

Had an interesting (and fun) afternoon today...

The Cosmos PTO on my R-390A was binding slightly. Symptoms were squeaks coming from inside PTO and more effort needed to adjust KC knob.

This was the first time I've attempted this procedure. I read everything I could find on PTO's including Jim Miller's excellent overview. (Thank you sir)

I tore PTO down to it's two separate halves. I made notes as to number of threads visible on main shaft before further disassembly. I tightened and lubricated where needed. With PTO back in, binding and noise is gone and it's easier than ever to twist KC dial...

This brings me to my question. When I had the PTO in two halves I stupidly <REMOVED> compensator stack without taking note of it's exact orientation on the shaft. This stack has 48 adjustment screws and 12 empty holes (no screws)

Before I tackle adjusting PTO's linearity, how do I know compensator stack is installed properly?

I followed Mr Millers suggestion of locating 15th set screw (from clockwise "end" on stack) in

adjustment window. Radio is running fine tho' readout accuracy is maybe 2kc +/- MORE off than I'm accustomed to.

Please pardon my long-winded-ness and the fact that I'm not so clear here, I'm really on the curve!
Thanks in advance for any help. Best, Mike

From ToddRoberts2001 at aol.com Wed Aug 31 00:47:59 2005
Subject: [R-390] Unusual Facility in UK

I was wondering if any other members of the r-390 group saw the picture in the Listeners Emails column in the Art Bell Coast To Coast AM website recently? A listener sent in a satellite picture of an AN/FLR-9 "Elephant Cage" HF DF antenna array and was wondering if any readers might know what it was. I was one of about 60 replies he got that correctly identified it as one of the large HF DF antenna arrays. It is a nice overhead picture showing the array at RAF Chicksands looking kind of like a large round clock face from above. It turns out the man who sent in the picture already knew what it was, he was just testing Art Bell's fans to see what kind of crazy responses he might get! He thought he would get emails from people telling him it was a landing site for UFO's! He said he was surprised and very impressed there were so many knowledgeable people out there who knew what it was. I think there are several members of this group who have actually operated an Elephant Cage array? I would love to hook up an R-390A to one of those arrays and sit down for a couple of hours of nice AM BC band DXing! You can still see the picture for the next day or two on Art Bells website. Look in the column under Listeners Emails. 73 Todd WD4NGG <http://www.coasttocoastam.com/>

From odyslim at comcast.net Wed Aug 31 07:49:21 2005
Subject: [R-390] Unusual Facility in UK

My father was an HF Dfer for the army for many years. I remember him telling me of such arrays. He would travel to remote sites all over the world and help organize the installation of them. They also used specially modified R391's that could be tuned from remote transmitters so the site could be unmanned. Scott W3CV

From n4buq at aol.com Wed Aug 31 09:43:12 2005
Subject: [R-390] Unusual Facility in UK

I think the link is: <http://www.coasttocoastam.com/gen/page1076.html> Barry - N4BUQ