R-390 Reflector March ’06 In Process

From: "Dan Merz" <mdmerz@verizon.net> Date: Tue, 28 Feb 2006 09:00:53 -0800
Subject: [R-390] 6BJ6/6BH6 sub

Hi, sometimes luck is the right kind. After being on for a few hours, my 390 suddenly went dead, no signals and little indication that it was still on. I just didn't feel like moving it and groaned a bit at the prospect. I pulled the top cover, and the tubes appeared lit and I fingered a few tubes with high hopes that it would show some response. The i.f. tubes seemed warm but I could touch them. I pulled a 6BJ6 i.f. tube out thinking I would put a tube extender in and see if there was hv. Without the extender, I measured the filament voltage on socket pins 3/4.... Nothing. As I recall, with the tube pulled it should have been 26 volts ac. I pulled the tube next to it and put one of the tubes back in the first socket I pulled. The voltage on pins 3/4 there was well over 20 volts ac. I measured the resistance between pins 3/4 on the pulled 6BJ6 and it was open, a dead tube. I couldn't find a spare 6BJ6 so I stuck a 6BH6 in per my Rider's sub book. The set came to life and operated much as before. My good luck was: the first tube I pulled was a good one and the series filament string was still affected by the bad one that was still in the radio. And then by dumb luck, the second tube I pulled out was the bad one. And then of the two tubes I had out, I by chance put the good tube back in before I thought to measure the pins on both tubes I had out. This made my day. In hindsight, I should have just measured pins 3/4 on the tubes themselves as I pulled them out since I had a pretty good idea one of them in that filament string was dead. I surmise the radio will not operate with good response to strong signals if 6BH6's are sub'd for all the i.f. 6BJ6's, since a 6BJ6 is remote cutoff and the 6BH6 is sharp cutoff. But will one replacement as I have done really matter much? I'll do one more search for a 6BJ6 today and can probably get some at a hamfest in a couple of weeks. I seem to recall depleting my supply when I rejuvenated the 390 about a year ago and I seem to have a lot of 6BH6's. Dan.

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Tue, 28 Feb 2006 13:45:20 -0500
Subject: Re: [R-390] 6BJ6/6BH6 sub

> I surmise the radio will not operate with good response to strong signals if > 6BH6's are sub'd for all the i.f. 6BJ6's, since a 6BJ6 is remote cutoff and > the 6BH6 is sharp cutoff. But will one replacement as I have done really > matter much?

In both the R-390 and 390A, there are so many stages of conversion and IF gain that in general the properties of any one stage don't dominate the whole gain factor.

Compare with much thriftier designs where there's a RF amp, a mixer, then two or maybe three stages of IF gain.

Depending on what stage you subbed your 6BH6 into you might see some distortion especially as AGC action kicks in and it gets driven to cutoff.

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A previous posting by Dave Wise talked about subs for 6DC6, which has the same pinout as the 6BJ6. By the tabulation it looks like 6BH6 for 6BJ6 is a pretty good match except for cutoff

characteristic.

The tabulation was:

7CM pinout (same as 6DC6):

6AS6 (way over max ratings)
6BH6 (low gm, too sharp)
6BJ6 (low gm, too remote)
6BZ6 (8000, 19V=3D50umho. Runner-up to 6DC6 in Cost Reduction Report.)
6CB6 (8000, 6.5V=3D20uA)
6CF6 same as 6CB6
6DE6 (8000, 9V=3D20uA)
6DK6 (9800, 6.5V=3D20uA. Used in large numbers in Tek 500-series scopes.)
8136 same as 6DK6
6EW6 (14000, 3.5V=3D20uA)
6GM6 (13000, 15V=3D60umho)
6JH6 (8000, 19V=3D50umho)
6JK6 (15000)

7EN pinout (same except internal shield connected to cathode instead of G3):

6DT6
6GX6
6GY6
6HZ6

These tubes are designed so G3 can be used as a second control grid. All have lower gm than the 6DC6. I didn't write down their cutoffs. I think they're all sharp.

From: "n4buq@knology.net" <n4buq@knology.net> Date: 28 Feb 2006 19:04:28 -0000
Subject: Re: [R-390] 6BJ6/6BH6 sub

wrote : > > I surmise the radio will not operate with good response to strong signals if 6BH6's are sub'd for all the i.f. 6BJ6's, since a 6BJ6 is remote cutoff

Okay, now it's time to educate me on this issue. If the 6BH6 is a remote cutoff tube, then it won't go into cutoff as "early" as the sharp cutoff 6BJ6, right? If that's the case, then why will you see distortion on strong signals with the remote cutoff tube? Barry - N4BUQ

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Tue, 28 Feb 2006 14:23:37 -0500
Subject: Re: [R-390] 6BJ6/6BH6 sub

> Okay, now it's time to educate me on this issue. If the 6BH6 is a remote cutoff tube, then it won't go into cutoff as "early" as the sharp cutoff 6BJ6, right?

Other way around: 6BJ6 is remote cutoff, 6BH6 is sharp cutoff.

The 6BJ6 was the original IF tube. 6BH6 is the sub.

> If that's the case, then why will you see distortion on strong signals with the remote cutoff tube?

Actually either will distort with very strong signals. And when you're subbing around it's likely that biases etc will be quite unoptimal for critical use. Tim.

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Tue, 28 Feb 2006 14:26:52 -0500
Subject: [R-390] Shielded twinax for antenna

I've now got a nice loop antenna in the attic. Right now I use a balun and 50-ohm coax. But... If I wanted to cable it to the twinax jack on the back of my 390A what is a good cheap readily available cable that's a good match? Should I start hanging out IBM mainframe installations looking for a hundred feet of their twinax? Tim.

From: "n4buq@knology.net" <n4buq@knology.net> Date: 28 Feb 2006 19:52:17 -0000
Subject: Re: [R-390] 6BJ6/6BH6 sub

Okay. I had them reversed. I thought that didn't make sense, but now it does. Thanks! Barry

From: Masters Andy <nu5o@yahoo.com> Date: Tue, 28 Feb 2006 14:55:09 -0800 (PST)
Subject: [R-390] 5 khz difference?

Good evening. I have an EAC-67 series R-390A that I am working through and learning about R-390A's in the process.

Using a recently cal'd counter, I was able to set my BFO for top dead center on 455khz and it tracks +/- 3 khz nicely as indicated by the ticks on the panel. I also adjusted the crystal calibrator by counting it on frequency at 200 khz. It stays put rather nicely as well.

Having done this, I then went through all the bands to have a look at dial calibration and have discovered that .5-8.0 mhz, the dial reads 5 khz low on each band but on the higher bands it is relatively dead on. (or it might be said it can be set dead on using the Zero Adjust for the lower freqs and is actually 5khz high on the higher ones). In any event, what gives here and why the disparity? I first thought it might be my 17 Mhz oscillator. When I count the 17 mhz oscillator it indicates it is 4.790 khz low on all bands .5 through 8 mhz. After 8 mhz, it changes, but I can't get an accurate read on its error. I don't see a way to "warp" the 17 mhz crystal on but I am not convinced that is the problem or that there is only one problem. Any suggestions? Thanks, Dutch Masters NU5O

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Wed, 01 Mar 2006 07:57:16 -0500
Subject: Re: [R-390] 5 khz difference?

> Having done this, I then went through all the bands to have a look at dial calibration and have discovered that .5-8.0 mhz, the dial reads 5 khz low on each band but on the higher bands it is relatively dead on. (or it might be said it can be set dead on using the Zero Adjust for the lower freqs and is actually 5khz high on the higher ones). In any event, what gives here and why the disparity? I first

thought it might be my 17 Mhz oscillator. When I count the 17 mhz oscillator it indicates it is 4.790 khz low on all bands .5 through 8 mhz.

That certainly points at the 17Mc oscillator. I can't blame you for wanting it to point somewhere else, but it's hard to avoid...

> After 8 mhz, it changes, but I can't > get an accurate read on its error.

Check the voltages etc. around V207, the 17Mc oscillator Pin 6 is supposed to get regulated +150V through R210 (to make a nominal 77V on the screen) when you are below 8Mc. Above 8MHz it looks like it floats (DC) but is grounded to RF. When tuned above 8Mc this oscillator is not supposed to be oscillating, probably the reason why you can't read it so well, but...!

Check bypass caps C275 and C326 (screen grid) and bypass cap C328 (plate). There has been some argument about what C275 is supposed to be, in my RF decks it happens to have been a 0.033uF black beauty, but what they probably *meant* to put in was a 5000pF or 3300pF disk. The Y2K manual in different places names all 3 values, obviously put together by a committee :-).

Check resistors R211, R210, and R207 for value and charring. It is very common for especially the plate resistor to have gone up in value by hundreds of percent, and this is generally not good. There was a sub for one of these resistors to reduce the amplitude of oscillation (Tempest it was later called) and if you see this mod made you may want to reverse it.

Check the peaking of T207, part of the plate tank. I don't see an official "tune-up" procedure for this but having the plate tank out of whack isn't good for an overtone oscillator.

> I don't see a way to "warp" the 17 mhz crystal on but I am not convinced that is the problem or that there is only one problem.

All of my suggestions are ways of finding the problem in something OTHER than the 17Mc crystal, since this is the hardest crystal to come by!

It won't hurt to open the crystal oven can and make sure that the crystal is seated reliably etc. You might even try turning on the ovens and see if the frequency shifts the right way! Again, grasping for straws so you don't have to find a replacement crystal... If anyone has ordered a "new" 17Mc crystal from one of the custom crystal makers I'd be curious what its parameters are. Tim.

From: "Dave Merrill" <r390a.urr@gmail.com> Date: Wed, 1 Mar 2006 07:26:15 -0600
Subject: Re: [R-390] 5 khz difference?

Fair Radio has 17 MHz crystals - bought some myself in October. Talk to Gary, their R-390 tech.

From: "Dave Merrill" <r390a.urr@gmail.com> Date: Wed, 1 Mar 2006 09:02:37 -0600
Subject: Re: [R-390] 5 khz difference?

wrote: wrote: > What type of crystal did they send you: CR-36 or CR-27?

You would make me get out the magnifier! All are marked: 17.00000 MC CR-36A/U CZX

Price was $10 ea or 5/$35, same as all their R-390x crystals. Gary took these out of his stock on the bench as I stood there.

From: Michael Melland <w9wis@yahoo.com> Date: Wed, 1 Mar 2006 07:38:51 -0800 (PST)
Subject: [R-390] R-390 Questions - Comments

Well my beloved Motorola R-390A station now has a mate. I traded an amplifier I had for a nice Motorola R-390 from the 1951 contract. The tag indicates it was a "Motorola Made For Collins Radio" and the s/n is 4449.

It works fine as it is but I'll have some cosmetic work that needs doing and an alignment to fully restore it. The previous owner said the audio was a bit low but I have it hooked through a Hammond audio 600/8 transformer and it sounds fine to me.... wonder if he hooked it direct to an 8 ohm speaker and had low audio due to that...

It is sans a number of tube shields and the top and bottom covers. Does the R-390 use the same top and bottom covers as the R-390A ? Who sells R-390 covers if not... the tube shield cans I can find. Also... any source for the tube pullers or tools? The pin straighteners are present. And, the proper power cord is provided... 3 wire ?

The only damage to speak of is a "dent" in the right rear corner that bent the square bracket like piece on the corner.... the side panel is only slightly bent and I can repair that... the square piece on the rear appears to be replaceable... anyone have a spare ?

I had my choice of another R-390A or this R-390 and wanted one of each ... I'm glad I chose the R-390. While it sure is "similar" to my R-390A and the lineage is unmistakable... it's really quite different.

Any suggestions or restoration tips are appreciated Mike, W9WIS

From: "Fred Hambrecht" <w4jle@w4jle.com> Date: Wed, 1 Mar 2006 13:37:53 -0500
Subject: [R-390] Non rare, not improved, garden variety Capehart R-390A to swap.

I have a Capehart R-390A for swap. First of all what it is not! It is not an improved Motorola, it has no super duper secret special Collins PTO.

I have spent no time in restoring it, and have spared every expense in getting it ready.

It is not some blue stripe junk and has never been on E-Bay.

Now for what it is, a solid old Capehart R-390A with a Cosmos PTO. It has no covers and is relatively clean.

It works, but probably as old as it is needs a few hollow state replacements and alignment to Operate properly. I have high resolution pictures for your perusal.

The prices today are absolutely crazy; ergo I choose not to put a price on it. I am open for swaps of any type of ham gear. Transceivers, amplifiers, Pactor capable TNC, old Volkswagens, unused underwear or

what ever. However nothing that requires feeding will be considered!

If interested, drop me an e-mail at w4jle@w4jle.com and I will send you more pictures than your eyeballs can stand.

If this is not traded, it will NOT be put on ebay so some smarmy guy can screw the public with it.

From: Mark Huss <mhuss1@bellatlantic.net>
Subject: Re: [R-390] 5 khz difference?

Depends on the age of the crystal. I have an R-390A with an origional (1956) 17 MHz crystal. With an average aging rate of 5ppm a year on a 50 year old crystal, 5 khz off is close to the specified aging rate. In other words, if the unit was made before 1960, you are probibily talking about normal operation. Younger than that, there is probibily a little contamination, increasing the frequency offset. In my receiver, all the crystals are about 2 to 4 kHz low, except for three that were probibily replaced during it's life.

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

From: "Dan Merz" <mdmerz@verizon.net> Date: Wed, 01 Mar 2006 10:57:46 -0800
Subject: RE: [R-390] R-390 Questions - Comments

Mike, I put a small fan on the left side of mine near the regulator tubes, to get rid of some of the heat, mounted on a plate externally so easily removed and with no permanent mod to receiver. This was ala design of Roy Morgan. Like you, I used a small external transformer to match speaker to the 600 ohm output impedance. I use 12BW4's in place of 26Z5 rectifiers (slight mod required),and I used 12BH7 in place of the ballast tube (1 innocuous jumper required). These last two tube subs were done because I didn't have the original tubes and couldn't find them at reasonable price. The other addition I made was an outboard product detector, easily removed with no receiver mod and the set can be operated per original setup with single switch on the outboard unit. This makes for better ssb agc performance, but is a refinement that satisfied my curiosity about such things. I almost always use it however because it does improve intelligibility somewhat on ssb. I too could not resist having the 390 when I encountered the set at a hamfest about a year ago at a reasonable price, even though I already had a nice 390a that I'd put a 390 i.f. into, happy listening, Dan.

From: Roy Morgan <roy.morgan@nist.gov> Date: Wed, 01 Mar 2006 14:28:38 -0500
Subject: RE: [R-390] R-390 Questions - Comments

wrote: >Mike, I put a small fan on the left side of mine near the regulator tubes, >to get rid of some of the heat, mounted on a plate externally so easily >removed and with no permanent mod to receiver. This was ala design of Roy >Morgan.

R-390/URR folks,

That fan plate is shown at: <http://home.comcast.net/~roysmorgan/ba/FanPlate.html> One picture includes a ruler so you can make one yourself easily.

As my notes tell, the tubes melted speaker wire insulation with no fan, but I could put my fingers on the tubes with the fan.

I have yet to work on a fan inside the radio. I think there is room to put a possibly smaller fan fastened to the front frame near the B+ filter cap with no holed drilled. It would be powered from inside the radio and not need separate turn on/off. Roy

From: Bonddaleena@aol.com Date: Wed, 1 Mar 2006 15:23:38 EST
Subject: Re: [R-390] R-390 Questions - Comments

writes: wrote: >Mike, I put a small fan on the left side of mine near the regulator tubes, >to get rid of some of the heat, mounted on a plate externally so easily>removed and with no permanent mod to receiver. This was ala design of Roy>Morgan.

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From: Bonddaleena@aol.com Date: Wed, 1 Mar 2006 15:39:54 EST
Subject: Re: [R-390] Another "Close to Perfect" R-390a

writes: No thin line from my experience. After one bad experience with Martyn that I attributed to his ignorance of things R-390, I tried to be sure of what I was getting by asking several specific questions prior to bidding on another Martyn item. When I received the item, it was clear that Martyn has no concept of what is truth is- he boldly lied in answering my questions. The only reason I didn't post a negative was that he threatened to retaliate. Deal with him at your own risk. Ed

Here's a simple solution to the RM problem. Everyone on this list write tothe Kentucky Revenue department and suggest they look at RM's dealings on ePay, er, eBay. Wanna bet he pays ZERO taxes on all that income he enjoys? ron N4UE

From: Bonddaleena@aol.com Date: Wed, 1 Mar 2006 15:56:33 EST
Subject: Re: [R-390] Another "Close to Perfect" R-390a

writes: Just saw another R-390A -- item 5872325416 -- from you know who.

The way to tell Martyn is lying, is to see if his lips are moving! ron (I've been to his 'shack') N4UE

This is an interesting radio, as it is described as an "improved Motorola version " but bears a Capehart

plate.

Now my question. Is there anything unique about the PTO in this radio which is described as "the exceptional Collins PTO which is very rare to find as they were only usually put in to special one off receivers built to a higher spec receiver for a special purpose" ?? It looks like the regular R-390A PTO, but maybe I am missing something as I only have one radio? I think I know the answer, but I am always willing to learn something new. 73, Fred Bray W6WAW

From: Mark Huss <mhuss1@bellatlantic.net> Date: Wed, 01 Mar 2006 17:18:36 -0500
Subject: Re: [R-390] Another "Close to Perfect" R-390a

According to a conversation I had many years ago with the son of one of the Engineers that worked on the R-390 and R-390A design, there was indeed something 'Special' about the Original 'Collins' PTO. From what I remember, we had an R-390A with a PTO that was out of adjustment range. It was a low serial number PTO made by Collins, the first time I had seen one. I had decided to try repairing it as the School was not exactly high on the priority list for spare parts. That is when this fellow told me about his history, and the solution to the problem. I.E., take a half turn off the small coil in the PTO. The cause, according to him, was the material used for the large coil form. It changed dimensions with age and heat, causing the inductance to change. He said his dad told him about it when he joined. Said that Collins discovered the problem in the 75A series, but it did not show up until about the middle of the first year Collins R-390A run since it took years to show up. They fixed the problem in the latter half of the Collins run, and all subsequent PTO's made by other manufacturers. So yea, it is 'Special' in that it is one of the worst PTO's you can have.

As for the bonifidies of this issue, I never met his father, just what he told me. However, the solution did work. And later I heard that PTO's on the 75A series Collins do have a problem with being out of adjustment range. And I never had the problem with any other PTO by other manufacturers. If the tale is true, then Motorola also made PTO's before 1957, so they may also have the same problem. Bonddaleena@aol.com wrote:

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

From: "Michael J Talkington" <kc8fwd@verizon.net> Date: Wed, 01 Mar 2006 18:22:07 -0500
Subject: RE:R-390 Digest, Vol 23, Issue 2 [R-390] R-390 Questions - Comments

I have a R-390 that is MOTOROLA MADE FOR COLLINS with a ser. # of 4173 and is stamped on the back July 20 1955.I need a few tube shields and covers also later Mike KC8FWD

From: "Dan Merz" <mdmerz@verizon.net> Date: Wed, 01 Mar 2006 19:10:10 -0800
Subject: RE: [R-390] Another "Close to Perfect" R-390a

Mark, can't be exactly as you say, or heard. My Cosmos in an EAC 390a required removal of a turn to get it back in the proper range. I have limited experience otherwise. Maybe because they're older, the Collins pto's are more apt to show up with this aging problem.

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Wed, 1 Mar 2006 20:22:53 -0800 (PST)
Subject: [R-390] Tube Shields and Heat follow up

Hi Gang,

Got a chance last week to verify a suspicion. I have an "original RARE L@@K Collins R390A with famous Collins PTO used in the one off"…. Oops, Zap me Igor. Ah thank you
.
Less see where wuz me. Oh yes. I have a Collins R390a, a Stewart Warner unit and an EAC. All the power supply transformers list the filament voltage as 6.1 volts. Collins engineers realized that there was a serious heat problem and lowered the filament voltage to extend the tube life.

BTW, I have the edited Feb reflector list in RTF that I will email to anyone. I also found a zenar multiplier circuit so one could put a bridge rectifier, caps and regulator in the space behind the power transformer and run regulated DC filaments. Reply off list. Regards, Perrier

From: "Bill Hawkins" <bill@iaxs.net> Date: Thu, 2 Mar 2006 00:50:02 -0600
Subject: RE: [R-390] Another "Close to Perfect" R-390a

Well, I worked on two R-389 PTOs for linearity. Can't get much more Collins or much older than that. They were within 500 cps of linear without being touched. Maybe the "cost-reduced" (that is "cheaper") R-390A had that problem. They're gone now... Bill Hawkins

From: Jack Absalom <kf4yio@charter.net> Date: Thu, 02 Mar 2006 08:41:32 -0500
Subject: [R-390] R390 non-A 1st I.F. transformer

Hi All;

I am in need of the first variable I.F. transformer including the slug. Been looking for one forever. Any help would be great! Thanks Jack - KF4YIO

From: Roy Morgan <roy.morgan@nist.gov> Date: Thu, 02 Mar 2006 10:09:11 -0500
Subject: RE: [R-390] Another "Close to Perfect" R-390a

wrote: >Well, I worked on two R-389 PTOs for linearity. Can't get much >more Collins or much older than that.

Bill and others,

The R-389 PTO is type 70H-1 (not 70H-2 or 70H-12). It makes FIFTY turns not 10 turns end to end. It is rumored to have been the most difficult PTO Collins ever made. I assume that they were all made at Collins, not contracted out. I need one. Roy

From: "Les Locklear" <leslocklear@cableone.net> Date: Thu, 2 Mar 2006 09:32:36 -0600
Subject: Re: [R-390] Another "Close to Perfect" R-390a

It was /is a known problem with the 51J series pto's, but they had other problems, 12 kc off wasn't un common. Theory seemed to be you either had a good one, or you didn't.

I must have been lucky, had several 51J3's (R-388) and 2 51J4's, all were good. Les Locklear

From: JMILLER1706@cfl.rr.com Date: Thu, 02 Mar 2006 10:50:33 -0500
Subject: Re: RE: [R-390] Another "Close to Perfect" R-390a

The one on epay, close to perfect? White meter faces? And what's that red wire underneath running from the front panel or AF module back to the PS, taped to the wiring harness with electrical tape?

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Thu, 02 Mar 2006 10:58:23 -0500
Subject: [R-390] Corrector plate PTO's, was Re: Another "Close to Perfect" R-390a

> The R-389 PTO is type 70H-1 (not 70H-2 or 70H-12). It makes FIFTY turns not 10 turns end to end. It is rumored to have been the most difficult PTO Collins ever made. I assume that they were all made at Collins, not contracted out.

I just googled for "R-389" and PTO and found Don Reave's pictures of the internals of a 70H-1. Except for the corrector plate stack it looks a lot like the innards of my 390A Cosmos PTO's (some of the parts look to be identical or at least the same series) and elements of the chassis look very similar too (including those dessicant packs even!)

Silly questions about corrector plates (my very limited experience is with Cosmos-style PTO's): What's the typical "range" of correction? It looks like a little less than 1/4 of a turn is max (although typical seems to be far less and obviously you can't go too far from one correction plate to the other.)

Are the plates "slidable" to the correction, or is each correction plate machined to provide exactly that correction? If they're slidable it looks like it'd be tricky to slide one without disturbing others in the stack... If they're not slidable it would seem that re-linearizing would require either a machine shop or a large supply of assorted corrector plates. Tim.

From: Roy Morgan <roy.morgan@nist.gov> Date: Thu, 02 Mar 2006 11:23:31 -0500
Subject: Re: [R-390] Corrector plate PTO's, was Re: Another "Close to Perfect" R-390a

wrote: >I just googled for "R-389" and PTO and found Don Reave's pictures of the internals of a 70H-1.

I found that at: http://www.r-389.com/

>What's the typical "range" of correction?

I have not done a corrector stack adjustment, but:

Seems to me that the range of the stack plates is way less than one quarter turn, more like five or maybe 10 degrees of rotation. The change of rotational position of the threaded part of slug mechanism imparted by the corrector mechanism is not very much.

Yes, the jump from one plate to the next cannot be too much, or the roller follower will not make the move.

As I understand it:
Each plate is separated from the next by a more or less fixed shim. Thus you can move each plate independently of it's two neighbors. The manufacturers had a jig with a PTO shield cut to allow entrance of a moveable set of jaws that could move one plate at a time. The stack of plates is locked by a bolt through the whole stack, or by some similar clamping mechanism. The operation was: Move PTO to next plate, unlock, make correction, lock, then repeat 40+times. Then do it all over again. If *I* were setting up the ladies with linearization adjustment stations, I would automate the stack lock/unlock thing with a foot switch, and provide a very easy to read center-zero meter readout for each 25 kc step, and likely an automated turn-a-quarter-turn mechanism. Roy

From: "Cecil Acuff" <chacuff@cableone.net> Date: Thu, 2 Mar 2006 17:15:32 -0600
Subject: Re: RE: [R-390] Another "Close to Perfect" R-390a

> The one on epay, close to perfect? White meter faces? And what's that red wire underneath running from the front panel or AF module back to the PS, taped to the wiring harness with electrical tape?

That's the stuff that was added to make it perfect...you know...during the exhaustive no expense spared restoration. Cecil....

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Thu, 02 Mar 2006 19:36:45 -0500
Subject: Re: RE: [R-390] Another "Close to Perfect" R-390a

> The one on epay, close to perfect? White meter faces? And what's that red wire underneath running from the front panel or AF module back to the PS, taped to the wiring harness with electrical tape?

Well, it runs to the wrong side of the back to be remnants of a Diode Load mod. The "official" Navy Diode Load mods tended to be done a little more nicely (routed through the lace in mine.)

Maybe some past mod for routing audio through the back and up front again for an external demodulator etc. Can't see if it meets with the local gain pot or the phone jack but it must be in that vicinity. Tim.

From: DJED1@aol.com Date: Thu, 2 Mar 2006 19:42:58 EST
Subject: Re: [R-390] Another "Close to Perfect" R-390a

I thought about asking if the meters worked, but why bother? Ed

From: "Barry" <n4buq@knology.net> Date: Thu, 2 Mar 2006 23:16:09 -0600
Subject: [R-390] When good resistors go bad

All the talk a few weeks ago about certain resistors going high over the years prompted me to start looking at some of the resistors in one of my IF decks. I think the discussion revolved around some 22k plate resistors going high (but I might not be remembering that correctly).

My plate resistors have weathered well (at the high end of the tolerance or maybe a percent or two above, but not enough to warrant replacement IMHO), but I discovered that a couple of the 27k screen grid resistors (2nd and 3rd IF amp) have gone to 39k (definitely too high).

I'm wondering what affect this is currently having on the system. I assume the lower screen grid voltage results in lowered gain at that tube, right? I haven't done a voltage measurement on the screens to see how far off they are, but I assume they are low.

While looking around at the innards of the deck, I did notice one particular resistor (I don't remember exactly which one) that is literally buried at the first IF amp. It is a 2.2k (I think) but they installed about a 3-watter down there. Good thing because it is spot on specification. It appears this was the first resistor installed in that area, it would require major surgery to replace it, and they must have known it would need to be hefty to avoid needing replacing.

Anyway, still having fun with the radios, but am wondering about the affect(s) of the high-value screen resistors. Barry - N4BUQ

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Fri, 03 Mar 2006 06:38:47 -0500
Subject: Re: [R-390] When good resistors go bad

wrote: > All the talk a few weeks ago about certain resistors going high over the years prompted me to start looking at some of the resistors in one of my IF decks. I think the discussion revolved around some 22k plate resistors going high (but I might not be remembering that correctly).

My complaint was 1/2W 2.2K plate resistors, especially in the RF deck and VFO (almost every one was high by over 100%, some 200-300%, many showed evidence of past heat damage/charring).

> My plate resistors have weathered well (at the high end of the tolerance or maybe a percent or two above, but not enough to warrant replacement IMHO), but I discovered that a couple of the 27k screen grid resistors (2nd and 3rd IF amp) have gone to 39k (definitely too high).

That's not ridiculously high but it can affect gain distribution and make it non-optimal. It does affect DC bias and maybe a stage will clip a little more easily (but nothing in the IF deck should be clipping if AGC is working...)

> I'm wondering what affect this is currently having on the system. I assume the lower screen grid voltage results in lowered gain at that tube, right? I haven't done a voltage measurement on the screens to see how far off they are, but I assume they are low.

Overall there's more than enough gain in the IF stages, all together, so I don't think you'll see a lot of affect from the screens being off a couple of volts. The "GAIN ADJ" pot can be set off a little bit to bring the RF/IF gain balance back into alignment.

> While looking around at the innards of the deck, I did notice one particular resistor (I don't remember exactly which one) that is literally buried at the first IF amp. It is a 2.2k (I think) but they installed about a 3-watter down there. Good thing because it is spot on specification. It appears this was the first resistor installed in that area, it would require major surgery to replace it, and they must have known it would need to be hefty to avoid needing replacing.

You're talking about the one underneath the bandwidth shaft on the front wall of the IF deck? Doesn't look bad at all on my decks, the shaft itself is removable. Tim.

From: "n4buq@knology.net" <n4buq@knology.net> Date: 3 Mar 2006 13:59:39 -0000
Subject: Re: [R-390] When good resistors go bad

wrote : wrote:<sniped> > > All the talk a few weeks ago about certain resistors going high over the > > years prompted me to start looking at some of the resistors in one of

The resistor I'm talking about is R506 (22k, 2w). It is underneath the bandwidth shaft, but there are a lot of other wires in the way. I'd really hate to have to replace that one. Yes, the shaft is removable, but there's still a lot of other "junk" in the way.

Thanks for the comments. I plan to replace the 27k resistors, but like you say, I may not notice a lot of difference in the overall gain as it is adjustable anyway. I still need to check the RF deck's resistors, but I'm dreading pulling that thing... Barry - N4BUQ

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 3 Mar 2006 08:37:47 -0600
Subject: Re: [R-390] When good resistors go bad

I'm still trying to imagine all those resistors in there with little leather jackets and switchblades, the *really* bad ones with pieces of motorcycle chain DARING you to change them... (Hey, they're vintage resistors.) Tom NU4G

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 3 Mar 2006 10:45:02 -0600
Subject: [R-390] OT - Ebay Funny For Friday

At first I was going to email the seller about his pricing typo. Then I read the text. Then I looked at the calendar and noticed it really *isn't* the first day of April...

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=7595500499 Argh! Tom

From: John Lawson <jpl15@panix.com> Date: Fri, 3 Mar 2006 12:07:53 -0500 (EST)
Subject: Re: [R-390] OT - Ebay Funny For Friday

eBay item 7595500499 (an HP 160 - USM/115 SCope for $10,000!!!)

wrote: > At first I was going to email the seller about his pricing typo. Then I read

Four folks (at least) folks have already done so. I'm not sure that I understand what seems to be the Seller's 'agenda' here: He says that the unit is set at a BIN of $10K because "I have a high price because I like keeping this item in my house. ITs getting to be a very rair investment piece...." No fear, Gene. It should stay right where you can see and admire it, for years and years to come...

Rair indeed. Probably one of the most P.O.S. scopes HP (and many other companies - Hickok, LaVoie, Capehart, etc) ever made.... unreliable, 'drifty' - HEAVY - 'rair' because the goddamed things were all

heaved piecemeal into the scrap where they belonged.

Anyone whose ever tried to fix one of these turkeys will tell you the same thing. I've had four or five.... yuk!

And I'm not (vintage) HP-bashing - far from it! But this model series was just one of those designs that everybody wishes to forget. I've seen a pile of about 100 of them at a surplus place - most had the rear CRT socket cover removed and a 1/8" drill run into the CRT base, through the press - and sssssssss!!!!. "Sir, this scope is not working - the Depot says it's 'unserviceable - condemned' - we need to order the new USM/[whatever the Tek military 100Mhtz replacement was]."

> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=7595500499
eBay: plenty of Junque to buy and sell, and sporadic amusement, too!!

Thanks Tom - you perked up my snowy morning! Cheers John KB6SCO

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 3 Mar 2006 11:18:11 -0600
Subject: [R-390] Photo of Collins PTO needed

Need a closeup foto of a Collins PTO label, the larger the better. Another overall pic of the pto can itself would be good too. Don't ask why, other than April first is less than a month away.

I have Cosmos, Progressitron, Dubrow, Raytheon relabeled, but no Collins any more. TIA Tom NU4G

From: odyslim@comcast.net Date: Fri, 03 Mar 2006 17:28:02 +0000
Subject: Re: [R-390] OT - Ebay Funny For Friday

do you think Radio Mart will buy it and ask $20,000 Scott

From: Tom Norris <r390a@bellsouth.net> Date: Fri, 3 Mar 2006 12:36:25 -0600
Subject: [R-390] OT - Ebay Funny - The Seller Responds

Well now, $700 for a 524? A $1000 offer for this fellow's boatanchor. Hmmm. Reply below Tom NU4G

"I was already offered $1000 for the item, so i am sure its worth at least that. I actually just reciently sold a frequency counter that was just as big as this and does about 1/10th as much as this device does and the auction did $700.00 and the canadian buyer was very please. It was an Hp 524B with 524A drawer. Thats why they have auctions. Most buyers don't want to pay and they loose to the others that do want to pay. When I am ready do sell it I will lower my price. But thanks for your input. All input is apreciated. Thanks again. Gene"

From: John Lawson <jpl15@panix.com> Date: Fri, 3 Mar 2006 13:52:28 -0500 (EST)
Subject: Re: [R-390] OT - Ebay Funny - The Seller Responds

wrote:> Well now, $700 for a 524? A $1000 offer for this fellow's boatanchor. Hmmm.

There are 60 born every hour..... ;} Cheers John KB6SCO

From: Richard Loken <richardlo@admin.athabascau.ca> Date: Fri, 03 Mar 2006 13:09:27 -0700 (MST)
Subject: Re: [R-390] OT - Ebay Funny - The Seller Responds

wrote: > auctions. Most buyers don't want to pay and they loose to the others
^^^^^
> that do want to pay. When I am ready do sell it I will lower my

No. No. No. The guy who is unwilling to pay doesn't "loose" anything, especially his purse strings. And he doesn't "lose" anything either except the oppertunity to pay too much. Richard Loken

From: "Tom M." <courir26@yahoo.com> Date: Fri, 3 Mar 2006 12:32:18 -0800 (PST)
Subject: [R-390] Radio Mart Does It Again, Full of C#ap!!

This is a complete fabrication:

"An unusual point is that the receiver has the exceptional Collins PTO which is very rare to find as they were only usually put in to special one off receivers built to a higher spec receiver for a special purpose."

Give me a freakin break. Collins made over 5000 radios with this PTO. Jeez!!!!!!!!!

From: "Michael J Talkington" <kc8fwd@verizon.net> Date: Fri, 03 Mar 2006 19:07:24 -0500
Subject: Re:[R-390] R390 non-A 1st I.F. transformer

Hello,

My Motorola R-390/URR has the first transformer marked I think 2-3 mhz missing the tunning core and slug is this normal on some of the R-390? Mine works fine between 2 and 3 mhz so it must just be a mod. Any info will be apreciated I can provide a pic also if needed later Mike KC8FWD

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Fri, 3 Mar 2006 22:10:32 -0800 (PST)
Subject: [R-390] Heat issue continued

Hi Gang,

<snip> wrote: All the talk a few weeks ago about certain resistors going high over the years prompted me to start looking at some of the resistors in one of my IF decks.

While you're at it, one should take R617, R618, and R619 from under the audio deck and re-mount them over the "L@@K RARE" squelch plate, perhaps with a small computer fan to stir the air. This will relieve the need for putting spacer washers underneath the mounting screw as some have advocated to reduce the cooking oven temps. One might as well remove FL601 as all it was designed for was 850Cps bandwidth for RTTY. (You could the sell it to PMS Marterin for a "Special RARE Collins hemorrhoid cure" He wouldn't know the difference. Regards, Perrier

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Fri, 3 Mar 2006 22:51:29 -0800 (PST)
Subject: [R-390] Precision AM Detector Circuit

Hi gang,

I buy an English magazine called Electronics World. It always has a feature of reader circuits, which usually aren't applicable to anything I need.

However, in the Jan '03 issue they had a circuit called "Precision full wave rectifier". This didn't peak my interest until I read the last part the said it "will rectify up to about 2Mhz, with input signals as low as 10 micro-volts. I originally used it for full envelope detection in a 455Khz IF chain."

It uses 7 GASP, WAIL, KNASHING OF TEETH, very cheap resistors and can be built on Rat Shack perf board with no sweat.

In the same magazine in May '04 an revamped circuit was done with spice simulation.

While it may be tough to put into a R390, There is plenty of space in a SP600.

The first article is a one page file that is 2.4 Mbyte TIFF image or a 4.8Mbyte RTF doc.

The second article is 6 pages long. Each file is about 3.5 Mbytes as a TIFF file.

I will be glad to email one or both to any (PMS Martyrn excepted) who reply off list. Regards, Perrier

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Fri, 3 Mar 2006 23:10:26 -0800 (PST)
Subject: [R-390] Precision AM Detector CORRECTION

OOPS!!

It uses 7 GASP, WAIL, KNASHING OF TEETH, very cheap TRANSISTORS and can be built on Rat Shack perf board with no sweat. So solly, Perrier

From: "bernie nicholson" <vk2abn@bigpond.net.au> Date: Sat, 4 Mar 2006 18:45:43 +1100
Subject: [R-390] Old Crows ????

Tom I thought it was a Hoot and Read all the comments , I have had my entertainment for today HI . I had a lot to do with all models of the 500 series Tec and plus these old hp models, I remember the 50KHz Osc for the EHT had grid leak biasing and the tube used to Glow red when the Bypass cap used to fail and allow the 50khz to wander all over the Chassis there was a 50mfd electro that used to go in them , I also remember HP524a Counters with the vertical rows of neon's before the advent of digital readouts , and bcd decoders , they were full to the brim with FORESTS of 5687 s from memory , I remember when we took delivery of our first Motorola digital counter ,with a DIGITAL READOUT about 1965 I think , I still have 3 HP5245/5248 counters with all the plug ins to 12GHz they were an industry standard for about 25 years in Australia , and they still perform admirably , But this Guy sure

has an inflated idea of the value of his Junk .... I looked at the electric Hoist , although he states its hardly used , TO ME It HAS THAT LIVED IN LOOK . I think he' s some sort of dealer when you see his other sales , BUT CERTAINLY AN OPTIMIST OF THE FIRST ORDER.

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Fri, 3 Mar 2006 23:47:51 -0800 (PST)
Subject: Subject: Re: [R-390] OT - Ebay Funny For Friday

Wrote: do you think Radio Mart will buy it and ask $20,000??

Let us ALL pray for that! Regards, Perrier

From: Jack Absalom <kf4yio@charter.net> Date: Sat, 04 Mar 2006 08:43:09 -0500
Subject: [R-390] R390 Non-A coil

Thanks to all the responses. I no longer need a 2nd mixer coil for my R390. This group has helped me out of a very tight situation and I appreciate it. 73 and all the best Jack

From: John Kolb <jlkolb@jlkolb.cts.com> Date: Sat, 04 Mar 2006 08:50:24 -0800
Subject: Re: [R-390] Precision AM Detector CORRECTION

Wrote: >OOPS!! >It uses 7 GASP, WAIL, KNASHING OF TEETH, very cheap TRANSISTORS and

I was wondering what else it used besides resistors :) One could replace the tran******s with 6C4's. John

From: Tom Norris <r390a@bellsouth.net> Date: Sat, 4 Mar 2006 17:14:56 -0600
Subject: [R-390] Thanks for the Collins pto pics

Thanks to all that photographed and emailed label and pto pics. 73 Tom NU4G

From: "Barry" <n4buq@knology.net> Date: Sat, 4 Mar 2006 17:30:13 -0600
Subject: [R-390] More "bad" resistor comments and questions (a bit long)

Gents,

I'm in the process of replacing those 27k screen resistors. I clipped one end of each one from the "Switched RF/IF B+ Line" side and measured the resistor completely out of circuit. I'm seeing about 49k now whereas I was seeing about 39k before. I was measuring from Pin 2 of the main IF chassis plug to the #6 pin of V502 and V503 so I should have had nothing but those 27k resistors in the line I was measuring so I can't account for the difference between the "then" and "now" readings.

Something else that's kind of strange. There are 82k resistors from pin 6 to ground. With the other resistors now clipped (isolating the #6 pins from the rest of the IF module), I'm seeing about 76k for the values of these resistors. The only other component in this equation are the 5000pf disc ceramic bypass caps also from pin 6 to ground. Is it possible these bypass caps are showing some DC resistance (i.e.

very leaky) and that's causing me to see some parallel resistance across those 82k resistors? If so, then this may account for why the 27k resistors have nearly doubled in value over the years. If those 5000pf bypass caps are that leaky, then they would cause excessive current to be drawn through those 27k resistors constantly. Does this sound reasonable?

The 5000pf caps in question are "Erie" brand and are rather dark brown in color. Does anyone else have any experience with these going bad on a consistent basis? I don't want to cut a leg on these caps just to test them, but when I unsolder the old 27k resistors, I'll be able to unsolder one leg of the 5000pf caps and test them completely out of the circuit. Thanks! Barry - N4BUQ

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sat, 04 Mar 2006 19:16:25 -0500
Subject: Re: [R-390] More "bad" resistor comments and questions (a bit long)

wrote: > I'm in the process of replacing those 27k screen resistors. I clipped one end of each one from the "Switched RF/IF B+ Line" side and measured the resistor completely out of circuit. I'm seeing about 49k now whereas I was seeing about 39k before. I was measuring from Pin 2 of the main IF chassis plug to the #6 pin of V502 and V503 so I should have had nothing but those 27k resistors in the line I was measuring so I can't account for the difference between the "then" and "now" readings.

These resistors when they "go bad" are often no longer purely ohmic. (Giving you different resistances when measured with different meters, or even in the other polarity.)

They may be incredibly sensitive to humidity and phase of moon too, and just the heat of being unsoldered or the change in lead strain from being clipped might change their values like you saw.

> Something else that's kind of strange. There are 82k resistors from pin 6 > to ground. With the other resistors now clipped (isolating the #6 pins from > the rest of the IF module), I'm seeing about 76k for the values of these resistors. The only other component in this equation are the 5000pf disc > ceramic bypass caps also from pin 6 to ground. Is it possible these bypass caps are showing some DC resistance (i.e. very leaky) and that's causing me to see some parallel resistance across those 82k resistors? If so, then this may account for why the 27k resistors have nearly doubled in value over > the years. If those 5000pf bypass caps are that leaky, then they would cause excessive current to be drawn through those 27k resistors constantly. > Does this sound reasonable?

82K to 76K is under 10%. Don't sweat it. I agree that this is opposite the direction that carbon comps usually age.

Seems unlikely that a whole bunch of disk caps would go leaky in that way. In my experience disk caps are more likely to fail open. (Or in transmitter power stages simply burn up - most of my transmitters have suffered some failure in the final compartment that consisted of sparks flames and smoke!)

If you really have these pins open-circuit now, you might want to take a megger and check out socket resistance, especially if it looks like the socket insulation may be decaying. Tim.

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Sat, 4 Mar 2006 19:43:40 -0800 (PST)
Subject: [R-390] R390A micro-switch saver circuit

Hi Gang,

I've come across another circuit that may be useful to R390A's in particular and BA receivers in general.

When we used the A's in Turkey they were usually on 24/7. Now days it's a completely different story for most of us.

It is a gated triac power on circuit from the 2/06 issue of Audio Express magazine. It will greatly reduce the current through the micro-switch which is getting scarcer by the day although Hank Arney still has some NOS. Reply off list and I'll send you a pdf file. Regards, Perrier

From: "TChirhart" <sparks@codepoets.com> Date: Sat, 4 Mar 2006 23:05:32 -0500
Subject: [R-390] Pair R-390 non-A's for sale

I have a pair of Collins R-390's non-A's, Motorola contract for Collins Order 14214-PH-51-93 First one is complete but missing one tube shield, nomenclature plate, two meters, covers, and power cord.

The second one is a parts rig which has the meters and nomenclature plate but is missing the power cord, power supply, IF strip, knobs, and other parts. There appears to be enough here to restore the first one, possibly both if you want to take the time to find another set of meters, modules, knobs, screws, hardware etc or break it down further for parts. both have engraved front panels. Also included in this package is a Navy LS-474 speaker as used onboard ships in Radio Central and CIC and were commonly used with the R-390's, R-1051's, WRR-3's etc. Asking $425 OBO for all with preference given to someone that can pick this 175 pound package up as I prefer not to ship due to weight and a weak back. I live in Northern Virginia, north of Fredericksburg, off I-95. I plan on going to the Timonium MD hamfest later this month and could bring along. Photos Available. Sold as-is. These are not plug and play, but would be fun to restore. 73 Tom K4NCG

From: DJED1@aol.com Date: Sat, 4 Mar 2006 23:45:01 EST
Subject: Re: [R-390] R390A micro-switch saver circuit

Fair Radio still has NOS microswitches also. I bought two- since the first one lasted 40 years, I figure I'm set for life! Ed

From: "Jim M." <jmiller1706@cfl.rr.com> Date: Sat, 4 Mar 2006 23:45:52 -0500
Subject: Re: [R-390] R390A micro-switch saver circuit

I hve found that a simple .01 ufd 1 KV disc cap put across the switch reduces arcing a lot and can extend the life of any AC switch.

From: "paolo gramigna" <paolo.gramigna@controllo.it> Date: Sun, 5 Mar 2006 09:32:05 +0100
Subject: Re: [R-390] More "bad" resistor comments and questions (a bit long)

Hi,

My experience is too thin to set out definite answers, but I have learned very soon to test all capacitors using a megger, not a tester. I use a surplus AN/PSM-2A. A capacitor with infinite resistance on a tester

will show less than 1Mohm on a megger, if leaky. Same for sockets (at least the non-ceramic ones). When I suspect a resistor, first I check the resistance and voltage as stated in the voltage/resistance table in the manual; if there is more tan 10% difference, then I'll clip one end and measure it with a "bad" ohmmeter (something with 1000 ohm/volt) in order to put some current in it. At that point, being the resistor already clipped, it's usually faster and safer to replace it with a new one; I'm told that metal oxide resistors are more stable than carbon, and smaller too. cheers, Paolo from Italy

From: "paolo gramigna" <paolo.gramigna@controllo.it> Date: Sun, 5 Mar 2006 18:45:10 +0100
Subject: [R-390] Looking for a CV-591A/URR part

Hi,

I'm restoring a CV-591A/URR converter. I'm in need of a Potter & Brumfield relay; it is used in the converter for the purpose of switching sideband. mine is burned out, and I'm trying to maintain originality as much as possible.

Does anybody has a converter, faulty beyond repair, with the Relay still in? In case, will you be so kind to take out the relay and sell it to me? looking forward, IK4YNG Paolo from Italy

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 05 Mar 2006 13:29:06 -0500
Subject: [R-390] VFO squirreliness solved FOR GOOD

OK, I went one step further and think I've solved all squirreliness issues with my two Cosmos VFO's for good:

The pics on the net show the lead-screw and slug. What may not be clear is that the bottom of the slug is threaded, and the top (above the arm assembly) is threaded separately.

Backlash is removed by taking the three tiny screws off the top of the arm assembly. You will find two rings (top with three holes, bottom with six holes) and a threaded piece in between them.

I removed the threaded piece, cleaned and polished the rings and the threaded piece (they seem to be copper or a copper alloy and had a good amount of green-red crud on them), tighten the threaded piece back down, and reassemble the ring back on top.

How tight? Well, I don't think I tightened mine down any more than they originally were, but mostly removing the crud did the job. This is not something you tighten with a wrench! Finger-tight seems to be more than enough. Make it too tight and there will be too much "drag" as you turn, I guess (I didn't try tightening them that much.)

I am now deep in the math of optimizing the linearization. It is a rather interesting thing with a number of controls. Of course there are the 40-some little linearization screws, but the effect of these screws is also affected by the overall adjustment of the slug in the linearization coil (for MOST RANGE, you adjust this slug so that it is JUST ENTERING the coil region; for LEAST SENSITIVITY you want to pick an area where the end has ALREADY ENTERED the coil region.). The endpoint adjustment comes in too (and while setting end-to-end to be 1MHz is a good place to start, for optimal adjustment the number may be a kHz higher or lower depending on where the linearization deviations are, if they're in the middle or at the ends.) To make things

just a little bit trickier, the linearization setting is MOST SENSITIVE at the 3.455MHz end, where the fraction of inductance provided by the linearization coil is the largest, and it is the LEAST SENSITIVE at the 2.455MHz end, where the fraction of inductance provided by the linearization coil is the smallest.

I am PROBABLY OVERANALYZING the linearization issues. Maybe I should just tweak the little screws more rather than graphing all this stuff!

At least the squirreliness is gone. Before, when I tuned the VFO through while listening to the 2.455 through 3.455 MHz end on a nearby receiver, I could clearly hear some funny wiggles going on. Now, it's smooth as silk! Tim.

From: "Dan Merz" <mdmerz@verizon.net> Date: Sun, 05 Mar 2006 10:57:45 -0800
Subject: RE: [R-390] VFO squirreliness solved FOR GOOD

Tim, thank you for taking the time to relay your findings. I never messed with the linearization on my Cosmos because it looked messy. And I don't recall really cleaning mine like you did when I had it open to take a turn off, which might be worth the effort. As far as "overanalyzing" goes, this happens. I'm glad you took the effort.

I wonder how much the linearization scheme improves the linearity. How non-linear are the other pto's that don't have this feature? Or how much correction are you making as you tweak these? I'll now have to monitor my pto with a frequency meter to see what I sacrificed by ignoring further adjustment of mine. Best regards, Dan.

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 05 Mar 2006 15:27:03 -0500
Subject: Re: [R-390] VFO squirreliness solved FOR GOOD

wrote: > Tim, thank you for taking the time to relay your findings. I never messed with the linearization on my Cosmos because it looked messy. And I don't recall really cleaning mine like you did when I had it open to take a turn off, which might be worth the effort.

I doubt that the grease-monkeys at Raytheon put so much oily goo inside your PTO's, Dan :-).

> I wonder how much the linearization scheme improves the linearity. How non-linear are the other pto's that don't have this feature? Or how much correction are you making as you tweak these?

One of my two units has a nonlinearity of about +/- 1.2kHz without linearity correction, and the other one (the one Raytheon gooped all up inside) is about +/- 2.0kHz without linearity correction. (By "without linearity correction" I mean that all the little screws have been adjusted to midrange and I've already optimized the endpoints.)

The maximum range of linearity correction by turning the little screws is about 4kHz at the 3.55MHz end (and 2.something kHz at the 2.455 MHz end), so even the extreme one is still within correction. That's about two turns of the little screw. To align at the 200Hz level the screws need to be adjusted to the tenth of a turn, and this is probably about as good as can be done. (I'm sure somebody's gonna chime in here about how they linearized theirs to the 10Hz level...!)

I don't think my PTO's are "cream of the crop" with respect to accuracy before correction.

Getting them much better than 200Hz is probably not feasible because the linearity screws aren't flat to that level on the back.

Hypothetically, I think the correction range could be extended somewhat by taking turns (there aren't that many to start with!) off the endpoint inductor and moving them to the linearity inductor.

Just moving some of the flying wires inside the PTO can will change linearity at the 1-kHz level.

As to "overanalyzing" this, I've got a few dozen tables of frequencies vs dial positions as I tweak the endpoint, sometimes at the 25kHz points but usually at the 100kHz points. It's interesting to an extent (but also realize that I spent many many years in grad school graphing data and fitting curves so I'm not actually averse to the subject.) Tim.

From: "Barry" <n4buq@knology.net> Date: Sun, 5 Mar 2006 14:59:05 -0600
Subject: Re: [R-390] More "bad" resistor comments and questions (a bit long)

It occurred to me last night as I was about to go to bed about what you're saying. I was thinking I was effectively isolating the resistor, but that's not true.

It also occurred to me that unless that 5000pf capacitor leaks quite a bit more under operating voltage, the reading I'm getting across the parallel RC circuit isn't enough out of tolerance to effect things all that much. If I were getting 1/4 or 1/10 the expected reading, then, yes, the cap would be very suspect, but no more than I was seeing, it's probably nothing to worry about and just some very low-reading resistors. Barry - N4BUQ

From: "Dan Merz" <mdmerz@verizon.net> Date: Sun, 05 Mar 2006 13:05:03 -0800
Subject: RE: [R-390] VFO squirreliness solved FOR GOOD

Tim, same here on the "I like to graph things". Thanks for the hard data on the amounts. I measured the pto on my Collins R-390 a few minutes ago... The 390a Cosmos isn't as easy to get to at the moment. I found:

The Collins pto output spans about 997.8 khz, or 2.2 khz short of the 1000 khz range in going from 000 to 1000 on the dial.

The error in dial readout is almost all due to that problem.

If I correct the readings as though I stretched the pto span by adding a turn or whatever it would take to the coil, I estimate the non-linearity of the pto to be in the range of 0.1 to 0.2 khz, pretty darn good for something that's probably not been messed with as far as I know. I'll check my Cosmos unit sometime to see how it fares. I'm not going to try to improve this particular unit, which spans 997.8 khz instead of 1000 khz. Dan.

From: "W. Li" <wli98122@yahoo.com> Date: Sun, 5 Mar 2006 15:24:26 -0800 (PST)
Subject: [R-390] re: upcoming changes in "Pearls"

Guys:

I am in the midst of doing what is long overdue: that of going each "Pearls" topic to correct misplaced posts and delete duplicated posts. For bungling, I apologize to all.

It has been mentioned that one can not do a "search" on a pdf file. Actually you can, but it takes "another" piece of software. Here is a quote from the Adobe website:

"Note: If you use Acrobat Reader, it must have accessibility and search functions for you to complete these solutions. You can download Acrobat Reader with search and accessibility from Adobe's Web site at www.adobe.com/products/acrobat/readstep2.html , and you can determine if Acrobat Reader has search or accessibility functions as follows:

1. In Acrobat Reader, choose Help > About Adobe Acrobat Plug-ins.

2. Check the plug-ins listed on the left side of the About Adobe Acrobat Plug-ins dialog box:

-- If the Search plug-in is listed, the version has search functions.

-- If the MSAA plug-in is listed, the version has accessibility functions. " (end of quote)

Perry Sandeen will provide a Word formatted document of ALL the posts soon.

Lastly, as the 'Pearl' pdf files are getting quite large, I have taken the initiative of providing abbreviated topic files (marked as (s)) after each topic name. These are half or less in size from the current versions. The first of these will be posted end March-early April this year. I can send full topic files separately (ask me off-list) to any who want them.

So here is a heads-up to all: download the current "Pearls" topics this month if you want the -long- versions for your reference. After this month I will not post them.

My goal is to provide the group with salient, useful information, without redundancies insofar as all the valuable information shared by many experts over the years. These have been and will be updated on a quarterly basis.

My deepest thanks to Al for posting "Pearls". W. Li Mercer Island, WA

From: "Dan Merz" <mdmerz@verizon.net> Date: Sun, 05 Mar 2006 17:28:59 -0800
Subject: RE: [R-390] VFO squirreliness solved FOR GOOD

Tim, I checked my Cosmos pto in the EAC 390a with following observations:

The pto output span was 1000.4 khz for 000 to 1000 on the dial

The non-linearity (after assuming I reduced the span from 1000.4 to 1000.0) was typically about 0.3 khz but two points at 200 and 300 on the dial were about 0.5 and 0.6 khz away from linearity.

Interestingly, the way the pto is now, if I were to calibrate the dial to a known signal at mid scale,

500, the indicated frequency would be within 0.2 khz over the entire range except at 000 which would be off by 0.5 khz.

That seems good enough for me. I don't recall that I adjusted the linearity at all when I took a turn off the coil about 5 years ago, best regards, Dan.

From: "n4buq@knology.net" <n4buq@knology.net> Date: 6 Mar 2006 15:32:07 -0000
Subject: [R-390] Bad resistors - the saga continues

While replacing the 27K resistors last night (and breaking one of those little two-pronged standoff which fortunately I had a replacement for but that's another story), I found R544 (2.7M in the AGC circuitry) to be completely open (or higher than the 30M my meter can detect). I wonder what the effect this had on the operation of the radio? I'm going to replace it, but was just wondering what function this resistor provides.

V506A's plate resistor, R549, was on the high side of it's tolerance (82K gone to 90K), but it was easy to get to and since one end had to be lifted to replace one of the 27K's, it's getting replaced too. I also wonder what effect (if any) this would make on the operation of the radio. Slight difference in AGC voltages? Thanks, Barry - N4BUQ

From: "n4buq@knology.net" <n4buq@knology.net> Date: 6 Mar 2006 19:18:24 -0000
Subject: [R-390] Leitch Meter-Matic VTVM?

I wonder if anyone on this list has ever seen or used a Leitch Meter-Matic VTVM? It is an autoranging meter that looks to have been manufactured in the '50s. Nice, big, big meter with little lamps to indicate the range that is selected. It uses a stepper relay to determine the range.

I haven't found any info on it on Google and wondered if any of you gents know anything about it. BTW, it's a model 20-55.

Leitch Engineering Corporation 326 Lincoln Street Manchester, New Hampshire, U.S.A Telephone 3-4773 (<- one indication of the age of this thing) Thanks! Barry - N4BUQ

From: "David Wise" <David_Wise@Phoenix.com> Date: Mon, 6 Mar 2006 14:25:36 -0800
Subject: RE: [R-390] 6BJ6/6BH6 sub

Affirmative, strong-signal performance will be suboptimal, with increased vulnerability to overload and cross-modulation. If it takes less AGC than normal to achieve a given gain (the case with a 6BH6 sub), then the front end is running hotter than intended, which means it takes less signal to drive them positive. Your carrier meter will also read low.

The "3D" in your copy of my old post is the tilde character, meaning "approximately". Most of those tubes can't be compared apples-to-apples from the specs, as some are tabulated for a given plate current, others for a given transconductance. (It would be possible to get closer with many models of transconductance tube tester.) I only meant to list all the ones I could find that would operate, with no implication that they would do well. It seems odd to me that the 6DC6 is less than abundant; it was made for TV's. 73, Dave

From: "David Wise" <David_Wise@Phoenix.com> Date: Mon, 6 Mar 2006 14:49:54 -0800
Subject: RE: [R-390] 5 khz difference?

Ahem. 8MHz and above does not use the 17MHz oscillator, so your frequency counter observation completely accounts for the discrepancy. Maybe someone else can say whether 5kHz is small enough to be correctable and big enough to bother. 73, Dave

From: "David Wise" <David_Wise@Phoenix.com> Date: Mon, 6 Mar 2006 16:22:58 -0800
Subject: RE: [R-390] Corrector plate PTO's, was Re: Another "Close to Perfect"R-390a

Caveat: I have linearized one Collins R-390A corrector plate PTO.

I can't remember the range of correction. There is a very real limit on rate of change of correction. If there's a valley, it has to be wider than the follower, or it will never touch bottom. The plates slide individually quite well, as each pair is separated by a thin stationary finger. A thumbnail is a pretty good tool for sliding individual plates. Just thin enough and stiff enough, and always handy :) Dave

From: Tom Norris <r390a@bellsouth.net> Date: Mon, 6 Mar 2006 22:36:49 -0600
Subject: [R-390] Current Requirement for R-390 Regulated B+?

What is the max current required for the B+ in the R-390? The 390A has had everything nice and mapped out over the past few years by bunches of us here on the list, not so it's pappy. Thanks and 73 Tom NU4G

From: "Barry" <n4buq@knology.net> Date: Mon, 6 Mar 2006 22:43:40 -0600
Subject: [R-390] A bit more on my IF deck

I got the resistors replaced and all seems fine. I need to do a full IF alignment, but it seems to be behaving just a slight bit better. I'm not sure, but I think it doesn't take quite as long for the system to dump the charge from SLOW AGC as it did. Is that perhaps a function of that 2.7M resistor?

I wanted to check the resistances and voltages around where I had worked. Everything looks pretty good except for pin 2 of V506. According to the manual, I should have about -0.4V, but I'm getting nothing (HP410B used here). Checking the resistance, the manual states I should be seeing 500K in AGC mode and I'm only seeing 400K here. There are three resistors to GND from V506, pin 2 and they add up to 500K. Apparently I have something else parallel to this that's pulling the resistance down a bit. It's always something. Any guesses why I don't see -0.4V here? Thanks, Barry - N4BUQ

From: "n4buq@knology.net" <n4buq@knology.net> Date: 7 Mar 2006 14:12:22 -0000
Subject: Re: [R-390] A bit more on my IF deck

Okay, I think I'm carrying on a conversation with myself here, but I'll continue...

When I pull the main connector from the IF deck, the resistance at Pin 6 of V506 goes very close to 500K (what the book says it should be). If I reconnect the IF connector and unplug the RF deck connector, the same thing: 500K. So, I checked the resistance at pin "E" of the RF deck (the point where Pin 6 of V506 connects to the RF deck). I get about 1.8M here. Those two resistances in parallel yeild what I'm seeing at Pin 6 of V506 when everything is connected.

I haven't traced it out, but I assume if I'm supposed to be seeing 500K at Pin 6 of V506, then the resistance at Pin "E" on the RF deck should be nearly infinite. Any comments on this? Barry - N4BUQ

From: "rdavis7" <rdavis7@comcast.net> Date: Tue, 7 Mar 2006 10:17:51 -0500
Subject: [R-390] Delta ISB-1 SSB Converter

Looking for any info on this unit. Acquired one with a broken meter. Would like to repair it,(need manual copy) and then use it with my non A to compare against my CV 591. I've run into a dead end on this. Apparently few made it into the civilian market. Rick K8PJQ

From: "Dan Merz" <mdmerz@verizon.net Date: Tue, 07 Mar 2006 07:59:06 -0800
Subject: RE: [R-390] 6BJ6/6BH6 sub

Hi all, I'm back with a 6BJ6 in the 390 i.f. in place of the make-do 6BH6 sub that I used for a week or so. Much thanks to the generousity of one of you for sending me what I didn't have on hand. The radio seemed to operate about the same with either the 6BJ6 or the 6BH6 (i.e. the signal I was listening to sounded the same) but I can't say I explored any extreme situations that might reveal a difference with regard to agc action and front end overload. But I'll accept the conventional wisdom and feel happy that my 390 is now operating more like it was intended to operate, thanks all, Dan.

From: "n4buq@knology.net" <n4buq@knology.net> Date: 7 Mar 2006 15:51:52 -0000
Subject: Re: [R-390] A bit more on my IF deck

Okay, more ramblings.

Tracing Pin "E" on the RF deck, I see a path through L208, R232 (22K), R231 (1M), through S207 and then through the selected L22*-2 winding to GND. Therefore, this places a theoretical 1.022M (not includine the negligible coil DC resistances) across the 500K in the IF deck at Pin 2 of V506. If this is true, then doing the math, the reading at Pin 2 of V506 should be approximately 335K. Am I missing something here?? Barry - N4BUQ

From: JMILLER1706@cfl.rr.com Date: Tue, 07 Mar 2006 11:10:52 -0500
Subject: Re: [R-390] A bit more on my IF deck

Isn't V-506B the AM detector? If I am reading the schematic right, V- 506B doesn't connect to the RF deck,... I htink it connects to the AF deck (it provides audio to the AF deck).

From: "n4buq@knology.net" <n4buq@knology.net> Date: 7 Mar 2006 16:44:22 -0000
Subject: Re: [R-390] A bit more on my IF deck

Oops!!! In my post below, I wrote Pin 6 of V506. I meant Pin 2 of V506A (the grid of the AGC Time Constant Tube). Sorry. Barry - N4BUQ

From: "David Wise" <David_Wise@Phoenix.com> Date: Tue, 7 Mar 2006 09:40:16 -0800
Subject: RE: [R-390] R390A micro-switch saver circuit

Apologies in advance because I haven't seen the triac circuit.

It can't supplant the switch by itself; triacs are hellish RF emitters. It would have to close only for the short periods of time covering the points at which the microswitch opens and closes. You might as well use a relay. (Electromechanical type only.)

The cap, especially if enhanced into an RC snubber, is the ticket IMO. There's stuff on the net for computing values, but since we don't know the requisite transformer parameters, just cut-n-try until it's good enough. I don't know why Collins didn't do this; it's a well-known technique. Dave Wise

From: JMILLER1706@cfl.rr.com Date: Tue, 07 Mar 2006 12:43:42 -0500
Subject: Re: [R-390] A bit more on my IF deck

Let's see.... from pin 2 of V-506 it looks like paths to ground are: R547 (220K) + R544 (2.7M) to ground thru whatever resistance to ground is in the B+ line in the power supply.

In parallel with: R234 1.5M which is on the AGC line in the RF chassis. What's the math for those parallel resistors? I get about 1M, which doesn't agree with the 500K you're reading...is there another resistance to ground I am missing? Look all along the AGC line to see if there are others in the RF deck...I can't find any others. Or am I reading this all wrong?

From: JMILLER1706@cfl.rr.com Date: Tue, 07 Mar 2006 12:45:54 -0500
Subject: Re: RE: [R-390] R390A micro-switch saver circuit

Someone (I forgot who) replied to me personally that adding a 100-500 ohm resistor in series with the cap would absorb the spark energy better. But I have always just used a cap (with no resistor) across the switch contacts. Adding the the resistor is a good idea. Jim N4BE

From: "n4buq@knology.net" <n4buq@knology.net> Date: 7 Mar 2006 17:59:50 -0000
Subject: Re: [R-390] A bit more on my IF deck

Pin 2 has a path to ground through R545, R546, and R547 which add up to 500K. The path through R544 meanders through the system and there are a few paths to ground I see; however at 2.7M, it is a bit negligible on the overall resistance. I'm thinking the 500K listed in the manual is theoretically incorrect, but I'm wondering how close that needs to be. Since I'm not getting the -0.4V on that pin, I'm trying to figure out why. It may just be a weak tube. I need to try some subs and also check that pin on my other R390A just to see if I see any differences. Thanks! Barry - N4BUQ

From: JMILLER1706@cfl.rr.com Date: Tue, 07 Mar 2006 13:40:22 -0500
Subject: Re: [R-390] A bit more on my IF deck

It could be a difference in tube performance, but also keep in mind that there is AGC on some grids and you could be seeing some residual AGC bias voltage. Also, with the higher line voltages today (120+ VAC), the B+ lines will run somewhat higher than spec. which could change the operating points of the tubes. To compare against the voltages in the maintenance manual, I think you should also be using the spec-ed AC line voltage input. A variac cranked down to 115 probably. Finally, these are very high impedance circuits. If you measure grid voltage with a standard VOM, you could be dragging the voltage down through the meter. Need to use a very high impedance VTVM like they had in the old days for working with tube circuits.

From: JMILLER1706@cfl.rr.com Date: Tue, 07 Mar 2006 13:50:14 -0500
Subject: Re: [R-390] A bit more on my IF deck

Barry

I just noted you are using a 410B VTVM which should be fine. So forget that part of my comment. I can suggest no other reasons you are not getting -0.4... but just be sure you are reproducing the exact test configuration the manual calls for. Oh, another thing that can affect B+ voltage (and operating points) is a conversion to solid state rectifiers, unless you have used a 220 ohm dropping resistor.

From: <robert.boyd@servicecanada.gc.ca> Date: Tue, 7 Mar 2006 15:17:15 -0500
Subject: [R-390] Guess Who's Back!

@LOOK@ Guys & Gals:

Another "Collins" R390-A, see Epay # 5875316232, except that it is a Motorola! And by the eminent restorer, "Sir Chick Ripple" If it's so original, what is the jack to the right of the phone jack! He now supplies "custom dust covers" Robert W. Boyd, VE3BE

From: "Kal White" <kalwhite@nbnet.nb.ca> Date: Tue, 7 Mar 2006 16:30:29 -0400
Subject: [R-390] R 390 problem

This is my first shot of explaining a problem with my R 390 receiver.

1.. Chassis is hot at 80 V AC
2.. V 505 no filament but checks good
3.. Test point E 211 Attached rf generator & lots of signal
4.. Test point E210 attach signal generator no signal
5.. V 6C4 checks ok
6.. V 401 6AK5 checks ok
7.. Original problem was 1 dead 26Z5
8.. Install 2 new replacement.

Not sure if there is more info I can give you but would appreciate any help from any of the owners of

this wonderful receiver, on this interesting site.

This radio had never been worked on until the two 26z5 replacements were installed. Kal VE9PK

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Tue, 07 Mar 2006 15:44:26 -0500
Subject: Re: [R-390] R 390 problem

** High Priority **

> 1.. Chassis is hot at 80 V AC

This is normal for the stock line fiter if you do not have a good chassis ground.

If you only provide a good ground, then you will trip a GFCI (if you have one). Tim.

From: "n4buq@knology.net" <n4buq@knology.net> Date: 7 Mar 2006 21:00:35 -0000
Subject: Re: [R-390] R 390 problem

Lack of filament on V505 is probably due to an open 3TF7 regulator tube. Barry - N4BUQ

From: "Dennis Wade" <sacramento.cyclist@gmail.com> Date: Tue, 7 Mar 2006 14:37:57 -0800
Subject: Re: [R-390] A bit more on my IF deck

Barry,

I am at somewhat of a disadvantage being at work with none of my diagrams, but your problem sounds very much like the one I was having with my Moto IF deck when I was trying to track down my AGC problems.

Where I got to was a leaky mechanical filter. I got there by lifting the ground side of the filter and watching the resistance to ground go right back to where it needed to be. I know its kind of vague at the moment.. but when I get home I hope I can give you more detail. But in the meantime, don't over look the possiblility of a leaky filter(s). I ended up with two. Dennis

From: "n4buq@knology.net" <n4buq@knology.net> Date: 7 Mar 2006 23:15:42 -0000
Subject: Re: [R-390] A bit more on my IF deck

Dennis,

If you selected the "good" filter positions, did the resistance return to its correct value? I see where the AGC line ties to the filters, so that is a good possibility. Thanks! Barry - N4BUQ

From: "bernie nicholson" <vk2abn@bigpond.net.au> Date: Wed, 8 Mar 2006 10:55:34 +1100
Subject: [R-390] leaky filters

HI To everybody, I also have seen quiet a few leaky filters , its caused by the foam packing inside the filter becoming crumbly and sticky and mildly Conductive , I have looked inside a few filters and this seems to be something that will eventually happen to all of them in time, The same problem is also happening in Kokasai filters, I have removed the 2&4 KHZ filters in a couple of receivers and replaced them with dedicated USB&LSB filters and Crystal locked the bfo on 455KHZ with a built in product detector {double Triode in the ballast tube socket} its a different receiver altogether from the original , but when you switch off the BFO it reverts to the original circuit for AM .

From: Tom Norris <r390a@bellsouth.net> Date: Tue, 7 Mar 2006 18:04:02 -0600
Subject: [R-390] OT - Ebay seller of $4K 833A responds -- *Now they want our 833A's*

And with no flames --

I had commented that they can usually be found NOS for under $100,why was he selling his for so much, etc.

$300K for a 833, probably Class A, system?? *shakes head*

Three. Hundred. Thousand. Dollars. I guess I'm not wealthy enough to understand why.

I do know for sure I'd not sell any to him for only $125. Maybe trade him 10 for one of those amps. Hee hee. Tom

"Thank you sir for the comments. You are absolutely correct Penta Labmake an equilvalence. But in the case of RCA 833 tube they are the finest for Hi-Fi. and they are very rare. Therefore Hi-Fi freak like ourself want to make a mono amplifier these could only make by one company like Wayvac.
They are selling for $300,000. per system. Are you into tube collection if so as you mention
you can find 833 for $125 i would like to buy them from you quantity for 10 units. When you have these available please contact me and iwill come and pick them up in person"

From: "John Page" <k4kwm@hotmail.com> Date: Wed, 08 Mar 2006 02:33:30 +0000
Subject: RE: [R-390] OT - Ebay seller of $4K 833A responds -- *Now they want our833A's*

If you check his other items for sale. You will see that he is selling all his wifes cloths to feed his audiofool habit. :-)

John Page K4KWM Hollow State since 1953 (ex W8PKU,N8BLB,NA8O)

From: "Barry" <n4buq@knology.net> Date: Tue, 7 Mar 2006 21:14:41 -0600
Subject: [R-390] What gives here!?

Paragraph 56 (page 96) of TM 11-856A shows various table for the resistance values for each pin on the various subchassis connectors. Table "a" is for the RF Subchassis and shows the resistance for pin "E" to ground to be Inf(inite); however, if I trace the schematic, there are two resistors, R201 (270K) and R234 (1.5M) in series to GND. I'm getting about 1.8M so my reading agrees with the schematic.

I wonder where they came up with "Inf" for this pin?? Barry - N4BUQ

From: "Barry" <n4buq@knology.net> Date: Tue, 7 Mar 2006 22:22:12 -0600
Subject: Re: [R-390] A bit more on my IF deck

Paydirt. I think I have some weak/gassy/whatever, tubes. I swapped V506 with another 5814 in the RF deck and I got about -0.1V at pin 2. I then swapped it with one of the other 5814's in the IF deck. This tube yields about -0.5V on pin 2. I seem to recall that gassy tubes can cause low grid voltages, but not sure about that. Also, it seems that the radio is a bit "hotter" with this tube arrangement.

I know Roger created a writeup on swapping tubes for maximum performance. Maybe I'll give that a look-see. I didn't put these tubes on the tester before firing this thing up. Maybe that will reveal something about them too (yes, I know the *best* tube tester is the circuit itself, but I want to see if the Hickock will tell me anything obvious). Oh well, this has been a fun exercise. Barry - N4BUQ

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Tue, 7 Mar 2006 20:59:33 -0800 (PST)
Subject: [R-390] R390A Inrush Limited, Slow ramp-up Regulated B+ circuits

Radio Fart Does it again, bringing you the very best in Ham Radio schematics for a R-390A/URR slow startup B+ supply. These new hand picked schematics leave No EXPENSE SPARED (as well as none on my part- I copied them)!! True connoisseurs know how much time and attention to detail that is required to do a perfect modification, the end result is truly amazing, the end result is a perfect R390A.

This modification allows the R390a to dispense with L602, L603, C603, and C606 with a little ingenuity. With an added bleeder divider and capacitor 0A2 (V605) may be eliminated.

I personally installed this modification on the R390A used my Dr. Timithy Leary on his little known peace flight to meet with Neville Chamberpot to help "achieve a piece of time". This Trans-Dogpatch biplane was flown by the famous pilot Capt. Eddie Ricketyback. The flight left Sadieville, Kentucky both in a fog of secrecy as well as that in the two heads of those in the aireoplane. They used this improved Late, Motorola version of this classic receiver, the most desirable made as it is a very late model. This receiver could easily been sold as brand new, there was hardly a mark on it and all controls were perfect in every way, it had all of the covers and all the markings are as clear as they could be. This was Motorola model Ser # CLASSIFIED. It had been Recently, completely restored, with no expense spared to make it perfect and allowing it to operate to well over Collins book specs.

For my modest contribution to this effort I was awarded the Croix de Air, with the crossed white feathers and 500 degree Celsius marking. (it makes blus to tell you this, but history IS history). I was awarded this by Filed Martial Spittoon - I have an autographed video tape of the ceremony- to prove it. I'd like to tell you more about this fascinating history but unfortunately the official secrets oath I signed makes me stop at this point.

The schematics work and are real. Reply off list. Regards, Perrier

The resemblance to any adverts by a Kentucky based scumbag are deliberately coincidental.

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Tue, 7 Mar 2006 21:03:27 -0800 (PST)
Subject: [R-390] Non Moment-of-Silence Mod

A while back a member posted that he had solved the "moment of Silence" problem. I and probably others, would appreciate if this would be posted to the list. Regards, Perrier

From: "Dennis Wade" <sacramento.cyclist@gmail.com> Date: Tue, 7 Mar 2006 21:24:52 -0800
Subject: Re: [R-390] A bit more on my IF deck

Good news Barry. To answer your question, no..I had to actually lift the side of the filter that was common, and not the switched side. Have a careful look at the switching arrangement of the filters (if you care to now that your problem isn't the filters apparently..good thing!). If you'd like the gory details let me know and I'll have a look at the schematic and work it out again. Dennis

From: eldim@att.net Date: Wed, 08 Mar 2006 05:40:41 +0000
Subject: Re: [R-390] A bit more on my IF deck

Hello Barry & Crew,

Your statement about swapping 5814's brings to mind a problem that we faced with a DC Test Point Readings on the SMO (Stabilized Master Oscillator) of the AN.KWT-6/5 Collins Radio HF Transceiver circa mid 60's. (Navy version AN/URC-32). The test point was supposed to read typically no less than -3.5 Volt DC at each frequency tracked across the Frequency Band. On one unit we just couldn't achieve that tracking level regardless of how many tubes we substituted in that ckt. We finally replaced the entire SMO with a New or Depot Overhauled Unit which did track across the band with voltages slightly above the minimum -3.5 VDC.

I decided to take a closer look between the two units and discovered that the replacement SMO had a Premium GE 5 Star tube. So we reinstalled the suspect SMO and stuck the 5 Star Tube in the circuit and "BINGO", the levels were in the Pass region. I think the tube was a 5670 or 5670WA. I have also noted that Oscillator Circuits in our older UHF Multi-Channel Collins Transmitters T-217 (AN/GRC-27) were particular which tubes it enjoyed. Lastly, I recall a TV that we serviced in the early sixties that had a Front End Tuner problem that would not work when one of the Tuner Tubes was replaced. PROBLEM: Tube replacement resulted in overdrive and picture tearing. We found out that the original tubes were all burnt-in to provide an acceptible drive level to the Mixer stage. I think the manufacturer issued a Service Bulletin later on to address this problem. We ended up changing some resistors to lower the gain when tube replacement was necessary.

My thought and bottom line is "DON'T CHANGE OUT TUBES AS A CURE or FIX-ALL. I always mark the tube with the V # or where it came out of the circuit, and put it in a small zip-lock with the Test Results what radio it came from, and symptoms. Just in the event that something new and unusual occurs to the sets performance, I can look back on what I did. If the Tube is Below Test Specs, Shorted, Gassy or Intermittant, then I discard the tube and press on. I always say, measure and compare readings specified in the manual, TM, TO, or NAVSHIPS. 73, Glen Galati, KA7BOJ Tacoma, Wa.

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Wed, 08 Mar 2006 07:50:50 -0500
Subject: Re: [R-390] OT - Ebay seller of $4K 833A responds -- *Now they want our 833A's*

> I had commented that they can usually be found NOS for under $100,> why was he selling his for so much, etc. > $300K for a 833, probably Class A, system?? *shakes head*

Dunno what auction you're talking about, strangely enough all my searches turn up only sub-$100 833A's :-). New 833A's are $110 straight from Penta. Did the tube actually sell at $4K or was that just the silly asking price?

About a week ago E-bay had a "special" on low-fee (free listing fee?) BIN listings, some folks took great advantage of this to put up silly sales. (like that HP scope talked about late last week.)

I'm always afraid to point out these auctions because I'm never sure whether I'm missing out on a joke or if they're real. I have some sort of presumably mutant condition that makes me miss obvious sarcasm over anything other than AM modulation :-). Tim.

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Wed, 08 Mar 2006 08:09:21 -0500
Subject: Re: [R-390] Non Moment-of-Silence Mod

> A while back a member posted that he had solved the "moment of Silence" > problem. I and probably others, would appreciate if this would be posted to the list.

I have not made the mod, but it was Dave Wise on this list in Jan 2005, and he was unsatisfied with a mod made with the existing switch and he put in a two-pole switch and was satisfied. I never did see a schematic, but he did drop some hints (seeming to not use the existing C551 and presumably having a new one somewhere) and promise to write it up for HSN.

Others on the list have said it would be easy with a three-pole switch so I'm guessing some cleverness was needed for the two-pole switch. Tim.

From: Barry Hauser <barry@hausernet.com> Date: Wed, 08 Mar 2006 08:25:06 -0500
Subject: Re: [R-390] What gives here!?

Might be as simple as an outright error. That was the initial motivation behind doing the Y2K book - errors in the originals.

One thing that seems to cause inconsistencies in resistance charts is the use of unused tube or connector terminals as convenient tie-points. In addition, because these were arbitrary, they might vary from one batch of radios to the next.

Then there's the question of how the resistance and voltage charts were compiled -- from a careful read of the (usually early) schematic? -- or live readings -- from a prototype? Either way, there can be errors. Barry

From: Barry Hauser <barry@hausernet.com> Date: Wed, 08 Mar 2006 08:46:36 -0500
Subject: Re: [R-390] A bit more on my IF deck

Sorry .. I was going to post a reply on the missing -0.4 volt thing sooner, but assumed you had already checked for grid emissions.

Also, my knowledge is a bit spotty in this area - I'm going mostly from what I've learned on this reflector and I usually wait for someone more experienced to post a reply. So, someone please correct/amplify on this in case I got it wrong:

A tube may be good in terms of no shorts and good quality, yet have a case of "grid emissions" - usually synonomous with "gassy". In some sockets/functions, it may have little adverse effect, however it was cited as one of the possible causes of fouled up AGC. As far as I understand, tubes are not supposed to have anything emitting from the grids at all --they're inputs for control voltages. So, most likely, the gassy tube was putting out an errant positive voltage, cancelling out the small negative voltage you were supposed to be getting there. I imagine, grid emissions could be caused by internal defects in the mechanics of the tube, but (I think) are mostly the result of the gas conducting some current out through the grid(s).

Practically all tube testers have a test mode for this. Some have dedicated setups for testing grid emissions, others have a gas test. Some have a "gas" button and you're supposed to press it during the quality test to see if there is any movement of the meter. Others may have some kind of indicator bulb.

There was a thread way back where someone was having problems with AGC not working and after a lot of checking of nearly everything else, found that it was due to grid emissions from one of the tubes in the IF deck. Barry

From: "n4buq@knology.net" <n4buq@knology.net> Date: 8 Mar 2006 14:12:18 -0000
Subject: Re: [R-390] What gives here!?

What got me started on this was the fact I wasn't getting the -0.4V on V506, pin 2. Resistance checked around 400K instead of the listed 500K; however, looking at the schematics revealed that there is about 1.7M in parallel with that pin via the RF deck. If pin E on the RF deck did indeed have INF resistance, then the 500K value would be correct; however, it is not INF and the 1.8M it really measures pulls that 500K reading down (as it should).

Perhaps these resistance values were checked on the RF deck with everything disconnected, but I doubt it as there are references to different readings on some pins depending the setting of certain other controls that are not part of the IF deck which means it would have to have been connected to the harness for at least some of these readings.

I'm just glad I found the problem, albeit I stumbled on it. At the very minimum, I should have checked all tubes for grid emission, etc. I chose 5814's from the calibrator as my first choice for subs, but those were apparently a little weak as well. Since I swapped with another IF deck 5814, I probably just moved a problem to a different part of the radio. Looks like I may be looking for some good tubes as I don't think I have many (if any) replacement 5814's. Thanks! Barry - N4BUQ

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Wed, 08 Mar 2006 09:57:39 -0500
Subject: Re: [R-390] What gives here!?

wrote: > Looks like I may be looking for some good tubes as I don't think I have many (if any) replacement 5814's.

I have had poor luck with "new" Eastern European 5814A's/12AU7's/ECC82's. They amplify but inter-element shorts and leaks are problematic.

I have had very good luck buying used and new 5814A's on E-bay. Used-tested-good 5-star tubes go for a dollar or two each. Occasionally moderately large lots (more than 100 at a time) of new JAN Philips tubes with date codes in the mid-80's show up, and they sell for $2-$3 a piece in that quantity (I think the last lot got sold to a guy with "r390" in his ID!). Onesies-twosies these sell for $5.70 at AES (contrast that with $12-$17 prices for tubes numbered "12AU7A".) Tim.

From: Gord Hayward <ghayward@uoguelph.ca> Date: Wed, 08 Mar 2006 09:59:55 -0500
Subject: Re: [R-390] R 390 problem

> 1.. Chassis is hot at 80 V AC

The line filters usually have caps from each side of the line to the chassis. This acts as a voltage divider making the chassis hot either way the plug goes in. I've been zapped a few times by this and have had a computer interface smoke too. Thats also why some trip GFIs. Make sure you have a good ground connected. Cheers, Gord.

From: JMILLER1706@cfl.rr.com Date: Wed, 08 Mar 2006 11:11:00 -0500
Subject: Re: [R-390] R 390 problem

To prevent tripping the GFI, I use an AC line isolation transformer (1:1), 117 VAC in, 117 VAC out. Radio Shack web page used to have these at low cost, but not any more. Here is a link:http://www.action-electronics.com/phciso.htm

From: "Dan Merz" <mdmerz@verizon.net> Date: Wed, 08 Mar 2006 09:03:13 -0800
Subject: RE: [R-390] A bit more on my IF deck & gas

Hi, anytime electrons leave the grid and enter the "vacuum" they cause an increase in voltage on the grid because of the current thru the resistance between grid and ground (outside the tube). The cause of such electron flow can be either true grid emission of electrons (like electrons emitted from a hot filament) or simply electrons leaving to neutralize positive gas ions arriving at the grid (gassy tube). Simple measurements are not able to distinguish between these two mechanisms.

The cause of grid emission by thermal effects can be the result of a damaged grid surface (grids were sometimes conditioned during manufacture to prevent thermal emission), poor heat conduction away from the grid or inadvertent heating of the grid by external circuitry. For example, it's possible to operate a "non-gassey" 6BE6 mixer tube such that the grid acquires voltages in excess of +50 volts by runaway heating and the tube becomes blocked.

I have experimented with this phenomenon sufficiently in a breadboard setup to convince myself that it actually happens. Some consumer radios actually exhibited this if the grid resistance to ground became too high. Turning the radio off would reset it to the normal condition but it was unstable and was apt to block again. This was not a capacitor charge-discharge effect.

I wander, but perhaps my thoughts on gas flow and grid emission will help clarify these two effects .

I'm sure this subject has been bounced to the moon and back in past tube literature but it's sometimes hard to find the details in current material and as you say, the terms "gassey" and "grid emission" are often thrown together as the same, but they are not necessarily the same. Grid emission of electrons can occur without gas ion current. Dan.

End of R-390 Digest, Vol 23, Issue 15

From: "n4buq@knology.net" <n4buq@knology.net> Date: 9 Mar 2006 14:30:11 -0000
Subject: [R-390] Tube Testing

Following up on the results of my 5814A-swapping adventure, I tested all the 5814A's in the IF and RF deck last night. The Hickock 752A sez all of them are perfect. No gas, not shorts, strong uMho readings, yet at least two of them produce less-than-desirable performance for V506.

I've read that tube testing only gives you so much and I guess this proves it. Now to find that lot of 100 5814A's on eBay for $1.00. :) Barry - N4BUQ

From: Tom Norris <r390a@bellsouth.net> Date: Thu, 9 Mar 2006 11:26:39 -0600
Subject: Re: [R-390] OT - Ebay seller of $4K 833A responds -- *Now they want our 833A's*

That was the asking price. Even though there where several in the $20 range at the time of the listing. The original auction was 5875449529 the short url is http:// tinyurl.com/l76lh Tom

From: Tom Norris <r390a@bellsouth.net> Date: Thu, 9 Mar 2006 12:13:19 -0600
Subject: [R-390] Rare R-390A FM Receiver on Ebay

In this case, I think "FM" may refer to Field Mice Item 6611849303 http://tinyurl.com/pah3h

From: mikea <mikea@mikea.ath.cx> Date: Thu, 9 Mar 2006 12:57:38 -0600
Subject: Re: [R-390] Rare R-390A FM Receiver on Ebay

wrote: > In this case, I think "FM" may refer to Field Mice Item 6611849303 http://tinyurl.com/pah3h

"THIS RADIO WEIGHS ABOUT 40 LBS." Shyeah. For some value of "40" that's rather closer to 85. Mike

From: "n4buq@knology.net" <n4buq@knology.net> Date: 9 Mar 2006 19:16:49 -0000
Subject: Re: [R-390] Rare R-390A FM Receiver on Ebay

He didn't say where it was weighed. Weren't these radios used in the Apollo program? ;) Barry

From: "Dave Merrill" <r390a.urr@gmail.com> Date: Thu, 9 Mar 2006 13:28:10 -0600
Subject: Re: [R-390] Rare R-390A FM Receiver on Ebay

wrote: > In this case, I think "FM" may refer to Field Mice

Perhaps "Motorola" confused the seller - they made a lot of FM stuff ya know. Actually, I'm more concerned about the misplaced mechanical filter cover - was someone investigating trouble there?

From: r391 <r391@worldnet.att.net> Date: Thu, 09 Mar 2006 17:16:21 -0500
Subject: Re: [R-390] Rare R-390A FM Receiver on Ebay

From the sellers "shipping and handling" statement...

" WE ONLY USE NEW BOXES AND ITEMS ARE PACKED USING BUBBLE WRAP AND PEANUTS. IF AN ITEM IS DAMAGED DURING SHIPPING YOU ARE TO COLLECT THE INSURANCE CLAIM FROM DHL NOT ME !!!! WE DO NOT AND WILL NOT GIVE REFUNDS FOR ITEMS DAMAGED IN SHIPPING."

Packed like that it probably will receive FM on delivery...

From: sdaitch@ibb.gov Date: Fri, 10 Mar 2006 07:27:23 +0900
Subject: Re: [R-390] Rare R-390A FM Receiver on Ebay

If you read all of the criteria, the text is a stock disclaimer for furniture! 73 Sheldon

From: "Jim M." <jmiller1706@cfl.rr.com> Date: Thu, 9 Mar 2006 19:22:07 -0500
Subject: Re: [R-390] Rare R-390A FM Receiver on Ebay

Could have probably picked it up for $50 if you just walked into their store, if it hadn't been for all the "advertisement" here. It's a steal nw, but in 5 days who knows.

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Thu, 9 Mar 2006 21:28:56 -0800 (PST)
Subject: [R-390] Inexpensive Nuvistor Tube Mod

A while back several members were looking at using the dual 6DS4 nuvistor mod for the R390a and SP-600. The nuvistors are in the range of $15-$25 a piece making it a an expensive experiment.

The website posting the schematic suggested using the dual triode 7963 "peanut tube". I found a website for SND Tube Sales in MO who sells them for $4 each. All the info for the tube can be found at: the WA2ISE sub-miniature tube page. The short specs are: 7963 twin triode 8DG h: 6.3, 0.35a Rk=270 mu=40 p:100v, 7.5ma gm=13000 Rp=3100 ...

If one can get a 7 pin header, this combination may prove to be a cheap performance enhancement. The site does mention that for the SP 600 one needs to do some aligning. This is also true if one uses a 6BZ6 sub for the 6BA6 and want optimum performance. Regards, Perrier

From: "Dennis Wade" <sacramento.cyclist@gmail.com> Date: Fri, 10 Mar 2006 19:19:05 -0800
Subject: [R-390] WTD: HP 141T Spectrum Analyzer System

Please excuse the semi-off topic post, but looking in places where people might hang out that have these things.

I'm looking for the above piece of equipment with the appropriate plug-ins to at least 1.2Ghz. I will consider a 110Mhz unit at the right price.

I'd like to have it be within a 2 hour or so drive from the Sacramento, CA area, but again.. tell me what you have, price.. shipping estimate to 95608 and we can talk. Thanks! -- Dennis L. Wade
KG6ZI Carmichael, CA

From: Scott Bauer <odyslim@comcast.net> Date: Fri, 10 Mar 2006 22:51:50 -0500
Subject: [R-390] antenna multi-coupler wanted

Greetings Everyone, I would like to buy an antenna multi-coupler if anybody has one for sale. If I could be choosy, 8 or more ports would be nice with coverage from 100khz-30mhz. I will take what I can get though. I was lucky enough to get one here before so maybe history will repeat itself?? Any sellers?

BTW, this is not to re-sell, it is for my personal use. Regards, Scott W3CV

From: <fwbray@mminternet.com> Date: Sat, 11 Mar 2006 06:11:23 -0000
Subject: Re: [R-390] antenna multi-coupler wanted

That brings up an interesting point. What is a good modern unit to buy? While a classic unit is sure nice, those are harder to come by. Thanks. Fred Bray W6WAW

From: "Jim M." <jmiller1706@cfl.rr.com> Date: Sat, 11 Mar 2006 04:43:28 -0500
Subject: Re: [R-390] antenna multi-coupler wanted

I have used this with success: http://www.stridsberg.com/prod01.htm Jim N4BE

From: mikea <mikea@mikea.ath.cx> Date: Sat, 11 Mar 2006 06:29:55 -0600
Subject: Re: [R-390] antenna multi-coupler wanted

wrote: > I have used this with success: http://www.stridsberg.com/prod01.htm

I agree: the Stridsberg multicouplers are quite nice. They do behave _slightly_ better with all the unused ports terminated in 50 Ohms, but it takes test gear to see the difference. Mike Andrews, W5EGO

From: "Ed Berbari" <eberbari@indy.rr.com> Date: Sat, 11 Mar 2006 08:07:38 -0500
Subject: Re: [R-390] antenna multi-coupler wanted

> That brings up an interesting point. What is a good modern unit to buy? > While a classic unit is sure nice, those are harder to come by.

I have the multicoupler from Jim Garland, W8ZR. It was published in QST (2004) and he sells the boards and provides a parts list- including an uploadable form for the Mouser web site. http://www.miami.muohio.edu/president/personal/w8zr/index.htm

His can be used as instrument to multiconnect other devices as well. I had fun building it. Ed, W9EJB

From: roy.morgan@nist.gov Date: Sat, 11 Mar 2006 09:15:53 -0500
Subject: Re: [R-390] antenna multi-coupler wanted

Quoting: > That brings up an interesting point. What is a good modern unit to buy? While a classic unit is sure nice, those are harder to come by

Fred,

It is the surplus place in Canada that sells modern new multicouplers. Likely they will outperform the old ones in some areas.

The place is W. J. Ford Surplus Enterprises: http://www.testequipmentcanada.com/ (new web URL)

OOPS: Sold out.. send an email to them to find out if more are expected: # RF Tech M-50-8 Antenna Multicoupler sold out"Manufactured exclusively for RF Science & Technology, the M-50-8 includes a 1 year warranty against manufacturer's defects." The cost was about $225 US.

The link to "RF Sceince & Technology" is: http://www.falls.igs.net/~rftech/ and inculdes this: "Around mid-1996, we (W.J. Ford Surplus Enterprises) were contacted by a company who wanted a distributor in Canada. After examining the items (and subjecting them to some serious abuse as well) we found that not only were these products priced well below the competition currently on the market, but were extremely well made. To avoid confusing these new items with our surplus inventory, we opened RF Science & Technology.
.....
If you would like to order any of our items, simply send us an e-mail rftech@falls.igs.net identifying the item, quantity wanted, and where you are located. We will reply with confirmation of availability and a shipping estimate. You can then place your order (by phone, fax, or e-mail) - we accept both Visa and MC, as well as Postal Money"

Reports on their multicoupler have been very good, so I would not hesitate to order one if they can supply it. Roy K1LKY

From: "Leigh Sedgwick" <bipi@comcast.net> Date: Sat, 11 Mar 2006 07:34:29 -0800
Subject: Re: [R-390] antenna multi-coupler wanted

I have one of Jim's kits too. Unfortunately, Jim is sold out of the kits and will not be doing any more of them. At least that was the story a few months back! 73 de Mike K7PI

From: Michael Melland <w9wis@yahoo.com> Date: Sat, 11 Mar 2006 07:58:56 -0800 (PST)

Subject: Re: [R-390] antenna multi-coupler wanted

I built one of Jim's multi-coupler kits a couple of months ago. IIRC it was one of only a couple he had left. It's one of the best thought-out kits I've ever built... and it works superbly.

I have been using multi-couplers made by Stridsberg Engineering, the active 4-port versions ($185 each) for both HF and VHF up (to 1 GHz+) and have been extreemly satisfied. I first found out about these when they came installed in a surveylance vehicle we purchased years ago at an agency I used to work for. http://www.stridsberg.com/

This winter I had one of my 4 year old multi-couplers stop working... I knew it had been blown by me doing something stupid. I sent it to Stridsberg for repair and even though it was out of watantee they repaired it... installed all new guts with an upgraded and better protected input like their new versions... and returned it to me with NO Charge. They even told me I could return my other 4 units for free upgrage too ! You don't often see this level of service.... they are a small firm and they do mostly Gov't contract work, but I sure was happy they also took care of me. Mike

From: "W. Li" <wli98122@yahoo.com> Date: Sat, 11 Mar 2006 16:04:34 -0800 (PST)
Subject: [R-390] Re: CV-89A

This year the Puyallup hamfest just outside of Seattle was well attended. Strangely enough there was a beat up R-390A for $385... but the big surprise was all the SuperPro-type receivers there... maybe 6 or 7.

Aside from little stuff, for $10 I got a pristine CV-89A FSK Converter. have no idea what I will do with it, but is was squeaky clean with all 17 tubes and IERC shields (and a 2BP1 CRT with a mu-shield) and lots of neat transformers. It looks too cool to dismantle for parts, so maybe it'll just be a conversation piece, stuck in the rack that I'll get one day *real* soon for my 390A's.

Did pick up a nice Tek 1cps-1mHz generator for $15. I happen to like Tek blue in my shop..... W. Li

From: "WA0HQQ" <r390@al.tirevold.name> Date: Sat, 11 Mar 2006 19:37:14 -0500
Subject: [R-390] New and Improved "Pearls"

Folks,

Wei-i Li has been enhancing and compressing the vast array of information present in his collection of R-390A "Pearls".

His latest collection is now available at: http://www.r-390a.net/Pearls/index.htm Enjoy! Al, WA0HQQ

From: Scott Bauer <odyslim@comcast.net> Date: Sat, 11 Mar 2006 20:20:55 -0500
Subject: Re: [R-390] antenna multi-coupler wanted

wrote: I have used this with success: http://www.stridsberg.com/prod01.htm

Jim,

I really like these. There is a passive unit that goes down to 100 khz as well was the active unit that does HF. Thanks a lot for forwarding the page. I will place my order Monday. Regards, Scott W3CV

From: DJED1@aol.com Date: Sat, 11 Mar 2006 22:03:41 EST
Subject: Re: [R-390] VFO squirreliness solved FOR GOOD

Thanks, Tim, for inspiring me to tackle one of my PTOs. I replaced my original Progressitron PTO with a Cosmos because it was warbling as I tuned. I had cleaned the grounding wiper, and had disassembled the PTO and cleaned the threads, but couldn't solve the problem. Based on your comments, I pulled the PTO apart, removed the back plate, and removed the slug and cams (all in one piece). I didn't disassemble the slug, but I was able to clean and lube the entire threaded shaft. I also resoldered the small caps as Les had suggested. I put it in the radio tonight, and it tunes great- no warbles. The only problem I have is that it's off about 2 Kc end-to-end, and the variation is not linear. I'll tweak the end point and see how close I can come- it will probably meet the original specs when completed, but won't be as good as a tweaked Cosmos.

Speaking of which, I also tweaked the end point on the Cosmos because it was out by 1 Kc. Fixed that right up, but now intermediate points are out by as much as 1.8 Kc, where they were within 0.4 before I touched it. And the strange thing is that all the 25Kc points are off the same amount- 1.8 Kc. All the 100 Kc points are right on, and the 75 Kc points are out about 0.8 Kc, and also all the same. Very strange. I'll look at the data tomorrow and decide if I want to tweak all those little screws, or just put the end point adjustment back to where it was.

While I was in the radio, I found I had a bunch of BBODs in the IF. I thought I had all Vitamin Q metal caps, but I was mistaken. I don't have a full set of replacements, but I did replace C553 with an Orange Drop, so at least that is taken care of. Ed

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 12 Mar 2006 13:12:57 -0500
Subject: Re: [R-390] VFO squirreliness solved FOR GOOD

wrote: > entire threaded shaft. I also re-soldered the small caps as Les had suggested. I put it in the radio tonight, and it tunes great- no warbles. The only problem I have is that it's off about 2 Kc end-to-end, and the variation is not linear. I'll tweak the end point and see how close I can come- it will probably meet the original specs when completed, but won't be as good as a tweaked Cosmos.

> Speaking of which, I also tweaked the end point on the Cosmos because it was out by 1 Kc. Fixed that right up, but now intermediate points are out by as much as 1.8 Kc, where they were within 0.4 before I touched it. And the strange thing is that all the 25Kc points are off the same amount- 1.8 Kc. All the 100 Kc points are right on, and the 75 Kc points are out about 0.8 Kc, and also all the same. Very strange. I'll look at the data tomorrow and decide if I want to tweak all those little screws, or just put the end point adjustment back to where it was.

The endpoint adjustment does interact at least a little with the calibration.

A couple kc is the limit of adjustment possible with the little linearity screws.

I think that in some cases it may be wiser to add some small amount of capacitance rather than tweak the endpoint. Maybe I'll experiment with that tomorrow, AFTER replacing the toilet AND seeding the lawn AND installing the ceiling fan... (meaning it probably won't happen!)

> While I was in the radio, I found I had a bunch of BBODs in the IF. I > thought I had all Vitamin Q metal caps, but I was mistaken. I don't have a full > set of replacements, but I did replace C553 with an Orange Drop, so at least > that is taken care of.

Was C553 a BBOD? The IF decks I've owned had BBOD's in a lot of not-so- critical-for-leakage places (e.g. screen and filament bypasses) but better quality metal cans - Vitamin Q's or Westcaps - at the filters. Tim.

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 12 Mar 2006 13:23:45 -0500
Subject: [R-390] Wanted: junker Cosmos PTO's

You guys may recall my voyage into the heart of my VFO (pretty much tearing down every single component in the can) a few weeks ago.

In an effort to learn more, I would like to find a few truly junker quality PTO's for me to tear apart and measure and reassemble in probably unrecognizable form. Probably prefer Cosmos mechanisms but I am willing to learn about others. And I am truly truly looking for basket cases here, whatever I do to these will make Frankenstein look like a wax job. I am mostly interested in the stuff inside the can so if parts are missing/lost/hopelessly damaged on the outside that is fine by me.

Also interested in junker BFO reactors for similar experimentation.

Will trade NOS tubes (usually JAN or British mil-spec) and/or 390A RF deck miscellany (springs, clamps, gears, etc.) for them. I also have some original 390A AC filters. Will also part with small quantities of cash and a good but used ballast tubes if sufficiently motivated. Tim KA0BTD

From: mike Kana <aa9il@sbcglobal.net> Date: Sun, 12 Mar 2006 10:25:30 -0800 (PST)
Subject: [R-390] R220-URR

Hi All

I recently picked up a Motorola R220/URR receiver. Did some web searches but didnt find too much information on this set. Just out of curiosity, what were they used for? Any information would be appreciated. Thanks Mike AA9IL

From: DJED1@aol.com Date: Sun, 12 Mar 2006 15:19:15 EST
Subject: Re: [R-390] VFO squirreliness solved FOR GOOD

Re: was C553 a BBOD?

No, it was a glass and metal capacitor. I checked it after pulling it out by putting 500V thru a microammeter into the cap. Not even one microamp of leakage. I checked a couple of BBOD I had laying around and they leaked about 80 microamps. But now I've got a 600V cap instead of a 300V

one. Easier than finding a 4 Kc filter these days. Ed

From: "Barry" <n4buq@knology.net> Date: Sun, 12 Mar 2006 14:48:54 -0600
Subject: [R-390] Matching info wanted

My signal generator's output impedence is 10ohms. A few years ago, I seem to recall a discussion we had about matching "networks" made up a couple resistors. Knowing the input impedence for the balanced connector is supposed to be 125 ohms, I'm running with a mismatch. Placing a 115 ohm resistor in series with the generator lets the radio "see" 125 ohms, but then the generator is seeing 240 ohms. One can place a parallel resistance across the generator so that it "sees" closer to 10 ohms, but then that throws the 125 ohm impedence off.

Is there a way to construct a matching network of sorts using a resistor network? Obviously with the generator attached to the 125-ohm input, there's no way to get the geneerator to see 10 ohms exactly, but I'm thinking there is a network that might provide a fairly decent match.

Would a matching transformer be a better choice? Can one wind a decent homebrew matching transformer? Anyone? Thanks, Barry - N4BUQ

From: DJED1@aol.com Date: Sun, 12 Mar 2006 17:48:09 EST
Subject: [R-390] PTO success

Thanks to all the lore collected through this group, I have gotten both my PTOs into shape. I adjusted the endpoint on the Progressitron, and it now meets original specs (300 cycle error after calibration at the nearest cal frequency. I'm impressed, for the most part it's within 100 cycles within 50 KHz of a calibration point. Off by a max of 1 KHz if calibrated only at mid-range.

I resolved the problem with the Cosmos after recollecting a list discussion about having pressure on the tuning shaft giving a cyclic variation in error. Sure enough, I loosened the mounting screws, moved things around a bit, and it looks good- almost all 25 KHz points within 300 cycles without recalibrating. I wasn't looking forward to tackling all those little screws again. Now I have to decide which one to leave in the radio. I wanted to see if the Progressitron was more stable, but I hate to mess up the setting on the Cosmos now that I've got it screwed in just right.

Incidentally, calibration is easier with the synthesized HP generator I got. Just dial up each 25 KHz increment and read the error on the radio dial. Ed WB2LHI

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Sun, 12 Mar 2006 15:15:44 -0800 (PST)
Subject: [R-390] Poor mans R 389 receiver

Most of us that don't would like to have a R389, but we aren't allowed to sell the kids or persuade our wives to get 2nd and 3rd jobs.

Sort of by dumb luck however I found a good equivalent on epay that set me back $200 delivered including an operators manual. My unit was a little rough so it was a bit cheaper that some of the others they had for sale. I already had a HP 312B which I hadn't got a chance to use (play with) yet so I've been lurking around epay looking for another unit.

Technically it is the HP 3586 Selective Level Meter. This description is as underwhelming as calling the Boeing 747-SP400 a "people transportation unit."

This sucker is a real sleeper. It has a USB/LSB receiver that covers 20Hz to 32Mhz. A synthesized VFO output over the same rang plus it can be used as a frequency counter. As a level meter it goes down around -121dbm. That's just for starters. It measures all kind of additional telecom stuff. Mine also came with the high stability 10Mhz oven. I checked it against WWV and it was off by 1852 Cps after being used for 15 years. Not to shabby!

Because of its name and funky rf patch panel inputs almost no dealer or epay surfers know what they are good for. This of course makes it a good buy for the BA crew.

Here is the icing on the cake: free operators manual written by Bill Feldmann, N6py on the BAMA site as well as the service manual is available from several sites. I got mine from the W5JGV website. These are BIG files. Volume 1 is 113Mbytes ZIPPED. It took me all night do download it on dial-up. Bill's operators manual is far superior to the HP one, which assumes that you have an EE degree from MIT. (Just Kidding). HP has kindly given permission to reprint its material. Also it looks the US military used a bunch of these.

Last, but not least the unit weighs 40 something pounds and takes up almost the volume of one of our beloved receivers. No rice box here. I got mine from a company on epay called atvm in MD which usually sells Mercedes Benz parts. [VERY well packed: UPS couldn't screw it up, a pleasant change.] They still are selling some under "receivers". Even if they sell out, this unit will show up from time to time. Download the operators manual from BAMA and see all the good stuff this thing can do. Good scrounging, Perrier

From: Joe Foley <redmenaced@yahoo.com> Date: Sun, 12 Mar 2006 17:20:11 -0800 (PST)
Subject: Re: [R-390] PTO success

> I wasn't looking forward to tackling all those little screws again. Now I have to decide which one to leave in the radio. I wanted to see if the Progressitron was more stable, but I hate to mess up the setting on the Cosmos now that I've got it screwed in just right.

++++++++
That must be why Nolan was so careful about how it was mounted in the radio. joe

From: roy.morgan@nist.gov Date: Sun, 12 Mar 2006 20:23:01 -0500
Subject: Re: [R-390] R220-URR

Quoting : I recently picked up a Motorola R220/URR receiver.

I have one here, and can report just a little bit about it:

- It was used by the Army for presumably tactical base station use.
- it covers something like 40 mc to 220 mc (I could be quite wrong on this)
- It has FM, AM, and I think CW modes
- It is HEAVY, like about 80 pounds or so

- It uses sub-miniature tubes in the front end and oscillator sections, at least one of which is moderately pricey now.

- It has two odd tuning coils with ferrite slugs for RF front end tuning (In my receiver, one of the slugs is loose from it's rod and I have no idea how to get at the thing short of major dis-assembly and subsequent re-manufacture and perhaps difficult re-alignment.)

- The connecting cable from the RF to IF sections, about 3 inches long, has an odd connector, and of course must be there for the thing to operate.

-The knobs on the thing are odd, I've seen them nowhere else. I seem to remember something odd about them: some run on 1/8 inch shafts, or they have locking mechanisms in them or some similar thing. I remember deciding that finding replacements for some missing on my radio would be most unlikely.

- WARNING: At least in the one I have, the bottom cover is made such that without the cover in place, the tips of the under-chassis tubes extend below the frame, and can (did!) get broken by simply putting the thing on a bench.

Any information would be> appreciated.

Does that mean you have no manual? I have one, but unfortunately, it *may* be among the things that recently went to storage. No telling when I might see it again if that is the case. I think I can get to my receiver farily easily, though.

From: "James M. Walker" <chejmw@acsu.buffalo.edu> Date: Mon, 13 Mar 2006 06:28:26 -0500
Subject: Re: [R-390] R220-URR

Oh Gee,

I have one, it works pretty good, after I refurbished the power supply for the thing. I also have the manual, which is VERY necessary if you intend to put the thing back into operation. I think I even still have some pieces and parts extra. However like Roy mine is NOW in storage, it works pretty good on CW never had it on FM. But it was touted as the vhf version of the R-390, not true I think they were referring to the weight. The unit uses a lot of 6BA6/5749 tubes in the IF chain. I remember buying a pack of 100 from some guy up north so I could get mine running. got pictures only at:--> http://eshop1.chem.buffalo.edu/R-220-VHF-RX.html

I would make the effort and look for the manual, if you need one. Jim WB2FCN

From: Bob <enigma_y_2000@yahoo.com> Date: Mon, 13 Mar 2006 11:40:47 -0800 (PST)
Subject: [R-390] Poor man's R389

Hi,

Regarding using various selective voltmeters as receivers, all of the ones I've used have no AGC. Bob

From: "Cecil Acuff" <chacuff@cableone.net> Date: Mon, 13 Mar 2006 20:03:34 -0600
Subject: Re: [R-390] Poor man's R389

It has been suggested that for beacon hunting on LF the AGC should be disabled on receivers that have AGC, mainly because of the atmospheric noise in that part of the spectrum. Static crashes would keep the radio desensitized due to constant AGC action. That being said frequency selective voltmeters are a great choice. I think with the proper mods they make excellent LF/VLF receivers.

I'm currently massaging a very nice W&G SPM-15. It has a built in selectable low pass filter that begins to roll off at 620 Khz. It has three crystal filters...3.1 Khz, 1.9 Khz and 25 Hz. The 25 Hz is great for beacon hunting. It has flywheel tuning in selectable steps down to 1 Hz and digital step tuning with selectable step sizes. Has a 600 ohm output for connection to an external amplifier or headphones.

I would imagine it cost more new than the 389 did in it's day....but it was designed as a piece of test equipment.

It's built like a tank and I would expect it to be shielded internally to the hilt. (it's portable and can be battery powered) But that's just my 2 cents worth.... May not be for everyone.... Cecil....

From: ToddRoberts2001@aol.com Date: Mon, 13 Mar 2006 21:17:21 EST
Subject: Re: [R-390] Poor man's R389

writes: It has been suggested that for beacon hunting on LF the AGC should be disabled on receivers that have AGC, mainly because of the atmospheric noise in that part of the spectrum. Static crashes would keep the radio desensitized due to constant AGC action. That being said frequency selective voltmeters are a great choice. I think with the proper mods they make excellent LF/VLF receivers.

Hi Cecil, the atmospheric noise on LF is exactly the reason why I couldn't live with a receiver with no AGC on LF. After a few lightning static crash spikes take out the level meter or after a while they would take out your speaker or your ears if using headphones unless you use some kind of limiter to protect your ears. Also it is very tedious when tuning with no AGC to have to constantly adjust the input attenuator to keep from overloading or banging the level meter everytime you tune across a beacon signal or other signal down there. A nice AGC enabled VLF radio like the R-389 is the only thing I can live with on LF/VLF. 73 Todd WD4NGG

From: DW Holtman <future212@comcast.net> Date: Mon, 13 Mar 2006 19:27:14 -0700
Subject: [R-390] Poor man's R389

Hello,

I have never had a receiver to access VLF. Anybody have any suggestions on inexpensive converters for HF receivers such as the R-390A? Thank you, DW Holtman WB7SSN

From: "Dan Merz" <mdmerz@verizon.net> Date: Mon, 13 Mar 2006 18:57:52 -0800
Subject: RE: [R-390] Re: CV-89A

Hi, there was also a not-so-beatup R390a there for $900, "make me an offer". I didn't. This unit was

shrink wrapped, and looked clean. I later saw it unwrapped, the knobs were cleaned down to the metal, ready to be coated. I think it left the swapmeet with the seller. I was surprised by some of the good prices on 50's/60's BA's, lower than I thought from experiences in the past. I didn't buy anything because I have enough for now and sold an HRO-50T to a guy that traveled across state to attend, from a town 8 miles away from me here. He was delighted to find one, Dan.

From: roy.morgan@nist.gov Date: Mon, 13 Mar 2006 21:58:21 -0500
Subject: Re: [R-390] Poor man's R389

Quoting : I have never had a receiver to access VLF. Anybody have any suggestions on inexpensive converters for HF receivers such as the R-390A?

DW,

There have been converters made and published in ham journals. But they overload, suffer from feedthrough and have other maladies. Heath made one, and Palomar Engineering does still, and it appears to be head and shoulders above the Heath one I have used. Cost is $100.00 http://www.palomar-engineers.com/VLF/vlf.html

"Many receivers do not cover the VLF band below 500 KHz or, if they do, have greatly reduced sensitivity there. QST's reviewer (Jan. 2000) reported: "the difference was astonishing. In many cases I couldn't hear the navaids at all with the IC-706, but they were clearly audible when received through the Palomar converter."

The VLF Converter has excellent sensitivity. It also has a 7-pole filter to eliminate overload from local medium wave broadcast stations.

It connects between your antenna and the radio. When turned "On" the 10-500 KHz band appears at 4010-4500 KHz for general coverage radios (Model VLF-S) or at 3510-4000 KHz for ham-band-only radios (Model VLF-A). When turned "Off" the antenna connects directly to the radio for normal shortwave reception."

FAR Circuits almost certainly has a kit (circuit board and magazine reprint) for very modest money. You buy parts and enclosure and build it yourself. Cheapest way to get one of these converters:

The downloadable catalog http://www.farcircuits.net/FAR_CKTS.pdf lists: 73's Dec91 VLF SPACE SHUTTLE RECEIVER $7.50
COMM. QUARTERLY Winter94 JOE CARR VLF RECEIVER $6.00
LOW &MEDIUM FREQ SCRAPB00K 9th ED RADIO CORNELL REGEN RECEIVER PREAMP $4.00
POPULAR ELECT Feb95 AAVSO VLF RECEIVER PREAMP BY CARR $6.00
(I see no converter, but the Low and Medium Frequency Scrapbook likely has one.)

There is a simple "mod" for the R-390A to let it hear below the normal lower limit of 500 kc: Simply feed your antenna into the radio at one of the test points in the RF deck *after* the input tuned circuits (through a cap to avoid messing up any AGC.)

It may overload, suffer from cross modulation and so on, but it gets you started with zero actual modifying, building, or expense. A preslector or low pass filter (or both) may be very useful, depending

on your antenna and location. Roy, K1LKY

From: DJED1@aol.com Date: Mon, 13 Mar 2006 23:05:57 EST
Subject: Re: [R-390] Poor man's R389

writes: I have never had a receiver to access VLF. Anybody have any suggestions on inexpensive converters for HF receivers such as the R-390A?

Palomar makes a converter which shifts the 0-500 KHz band up to 4.0-4.5 MHz. I got one and used it with my R-390A. It worked well, but I quickly lost interest in tuning the VLF bands. Costs a bit more than $100, so it's a LOT less expensive than a R-389. Ed

From: "Steve & Carol" <srosenb2@nycap.rr.com> Date: Tue, 14 Mar 2006 02:31:16 -0500
Subject: [R-390] Longwave Products 6 Khz AM filter for R390a by Dave Curry.

Hi Guys,

Has anybody installed one of these filters in there R390a and if so what do you think of it for the price? $199 Steve, WA2TTP

From: "Walter Wilson" <wewilsonjr@gmail.com> Date: Tue, 14 Mar 2006 06:31:01 -0500
Subject: Re: [R-390] Longwave Products 6 Khz AM filter for R390a by Dave Curry.

wrote: Has anybody installed one of these filters in there R390a and if so what do you think of it for the price? $199 Steve, WA2TTP

I've only had experience with this one time. I remember it sounding better than any other R-390A filter for AM. Walter - KK4DF http://www.r-390a.us

From: Jack Absalom <kf4yio@charter.net> Date: Tue, 14 Mar 2006 10:01:28 -0500
Subject: [R-390] R390 type meter cover

Hi Y'all

I'm almost finished with the restoration of my 1963 Teledyne R390A and am in need of one black metal meter cover. If anyone has any to spare or want to sell, please contact me at KF4YIO@charter.net. Thanks in advance. 73 - Jack

From: Phil <tubesareking@yahoo.ca> Date: Tue, 14 Mar 2006 10:06:34 -0500 (EST)
Subject: [R-390] Dave Curry 6 KC filter for R-390A

Steve wrote: Has anybody installed one of these filters in there R390a and if so what do you think of it for the price? $199

Steve, I bought one of these for my R-390A but have not yet had the chance to take my 1955 Collins R-

390A out of its Hammond table top rack case as yet. Partly this is because I recently got a Stromberg-Carlson[Collins designed] R-392 and have been enjoying playing with it!

Whether $199 is a good deal or not - well, that depends. In my case, my 4 KHz filter is dead. 4 KHz filters are probably the most likely to go bad and the hardest and most expensive to find. So I will use the 6 KHz Dave Curry filter to replace the 4 KHz filter, giving a filter line up as follows:

.1 KHz CW
1.0 KHz CW
2.0 KHz SSB
6.0 KHz MW DX, SW and "high fi" AM modulated HF amateur radio
11.0 KHz MW general and "high fi" SW [described as 8 KHz but actually 11!]
16 KHz MW local

I'm primarily a MW DXer, with a secondary interest in SWL and a tertiary [my big word for the day] interest in ham]. I also like HiFi audio, so nobody can convince me to give up that lovely sound 16 KHz.

If my 4 KHz filter worked fine, I would not spend the $199. But if my 4 KHz was good but my 8 KHz was dead, I probably would get the Curry 6 KHz filter too.

The most common is to remove the 16 KHz filter and put in the 6 KHz Curry unit, but you would never see me do that!

The Curry unit uses "PC board" lugs. Translation, use a low wattage soldering iron and work carefully to avoid lifting copper traces.

Also, the ER mag reprint which serves as instructions is kind of vague. The gist of it is that you do not use trimmers at all, and do not use the trial and error pf caps either.

IF output apparently goes WAY up, so if you have just one Curry filter setting IF gain may be a bit of a compromise.

But I have heard great things about them. From a user point of view, having a brand new filter to use most of the time, taking the load off the others, is a fine idea too.

Hope this helps and hope others who have actually used and installed one will chime in! Phil Rafuse PEI Canada

From: Albert Santangelo <ve3ajm@sympatico.ca> Date: Tue, 14 Mar 2006 10:06:48 -0500
Subject: Re: [R-390] Longwave Products 6 Khz AM filter for R390a by Dave Curry.

wrote: > I've only had experience with this one time. I remember it sounding better than any other R-390A filter for AM.

I installed the Dave Curry 6kc filter into my R390A in place of the 16kc filter last year and am very pleased with it. The installation took me about an hour, and the supplied instructions were very helpful. For me, the 4kc filter can be too narrow sometimes, and the 8kc position can be a little too wide when dealing with QRM either on the ham bands or SWLing. So the 6kc filter fills in the gap there for me.

I see higher gain in the receiver when using this filter, of about 10db, perhaps due to the aging of the original mechanical filters in the set.

It is a pricey option, but I could justify it for the most part because I didn't have to pay a high premium for the receiver. Al Santangelo VE3AJM

From: "pete williams" <jupete@bigpond.net.au> Date: Wed, 15 Mar 2006 14:29:41 +1100
Subject: [R-390] Racal manual WANTED

G'day.. would anyone have or direct me to a site wherein there could be a manual for a RACAL DANA counter model 9916. Thanks Pete D . Williams METUNG 3904 Australia

From: "Michael J Talkington" <kc8fwd@verizon.net> Date: Wed, 15 Mar 2006 07:53:08 -0500
Subject: [R-390] R-390/URR Parts Wanted

Hello,

I need the round clip and nut that holds the 6082 regulator tubes in place on a R-390/URR.This item goes on top of the tube to hold it in place.I need the whole unit with relay where the Twin-Ax Connector is my relay is bad and it has been modified. Does anyone have these two parts for sale thanks Mike KC8FWD

From: "dps4@juno.com" <dps4@juno.com> Date: Wed, 15 Mar 2006 14:18:06 GMT
Subject: Re: [R-390] R-390/URR Parts Wanted

Mike,

I bought one of the relay units from Fair Radio several years ago. The price was reasonable and included the relay. Good Luck W8GWI David Seckel

From: "john d kopke" <jdkopke@cablespeed.com> Date: Wed, 15 Mar 2006 16:22:59 -0500
Subject: [R-390] TMC-Exciter, Driver, MMX MX-2.

Gentlemen;

I know that this may be a little off topic, however, I don't think that there is any other place with a greater amount of knowledge or experience, which brings me to my subject. I am searching for a manual for a TMC Exciter model MMX-MX-2 , would anyone be able to give some direction as to, how to find or copy one ? Thank You for any Information; john

From: "Don Heywood" <wc4g@knology.net> Date: Wed, 15 Mar 2006 20:28:01 -0500
Subject: [R-390] 6082WB tubes on eBay

GE All,

there is a fellow selling 6082WB regulator tubes for your R-390's. I just bought four. Beware of the shipping charges. 73 Don WC4G Charleston, SC

From: "Leigh Sedgwick" <bipi@comcast.net> Date: Wed, 15 Mar 2006 19:35:14 -0800
Subject: [R-390] Now How Much Would You Pay?

I have really tried my best to ignore these threads on e-Pay sales posted to the reflector but I just can't help myself posting this one...good grief!

http://cgi.ebay.com/Nameplate-Amelco-for-Collins-designed-R-390A_W0QQitemZ5879987475QQcategoryZ1502QQrdZ1QQcmdZViewItem 73 de Mike K7PI

From: "Jim M." <jmiller1706@cfl.rr.com> Date: Wed, 15 Mar 2006 23:34:23 -0500
Subject: Re: [R-390] Now How Much Would You Pay?

I'm holding out for a Helena Rubenstein name plate myself.

From: radiograveyard@aol.com Date: Wed, 15 Mar 2006 23:38:45 -0500
Subject: [R-390] Now how much to Pay?

Lets make it a real hold out a Fowler plate

From: <w9ya@arrl.net> Date: Thu, 16 Mar 2006 03:38:43 -0500 (EST)
Subject: Re: [R-390] Now How Much Would You Pay?

http://cgi.ebay.com/Nameplate-Amelco-for-Collins-designed-R-390A_

Must be the screws that make that price so attractive. Vy 73; Bob w9ya

From: "Cecil Acuff" <chacuff@cableone.net> Date: Thu, 16 Mar 2006 07:48:52 -0600
Subject: Re: [R-390] Now how much to Pay?

Yea with a blank serial number spot so you can stamp anything you want in there.....and a botched up contract number so it's hard to figure out which contract it really came from.

How about some Fowler rubber stamps for module marking....

Guy could make a fortune..... R-390A counterfeiting....there's no law against that is there? Nomex undies on! Cecil....

From: "Cecil Acuff" <chacuff@cableone.net> Date: Thu, 16 Mar 2006 07:51:03 -0600
Subject: Re: [R-390] Now How Much Would You Pay?

Go Figure.....

I have a few of those in the shop...attached to radio's....and that's where they will stay. That's crazy! Cecil...

From: "Cecil Acuff" <chacuff@cableone.net> Date: Thu, 16 Mar 2006 07:53:07 -0600
Subject: Re: [R-390] 6082WB tubes on eBay

Thanks for the heads up Don...that's a good price too. Cecil...

From: "Tom Bridgers" <Tarheel6@msn.com> Date: Thu, 16 Mar 2006 09:25:06 -0500
Subject: Re: [R-390] Now How Much Would You Pay?

Me too! -tom

From: "john d kopke" <jdkopke@cablespeed.com> Date: Thu, 16 Mar 2006 09:32:45 -0500
Subject: Re: [R-390] Now How Much Would You Pay?

In deference to Helena -Rubenstein's R=390A's, I thought that it was said that MAX (read Art Collins) FACTOR. "pronuncia- tion required". John

From: odyslim@comcast.net Date: Thu, 16 Mar 2006 16:34:50 +0000
Subject: [R-390]much to Pay? Amelco/ Capehart

I was told that Amelco and Capehart were made in the same building . Is this true. Does anybody know? My reason for asking is I have an Amelco with come Capehart parts inside. Scott W3CV

From: Michael OBrien <mikobrien@yahoo.com> Date: Thu, 16 Mar 2006 09:22:00 -0800 (PST)
Subject: Re: [R-390]much to Pay? Amelco/ Capehart

Hi All

I asked the same type of question a few years ago and this is what I was told:

Here is the story on the Amelco/Teledyne connection.

The Amelco story starts with Teledyne. In the fall of 1960 Dr. Henry Singleton and Dr. George Kozmetsky left Litton Industries and formed Teledyne Inc. Teledyne's first acquisition was to purchase a small electronic "build to print" manufacturing company in Los Angeles named Amelco, which was located on Panama Street in Culver City. Amelco was the first operating company of Teledyne. They bid and won contract 35064-PC-62 for the manufacture of R-390A's in late in early 1962. The first units were manufactured and shipped with the name Amelco on the name tags. Before all units on this contract were shipped, the name of the company was changed to Teledyne Systems Corporation and the remaining units under this contract were shipped under that name.

In the meantime, another Los Angles area company named Imperial won contract 37856-PC-63 to make R-390As. Teledyne acquired Imperial shortly thereafter, and all units shipped under the names Amelco, Teledyne Systems Corporation and Imperial were manufactured and shipped from the plant on Panama Street in Culver City. According to my research, about 7600 radios were built by Teledyne under the three company names and two orders.

In summary, the Teledyne production of R-390As looked something like this (hope the tabs don't mess it up):

Badge Name	Order No.	High s.n. noted
Amelco	35064-PC-62	2540
Teledyne Systems Corp	35064-PC-62	3642
Imperial	37856-PC-63	3022
Teledyne Systems Corp	37856-PC-63	3976

Total Production, at least 7619 sets. Hope this helps. 73 Tom N5OFF

From: DJED1@aol.com Date: Thu, 16 Mar 2006 13:09:54 EST
Subject: Re: [R-390] Now How Much Would You Pay?

I've got one too. Looks like the radio and my stash of 3TF7s will see me through retirement just fine.

"LOOK! Collector Quality **RARE** Amelco R-390A, matching modules, original nameplate with screws, **RARE** Progressitron PTO only used in certain unmentionable applications, etc. Probably worth $50,000 or so. " But I think I'll keep it for now. Ed

From: "Don Heywood" <wc4g@knology.net> Date: Thu, 16 Mar 2006 14:10:10 -0500
Subject: [R-390] 6082WB Tubes on eBay

The seller has discovered a problem with the shipping calculator on his listing and has refunded most of the previous shipping charges into my paypal acct. The shipping is now reasonable as well as the tube price. It's a good deal. 73 Don WC4G

From: "Les Locklear" <leslocklear@cableone.net> Date: Thu, 16 Mar 2006 15:03:51 -0600
Subject: Re: [R-390]much to Pay? Amelco/ Capehart

Amelco started the 35064-PC-62 contract for 5,000 receivers, they were purchased/acquired by Teledyne who built the remainder of the R-390A's under the same contract number. Les Locklear

From: Dan Arney <hankarn@pacbell.net> Date: Thu, 16 Mar 2006 17:32:10 -0800
Subject: Re: [R-390] Now How Much Would You Pay?

Mike I sell mine all day long for all of the contracts with S/N of choice for $30.00 mailed First Class in USA. Hank KN6DI

From: Dan Arney <hankarn@pacbell.net> Date: Thu, 16 Mar 2006 17:51:40 -0800
Subject: Re: [R-390]much to Pay? Amelco/ Capehart

My understanding is that Capehart was taken over by Amelco and the end producer was Teledyne. Either Tom M. or Les can set you strait on that. Hank KN6DI

From: Jack Absalom <kf4yio@charter.net> Date: Thu, 16 Mar 2006 19:43:52 -0500
Subject: [R-390] Teledyne serial number contract question

Hi everyong.

Earlier today there was a post describing the manufacturing history of the Teledyne R390A contracts. That post is copied below.

>Teledyne Systems Corp 37856-PC-63 3976

I have Teledyne Systems Corp 37856-PC-63 serial number 3976. Does this mean that I might have the last Teledyne R390A manufactured????? Interesting huh? Jack - KF4YIO

From: "Bob Young" <youngbob53@msn.com> Date: Thu, 16 Mar 2006 22:32:50 -0500
Subject: Re: [R-390] Teledyne serial number contract question

Where does Capeheart come in the scheme of things? Bob Young Millbury, ma

From: aromero@rodio.com Date: Fri, 17 Mar 2006 09:16:09 +0100
Subject: [R-390] tubes 26Z5

Hello to all; please where I can buy 4 tubes 26Z5 power supply of my R-390??? Many thanks, Antonio, ea7ely

From: "Les Locklear" <leslocklear@cableone.net> Date: Fri, 17 Mar 2006 07:23:13 -0600
Subject: Re: [R-390] Teledyne serial number contract question

> Where does Capeheart come in the scheme of things?

Capehart Corp. Order Number 21582-PC-61 (1961 order)

Capehart Corp. Mfd. for Adler Electronics Order Number 20878-PC-63 (only five units can be accounted for)

Capehart Corp. was a home stereo (hi fidelity) manufacture and was owned by Senator Capehart. Les Locklear

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Fri, 17 Mar 2006 09:55:22 -0500

Subject: [R-390] Army/Navy/MARS/other "customer" breakdown for 390A's?

We've got a good background on the various manufacturers/nameplates of R-390A's. I'm not claiming it's perfect, but it certainly satisfies most of my curiosity about who built what and when.

What I do not necessarily know is a breakdown of the "users" of the 390A's. Obviously there's the "Navy diode load point on the front panel" mod. I don't know if every Navy unit had this done or just certain ones. My guesstimate is that most of the radios sold by Fair over the last couple years came through the Navy chain based on this mod and pictures and comments that I read. But of course this is heavily influenced by where Fair got them from, right? So just because most of the Fair Radio chassis had the doide mod I would be wrong to say that most 390A's were used by the Navy?

Was there any cross-pollination between Army and Navy depot repair? i.e. Did Tobyhanna do Navy radios too?

I also know that certain 390A's went to hams in MARS, many of which have passed away and their equipment redistributed. Did MARS ever want radios back? Could radios be turned back in to MARS for depot maintenance and you got a refurbed radio, or were the hams pretty much on their own after they got issued equipment?

Also I'm sure that certain units went to embassies/spy agencies/military contractors etc. and might have been maintained outside the depot system. But I'm guesstimating that these numbers are in the very very low percents.

And of course there were the EAC/Hammarlund "consumer" units offered for sale in the late 60's... a hundred or so in total? In any event these had unique nameplates and serial number run, right?

So, finally: Is it safe to say that if wasn't a Navy radio, and it wasn't a MARS radio, and it wasn't an embassy/spy agency/contractor radio, and it wasn't a consumer unit, that it was probably a Army unit? Or is there a category of user that I'm missing out on?

Sorry if these are all silly questions. What little I know about military repair depots I've guessed or read here. And while I've seen the ex-MARS units 30 years after the fact, I don't understand the MARS organization as it was in the 60's. Tim.

From: "n4buq@knology.net" <n4buq@knology.net> Date: 17 Mar 2006 15:43:01 -0000
Subject: [R-390] SSB R390A on eBay

I was strolling around the action site and noticed one of the new R390A offerings includes what appears to be a factory-installed (or mil-modified) SSB adapter. Anyone else see that?

Barry - N4BUQ (no, that R390A's not mine nor do I know the owner)

From: "KC8OPP Roger S." <kc8opp@yahoo.com> Date: Fri, 17 Mar 2006 08:03:19 -0800 (PST)
Subject: Re: [R-390] Army/Navy/MARS/other "customer" breakdown for390A's?

wrote: > So, finally: Is it safe to say that if wasn't a Navy radio, and it wasn't a MARS radio, and it wasn't an embassy/spy agency/contractor radio, and it wasn't a consumer unit, that it was probably a

Army unit? Or is there a category of user that I'm missing out on?

Tim,

Don't forget about US Air Force, we had lots of R-390A's at the school house on Keesler AFB in the early 70's. 73's Roger, MSgt, USAF ret ex 30474 KC8OPP

From: "Les Locklear" <leslocklear@cableone.net> Date: Fri, 17 Mar 2006 14:07:16 -0600
Subject: [R-390] This should be the official list clock

http://www.eldocountry.com/projects/tubeclock.html

Obviously someone with spare time on their hands..... Les Locklear

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

From: "Cecil Acuff" <chacuff@cableone.net> Date: Fri, 17 Mar 2006 14:39:19 -0600
Subject: Re: [R-390] This should be the official list clock

> http://www.eldocountry.com/projects/tubeclock.html That is the ultimate cool! Cecil....

From: DJED1@aol.com Date: Fri, 17 Mar 2006 17:01:16 EST
Subject: Re: [R-390] SSB R390A on eBay

I did notice it- I thought it was strange that the sideband selector only has USB and not LSB. I assumed it was homebrew, but I could be wrong. Ed

From: "Francesco Ledda" <frledda@verizon.net> Date: Fri, 17 Mar 2006 16:32:14 -0600
Subject: RE: [R-390] SSB R390A on eBay

What is the e*** number?

From: "TChirhart" <sparks@codepoets.com> Date: Fri, 17 Mar 2006 22:00:02 -0500
Subject: [R-390] R-390A help

This is my first R-390A project. I have an Imperial 1963 vintage R-390A and the previous owner may have modified it. First of all, all 3 fuse holders are either missing or have been bypassed, the AC, B+ 1/8 amp and B+ ¼ amp have been bypassed with F-102 B+ ¼ amp fuse holder missing..

F-102 B+ ¼ amp fuse socket, near power supply is missing and two wires soldered together.
F-101 AC 3 amp fuse has been bypassed, fuse socket broken
F-103 B+ 1/8 amp, fuse bypassed inside.

In the power supply, the 2x 26Z5's are missing, the metal tube sockets crimped and a selenium rectifier

installed over the sockets and the F-102 fuse holder is missing, apparently this is a modification. But why would you bypass the AC and 1/8 amp B+ fuse?

Am I missing something here?

It makes no sense to bypass all 3 fuses, especially the AC fuse socket. The fuse holders are damaged, but can easily be replaced. I would hope that the previous owner had enough sense to replace a simple fuse holder...but...

I've pulled out all the tubes and found over half of them bad or very weak.

This is my first time going into an R-390A so I'll need some advice from you experts.

Also does anyone have the top and bottom covers for an R-390A? Thanks in advance73 Tom K4NCG

From: "Cecil Acuff" <chacuff@cableone.net> Date: Fri, 17 Mar 2006 21:31:46 -0600
Subject: Re: [R-390] R-390A help

Hi Tom,

Congrats on the R-390A. You'll enjoy the project. Sounds like the fuse holder problem is easily fixed and pretty obvious as to how to do it. If I remember correctly one of the fuse holders never had anything connected to one lead...I am working from memory here but I think it is the one marked 20 amp....I'll have to go look.

Pull the power supply out and look under the bottom side of the tube sockets...I am guessing you'll find solid state rectifiers soldered onto the tube socket pins. That was a military mod. Crushing the tube socket bases was to ensure tubes were not placed in the sockets after the mod was done. It's no big deal. You will find differences of opinion on the list as to the suitability of the mod but personally it works fine. The selenium rectifier is factory...it supplies a couple of things. The break-in relay and the antenna relay. If it's not causing the relay to buzz or chatter it's ok for now. I usually replace them with a silicon bridge just to improve long term reliability...they are quite nasty if they fail and spew their guts!

The top and bottom covers are available as reproductions or Fair Radio may have some. The reproductions are sold on ebay quite regularly... Hope that helps... Cecil...

From: "Barry" <n4buq@knology.net> Date: Fri, 17 Mar 2006 21:42:38 -0600
Subject: Re: [R-390] SSB R390A on eBay

5880089680 Barry - N4BUQ

From: Dan Arney <hankarn@pacbell.net> Date: Fri, 17 Mar 2006 21:47:21 -0800
Subject: Re: [R-390] R-390A help

Hi Tom,

I have the new covers for the R-39X series, plus the RF Deck, AC power covers and AC cable clamp. I also have the peel N stick OSC. module band indicator strip. Hank KN6DI

From: Barry Hauser <barry@hausernet.com> Date: Fri, 17 Mar 2006 23:23:06 -0500
Subject: Re: [R-390] R-390A help

Cecil wrote: > If I remember correctly one of the fuse holders never had anything > connected to one lead...I am working from memory here but I think it is > the one marked 20 amp....I'll have to go look.

20 amp? That's the DC fuse on the R-390/R-391, not on the R-390A. Probably not used on stock R-390's, but is used for the 28 vdc external supply for the autotune on the R-391, thus probably not connected in the R-390. (also might have been for some other 28 vdc equipment on the R-390, or for an alternate dynamotor supply -- but those have "@RARE@" encrypted into the contract number.

All three fuses should be wired in to properly protect an R-390A. You're right Tom -- it makes no sense to bypass them, unless you feel lucky, very lucky. ;-)

> Pull the power supply out and look under the bottom side of the tube > sockets...I am guessing you'll find solid state rectifiers soldered onto > the tube socket pins. That was a military mod. Crushing the tube socket > bases was to ensure tubes were not placed in the sockets after the mod was > done. It's no big deal. You will find differences of opinion on the list > as to the suitability of the mod but personally it works fine. The > selenium rectifier is factory...it supplies a couple of things. The > break-in relay and the antenna relay. If it's not causing the relay to > buzz or chatter it's ok for now. I usually replace them with a silicon > bridge just to improve long term reliability...they are quite nasty if > they fail and spew their guts!

I dunno, sounds like Tom was possibly referring to an _added_ selenium rectifier. If the previous owner jumpered out all the fuses (wore a sombrero and said at the time "wheee don' need no steeenkin' fuses. Hah Hah Hah Hah Hah. But wheee do need another maybe steeeking selinium rectifiers!") Could have felt fuses were superfluous but seleniums were the best thing since sliced bread -- and look something like a bread slicer. Probably not, but ya' never know. "Radio Bart does it again! Rare fuseless double-selenium Collins designed, almost-Mish-Rippel-like R-390A. So reliable was this model with it's rare Cosmos PTO and special, high reliability hermetically sealed molded capacitors, drift-proof carbon comp resistors, and mercury-laced MFP coating -- it didn't need the protection of common glass fuses ..."

(Am I getting the hang of that? Sometimes I scare myself.) My 2 cents woith. Barry

From: "Barry" <n4buq@knology.net> Date: Fri, 17 Mar 2006 23:01:39 -0600
Subject: [R-390] URM25 Accessories F/A?

I hope I don't get in trouble for posting a bunch of eBay references, but I saw this one and knowing that some of you guys on this list have URM25 signal generators, I thought these might be of interest, especially at the going price. eBay item # 5879467142 Barry - N4BUQ

From: "paolo gramigna" <paolo.gramigna@controllo.it> Date: Sat, 18 Mar 2006 10:16:06 +0100
Subject: [R-390] R: R-390A Help

Hi,

you indeed are looking for a LOT of help! First of all: do you have a manual? if not, go to http://www.hausernet.com/r390a/ and download the Y2K manual. it is worth his weight in gold and sweat.

Second, RESTORE THOSE FUSES. you will need them in place, believe me. Third, do not throw away the "low" tubes; sometimes, an old tube is so much less noisy than a new one that it's better to leave them alone. All that said, a good source for spare parts (including those covers) is www.fairradio.com good luck! Paolo from Italy

From: "Tracy Fort" <beerbarrel@cox.net> Date: Sat, 18 Mar 2006 06:42:03 -0500
Subject: [R-390] Where would you start?

Just got a new 390a the other day. It seems to have arrived with a little problem. It has extremely low audio output. I don't know if something was shaken loose in shipping or not but it all looks good and was packed well. Tuned to a local AM station with rf gain and audio maxed out I can barely hear audio. I get very little carrier reading. It's slightly above zero. No movement on the line meter either. I'm trying to figure out if it was working OK before it was shipped and am waiting on a response from the seller. I'm pretty sure that it was but wanted to make sure before I started getting to deep into it. Are there any problems that jump out at anyone right away that could be easy to check? Tracy

From: "Tracy Fort" <beerbarrel@cox.net> Date: Sat, 18 Mar 2006 06:52:56 -0500
Subject: RE: [R-390] Where would you start?

I got carrier level to come up but no audio impoovement. Tracy

From: "Clemens S.Ostergaard" <clemens@it.dk> Date: Sat, 18 Mar 2006 13:19:20 +0100
Subject: [R-390] Army/Navy/MARS/other "customer" breakdown for 390A's?

writes _"Also I'm sure that certain units went to embassies/spy agencies/military contractors etc. and might have been maintained outside the depot system. But I'm guesstimating that these numbers are in the very very low percent."

I think this underestimates the numbers employed during the Cold War in "elephant cage" and other arrays surrounding the Soviet Union (and China), from Norway to Turkey to Yemen to Thailand to South Korea, etc. etc. rooms and rooms with walls full of them in all the allies. Also rx's sold to the three-letter agencies of allies in the sixties. But others on this list can better estimate that field of employment of the R-390A.

And by the way, the sun is shining today: I just found a working 56-contract Motorola for $120 while today on German e-bay a nice Capehart sold for $2500. Best, Clemens S.Ostergaard DENMARK

From: "Tracy Fort" <beerbarrel@cox.net> Date: Sat, 18 Mar 2006 07:32:46 -0500
Subject: RE: [R-390] Where would you start?

Paolo,

I'm so-so at it. I'm not close to an expert though. I do have the manual. I was just hunting quick things to check. I can't tell is sensitivity is Ok because volume is quite low. At this point, I'm thinking that it's only audio. I'm think I might check for the leaky cap at V507 tube socket. I lose volume completely if I turn off limiter switch. Thanks, Tracy

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sat, 18 Mar 2006 08:51:00 -0500
Subject: Re: [R-390] R-390A help

> wrote: > This is my first R-390A project. I have an Imperial 1963 vintage R-390A > and the previous owner may have modified it. First of all, all 3 fuse > holders are either missing or have been bypassed, the AC, B+ 1/8 amp and > B+ ? amp have been bypassed with F-102 B+ ? amp fuse holder missing..

A couple of thoughts:

1. Verify that the original B+ wiring is still there and intact. Wire colors and diagram are in the Y2K manual. Also look for charring etc. on the wiring harness and check out the filter inductors (on the AF deck) for continuity.

2. Verify that the wiring harness you have is one appropriate for B+ fuses. It is vaguely possible that someone transplanted a back panel with fuseholders for B+ onto a chassis with a wiring harness that didn't have B+ fuse connections.

> In the power supply, the 2x 26Z5?s are missing, the metal tube sockets > crimped and a selenium rectifier installed over the sockets and the > F-102 fuse holder is missing, apparently this is a modification.

Is it vaguely possible that the "selenium rectifier installed over the sockets" is an approx 200 ohm resistor (maybe with fins?) and that there are diodes under the sockets?

> But why would you bypass the AC and 1/8 amp B+ fuse?

Original radios had no B+ fuses. But it makes no sense at all to bypass the AC fuse. Tim.

From: Jack Absalom <kf4yio@charter.net> Date: Sat, 18 Mar 2006 09:39:03 -0500
Subject: [R-390] possibly the last teledyne R390A

Hi group

I am finishing my restoration of a Teledyne R390A that I think may be the last one built by Teledyne.

I know that Teledyne bought out Imperial in 1963 and finished their contract 37856-PC-63 using the name "Teledyne Systems Corp" and that the highest serial number they built was 3976.

Well, my Teledyne Systems Corp R390A has the following information on the front panel label.

RECEIVER, RADIO R-390A/URR
SERIAL NUMBER 3976
TELEDYNE SYSTEMS CORP
37856-PC-63 U.S.

At least one of the modules has the same markings. It looks like everything fits so I thought I'd ask you all what you think. Could this be the last Teledyne R390A built? Jack

From: "Les Locklear" <leslocklear@cableone.net> Date: Sat, 18 Mar 2006 09:20:08 -0600
Subject: Re: [R-390] possibly the last teledyne R390A

That highest serial number is the highest serial number that was reported to either Tom Marcotte or myself when we ran that informal survey years ago. Those contracts were typically for 5,000 units with the exception of the 1967 EAC contract for 10,000 + and various small contracts to both military and civilian governmental agencies. Les Locklear

From: TVComlGuy@aol.com Date: Sat, 18 Mar 2006 15:58:17 EST
Subject: [R-390] re R-390A SSB

Hi to the group,

I had an R-390A a few years ago that had the same type plug on the i.f. strip and the same switch arrangement. Mine had a metal overlay on the front under the switch that was the same color as the receiver with the USB, AM, CW, and LSB letters silkscreened on it. The pictures don't show if this one, has the extra box behind the front panel. The story I got at the time I had mine was that Imperial Radio converted about 50 of these. Ron, KB0WAR

From: odyslim@comcast.net Date: Sat, 18 Mar 2006 23:26:56 +0000
Subject: [R-390] 6082's on eBay

Only 73 tubes out of 200 left! He is a good seller! Scott W3CV

From: "Les Locklear" <leslocklear@cableone.net> Date: Sat, 18 Mar 2006 18:06:43 -0600
Subject: Re: [R-390] re R-390A SSB

There were a couple of versions, some with the two x-tals and tube on the blank end of the audio deck and some behind the front panel. The tubes used was a 6U8A. Not real R@RE either.....:-) Les Locklear

From: "john d kopke" <jdkopke@cablespeed.com> Date: Sat, 18 Mar 2006 21:00:26 -0500
Subject: [R-390] Off Topic Help.

Gentlemen;

I have a TMC-Exciter from a 40 Thousand Watt Voice of America Transmitter Model -MMX-MX-2, I

am searching for a Manual or a copy of a Manual, any help or direction will be greatly appreciated. Thank You; john d. kopke

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 18 Mar 2006 20:12:16 -0600
Subject: Re: [R-390] 6082's on eBay

Pricing them right helps a bit too! Cecil...

From: Fernando Quinones N2FQ <n2fq@sbcglobal.net> Date: Sun, 19 Mar 2006 09:22:34 -0800
Subject: [R-390] Hosing those 390A, a short pictorial

Hello to all.

Awhile back I posted a picture of my R-90A's in a rack, which all needed a good cleaning.
So.. after reading previous posts here as to how go about it, I decided what someone suggested but never shown, that is to hosed them down.

I used Simple Green and a water hose, perhaps I committed HariKari. Here are some pictures for your enjoyment.

< http://pages.sbcglobal.net/nf6q/R-390A's/R-390A's.html >

Oh.. the darn thing are to heavy for my oven self, so they are bathing in the California Sun. hi

While I'm at it, let make a plug now. To subsidize the rebuild of two of my keepers, I'm selling two R-390As (Collins), one with engrave panel and the other with decals, they both work by the way, as well as the SSB Adapter (never plug in so don't know if it works or not, but all there).

Please contact me off list if interested. Fernando N2FQ <http://pages.sbcglobal.net/n2fq>

From: <mfisch@kent.edu> Date: Sun, 19 Mar 2006 12:31:52 -0500
Subject: [R-390] Cosmos PTO

Hi:

I know there is a lot about the Cosmos PTO out there, but nerves have got the best of me. I want to adjust the end point (out by about 1 kHz) and I took off the screw to adjust the end point, but the end point adjustment screw looks like a spanner nut with a rubber center. Do I just take a 1/8 inch blade screwdriver and have ho or is there something I need to be careful of? I was expecting a slot and it looks like I should stone a screwdriver to have parallel sides. Is this the case? Thanks in advance. Mike

Date: Sun, 19 Mar 2006 12:44:53 -0500
From: shoppa_r390a@trailing-edge.com (Tim Shoppa)
Subject: Re: [R-390] Cosmos PTO

wrote: > I know there is a lot about the Cosmos PTO out there, but nerves have > got the best of

me. I want to adjust the end point (out by about 1 kHz) > and I took off the screw to adjust the end point, but the end point > adjustment screw looks like a spanner nut with a rubber center.

Well, two months ago I didn't know what a Cosmos expert was, now I is one!

There are three "holes". The endpoint one is the one that is partially obscured by the transformer can. Removing the can might help get you access (especially if you have a stiff-bladed driver). BUT... I think there is "hot" wiring inside the transformer can so be careful if you do so. If you do not remove the transformer can you can use a metal screwdriver without fear.

The one next to the endpoint hole reveals all the little linearity adjustment screws. (I bought the 4-flute spline driver for these from McMaster, let me know if any of you need the official McMaster part number.)

And there's a third hole that reveals the thermostat set point. This is a BIG (in comparison) brass screw.

Not sure what a "spanner nut with a rubber center" is, but the endpoint inductor has a brass three-wing section that has an external nut which can tighten down on the brass adjustment screw. I think the purpose of the three-wing section is that it is adjusted to minimize wiggling/backlash of the internal brass adjustment screw. The brass screw is attached to the slug.

If you find you do not have enough adjustment range, you probably have to open to the PTO can and adjust the turns on the inductor. Others talk about removing whole turns, but for mine I found that removing half a turn (reversing the direction of the winding so it went from 2.75 turns to 2.25 turns) was the best choice. In my case removing a whole turn took me too far in the direction of increasing the span. But removing half a turn got me in the "sweet spot". Since you're only 1kHz off in endpoint, maybe you don't have to do this surgery. But if you find yourself with the brass screw all the way inside the three-wing clamper, or sticking out so far it would interfere with the threaded cover, then maybe it's time.
Tim.

From: "Jon" <jonklinkhamer@comcast.net> Date: Sun, 19 Mar 2006 13:12:26 -0500
Subject: [R-390] Calibration issue

Hello Group,

I'm in the process of going thru electrical calibration on my R390A. I noticed a couple of things when I turned on the calibration signal. After I zero adjusted it to achieve zero beat frequency I can basically do two things in which I would have to zero beat it again. First by just going +/- say 50khz (or maybe even less) around the calibration point, in this case 09.000 I would have to re zero and there would be a good tone not just a little off beat. The other observation is by just sitting on the calibration mark and returning after about 15 minutes it again would be off. However not as bad. BTW the receiver has been warmed up for at least 2 hours in advance. I guess I'm trying to pin down whether the BFO or PTO is drifting or maybe the 100Khz signal is off. Thanks, Jon, KB1Dc

From: "Tracy Fort" <beerbarrel@cox.net> Date: Sun, 19 Mar 2006 13:05:59 -0500
Subject: RE: [R-390] Where would you start?

Thanks for all the replies guys. I write this as I sit here red faced.... It's amazing what happens when you put the Diode load jumper back in..... Tracy

From: "Bill Hawkins" <bill@iaxs.net> Date: Sun, 19 Mar 2006 12:44:17 -0600
Subject: RE: [R-390] Hosing those 390A, a short pictorial

Fernando,

It's been my experience that spraying detergent just irritates the dirt without removing it. You need a soft bristle brush to break it loose. Soft bristles so you don't break any wires. Detergent is pretty good at removing the identification from the tubes.

Any detergent or even hard water can leave a conductive residue. Tektronix service people used to wash the big scopes with detergent and then follow with a distilled water rinse. The conductive residue can drop the Q of coils or change the value of trimmer caps.

It might not be too late to rinse, but once hard water deposits dry, they're hard to remove. Don't allow water to sit around after you rinse. Use canned or compressed air to blow water out of sockets and other places it can get into, then leave it to dry.

I've washed and rinsed many Tek scopes and other pieces of test equipment. They always worked fine afterwards. Never tried to wash a 390 class radio, though. Bill Hawkins

From: ToddRoberts2001@aol.com Date: Sun, 19 Mar 2006 14:31:33 EST
Subject: Re: [R-390] Hosing those 390A, a short pictorial

writes: I used Simple Green and a water hose, perhaps I committed HariKari. Here are some pictures for your enjoyment.

Hi Fernando, thanks for the interesting pictures of your R-390As being sprayed with simple green and hosed off with a garden hose. There are several things I would worry about with this procedure. It looks like you left the tubes in their sockets? The dirt and muck loosened up from the simple green and water could settle in the sockets causing problems? I would also worry about water possibly migrating into the fiberlass insulation in the crystal oven and PTO and just sitting in there wet unless the covers were removed and allowed to air-dry. Not likely but water could get into the meters and it could also get inside the carbon pots and RF/IF transformer cans and sit in there. The only thing I would dare to give the radio like the R-390A a bath in would be something non-conductive like Kerosene or Diesel fuel. In that case you have to remove the small ceramic trimmers or else the kerosene will get into the rubber gaskets and cause them to swell up, but normally kerosene will not rust or short out electronic components. But your radios may turn out just fine if everything is allowed to thoroughly dry. I know people have rebuilt the Blue-Stripers and they were sitting out in the weather and rain for who knows how long. I once washed and hosed off a really dirty SP-600 with soap and water and it is the best working SP-600 I have. I put it in front of a dehumidifier for 3-4 days and it was bone dry but I did have to take the meter apart to dry it and took off all the covers from the IF cans, etc.to air dry the innards. Good luck and let us know how the R-390As turn out! 73 Todd WD4NGG

From: "Barry" <n4buq@knology.net> Date: Sun, 19 Mar 2006 14:30:51 -0600
Subject: Re: [R-390] Where would you start?

Tracy,

A few weeks ago, I replaced some out-of-spec components on the underside of one of my IF decks. When I put it back in place, I noticed the bandwidth selector no longer had any effect. I got the same bandwidth no matter what position I selected. I scratched my head for a while and then realized I had removed the bandwidth selector switch's shaft (the one that connects it to the front panel of the IF deck) so I could more easily get to some of the parts. Duh.

As if that wasn't enough, a week or so ago, I was fiddling around with the 5814A's in the same IF deck. I was seeing the differences one tube or the other made in the AGC amplifier socket. One of them gives good grid voltage and the others don't. When I started trying to listen to it again, I noticed some of the same symptoms you describe. I then looked and noticed I had failed to plug one of the 5814A's fully back into its socket. Those kind of things happen. ;-) Barry - N4BUQ

From: "TChirhart" <sparks@codepoets.com> Date: Sun, 19 Mar 2006 16:22:55 -0500
Subject: [R-390] R-390A Front Panel restoration

Can anyone recommend where to get an R-390 front panel painted and re-lettered? It has the engraved panel. I have an Imperial 1963 that has the off Grey/Green front panel and I'd like to keep it the same color. The reasoning is that the 1956 vintage US Navy Destroyer I served 30 plus years ago had these same receivers with the same color front panels. The rear of the panel could be used for color matching and the only part I want painted in the front panel and perhaps the edges and outer margin on the rear. This color scheme matches the LS-474 speakers which I have. This color is not the typical Battleship Grey that most of us are accustomed to seeing. What is interesting is that the interior of the tin can I was on pretty well matched this color as well. The color is typical of the R-1051 line. Thanks in advance. 73's to all. Tom K4NCG

From: John Lawson <jpl15@panix.com> Date: Sun, 19 Mar 2006 16:33:16 -0500 (EST)
Subject: Re: [R-390] R-390A Front Panel restoration

Howard Mills re-finished my R-388 (Collins 51-J4) front panel (and also the dial-drum) and did a stunning job. w3hm@nfis.com I very heartily recommend him. Cheers John KB6SCO

From: "John Page" <k4kwm@hotmail.com> Date: Sun, 19 Mar 2006 21:50:10 +0000
Subject: RE: [R-390] R-390A Front Panel restoration

If you wanted to DIY. Ace hardware "Ford Gray" is the green gray you need. John

From: Mark Huss <mhuss1@bellatlantic.net> Date: Sun, 19 Mar 2006 17:19:35 -0500
Subject: Re: [R-390] Hosing those 390A, a short pictorial

For what it is worth, in the ASA, we used to wash down the R-390A's in a huge sink every four years, weather the needed it or not. the only precautions we took was to yank the PTO and tubes, then went at

it with degreasing fluid. Then we took it to the sink and hosed it down real good. Finally, they went to a small spare room we had, which had a few industrial heaters that kept the room at about 130 degrees. After a few days, we would pull them out, lube the gears, and install the realigned PTO's

What was funny was when we had a Collins Rep come in. He had an Engineering Degree, whose ink wasn't dry yet. Supposed to help us with a maintenance schedule for some new Collins solid-state intercept receivers. As soon as he walked into the shop, he demanded to see our maintenance procedures for his Collins equipment, with that 'know it all' voice of the 'Young and Ignorant'! So I took him out to the van, and drove him to the Fire Station, where we were washing down a dozen R-390A's. Panicked when he saw us fire-hosing down a dozen R-390A's! And actually fainted when Charlie told him we had already finished doing the HF-8050's he had come to maintain! Remember Charlie's last words to him. 'Hey, a Collins is a Collins'

Also a sea-story when I was in was a shipment of R-390A's arriving on a small barge in the destined for Field Station Okanawa in 1968. Sank between the cargo vessel and the dock. In 1972, a couple of maintenance guys were diving in the harbor, and ran across them. Hauled them up, washed them down to get the salt off of them, then shoved them in the rack. Every one worked fine. Not sure I buy that one, though, considering the damage salt water would do the the coils, if nothing else.

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

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 19 Mar 2006 18:04:44 -0500
Subject: Re: [R-390] Calibration issue

wrote: > I'm in the process of going thru electrical calibration on my R390A. I > noticed a couple of things when I turned on the calibration signal. After I > zero adjusted it to achieve zero beat frequency I can basically do two > things in which I would have to zero beat it again. First by just going +/- > say 50khz (or maybe even less) around the calibration point, in this case > 09.000 I would have to re zero and there would be a good tone not just a > little off beat.

This sounds like the dial clutch is slipping. Lots of geartrains out there have so much grease and grunge on the clutch that I could see this happening. Also the anti-backlash spring on the Oldham coupler. And...also see my thread on PTO squirreliness.

> The other observation is by just sitting on the calibration > mark and returning after about 15 minutes it again would be off. However not > as bad.

You have to quantify "not as bad". A few hundred Hz of drift from power on isn't so bad. But as a data point: My R-390A's are stable to +/- 50 cycles after warmup (measured with a GPS-locked counter - if it says it's off by 0.1 or 0.001 cycles, then I believe it!)

> BTW the receiver has been warmed up for at least 2 hours in advance. > I guess I'm trying to pin down whether the BFO or PTO is drifting or maybe > the 100Khz signal is off.

If the 100kc signal is drifting then you will see a much bigger affect at 31Mc than at 1Mc (a factor of 31 in fact.)

Also keep in mind that the band crystals and the 17Mc crystal (which is on below 8Mc) could be drifting too. But again, you'll have to quantify the drift and find out on which bands it is there/worse. Tim.

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 19 Mar 2006 18:17:37 -0500
Subject: Re: [R-390] Calibration issue

Oh, a couple more comments about frequency stability/calibration/etc.:

1. 50 years ago a frequency counter was unobtanium. (Well, they sort of existed but filled up an entire rack). But today they're cheap and everywhere. Do not neglect this as a tool to narrow down the problem!

I know, the purists will insist that using any tool not mentioned in the official Army/Navy docs is a violation of the sacred rules. But it's easy and really does work.

A simple coil put around the oscillator tubes will be enough to get amplitude sufficient to run most any counter. Sometimes the waveforms you will see at V401 will be a bit funky. The 100kc calibration is really a 200kc oscillator and a 5814A multivibrator (divide by two) and of course it has lots of harmonics. The 17kc osc on the RF deck only runs below 8Mc.

And it's easy enough to pull the coax cable running from the PTO to check what it's putting out.

2. Check the 0A2. Purple glow is good. But even if you've got a purple glow check out the +150V test point. I have been thoroughly unimpressed with the quality of lots of "consumer" 0A2's over the years. Tim.

From: "Tracy Fort" <beerbarrel@cox.net> Date: Sun, 19 Mar 2006 20:27:12 -0500
Subject: [R-390] Flowertime

Flowertime, you still here? Please email me... Thanks, Tracy

From: "Tracy Fort" <beerbarrel@cox.net> Date: Sun, 19 Mar 2006 20:40:28 -0500
Subject: RE: [R-390] Where would you start?

Haha...Glad to see that the pros do it too! It's expected of me. I'm the newbie here. Tracy KE4ODD

From: "federico" <federico@dottorbaldi.it> Date: Mon, 20 Mar 2006 09:36:51 +0200
Subject: Re: [R-390] R-390A Front Panel restoration

Hi to all,

in my personal opinion absolutely the best is Rick Mish of Miltronix but I don't know if Rick make the job on the lone front panel instead of rebuilding the entire rig.

I made by myself an engraved front panel of an R-392/URR :

1) I sand-blasted the panel with very subtle sand

2) then I re-painted with nitro spray two-three times

3) re-lettered with white smalt (SARATOGA pencil) and I took the excess with solvent (it is easy because the nitro spray is resistent to solvent)

you can see the work done in my webspace R-390 FEDERAL folder and subfolder PRIMA E DOPO (BEFORE & AFTER).

4) your degree of auto-evaluation shall be better if you done the work by yourself

I hope that you can understand my enghils that isn't so goog as I should like. 73 de Federico IZ1FID

From: "federico" <federico@dottorbaldi.it> Date: Mon, 20 Mar 2006 09:37:25 +0200
Subject: Re: [R-390] R-390A Front Panel restoration

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From: "TChirhart" <sparks@codepoets.com> Date: Mon, 20 Mar 2006 06:24:34 -0500
Subject: RE: [R-390] R-390A Front Panel restoration

Federico, thanks for sharing your experience with me and the R-390 group, in the world of amateur radio the exchange of technical information is universal and you have done a great job of sharing with the group. Best 73 Tom K4NCG

From: "Craig Anderson Ext 1365" <Craig.Anderson@saintpaul.edu> Date: Mon, 20 Mar 2006 07:43:44
Subject: [R-390] RE: Washing your R-390A

As some one already pointed out, back in the old tube scope days Tektronix actually washed their scopes. I was in charge of our cal lab back in the early 1970's and remember well the Tektronix folks putting these in some kind of dish washer contraption. They used a low foaming, non-alkaline detergent that did not leave any residue after a thorough rinse in distilled water. You can get the same kind of detergent by going to:

http://cleanosonic.com/cleaning_solutions.htm

I use these chemicals in a large commercial grade heated ultrasonic cleaning tank. I can get an entire R-390A RF deck in the tank. Amazing results! Craig W9CLA

From: Fernando Quinones N2FQ <n2fq@sbcglobal.net> Date: Sun, 19 Mar 2006 09:22:34 -0800
Subject: [R-390] Hosing those 390A, a short pictorial

Hello to all.

Awhile back I posted a picture of my R-90A's in a rack, which all needed a good cleaning.

So.. after reading previous posts here as to how go about it, I decided what someone suggested but never shown, that is to hosed them down.

I used Simple Green and a water hose, perhaps I committed HariKari. Here are some pictures for your enjoyment. < http://pages.sbcglobal.net/nf6q/R-390A's/R-390A's.html >

Oh.. the darn thing are to heavy for my oven self, so they are bathing in the California Sun. hi

While I'm at it, let make a plug now. To subsidize the rebuild of two of my keepers,

I'm selling two R-390As (Collins), one with engrave panel and the other with decals,

they both work by the way, as well as the SSB Adapter (never plug in so don't know if it works or not, but all there). Please contact me off list if interested. Fernando N2FQ<http://pages.sbcglobal.net/n2fq>

From: <mfisch@kent.edu> Date: Sun, 19 Mar 2006 12:31:52 -0500
Subject: [R-390] Cosmos PTO

Hi:

I know there is a lot about the Cosmos PTO out there, but nerves have got the best of me. I want to adjust the end point (out by about 1 kHz) and I took off the screw to adjust the end point, but the end point adjustment screw looks like a spanner nut with a rubber center. Do I just take a 1/8 inch blade screwdriver and have ho or is there something I need to be careful of? I was expecting a slot and it looks like I should stone a screwdriver to have parallel sides. Is this the case? Thanks in advance. Mike

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sun, 19 Mar 2006 12:44:53 -0500
Subject: Re: [R-390] Cosmos PTO

<mfisch@kent.edu> wrote: > I know there is a lot about the Cosmos PTO out there, but nerves have > got the best of me. I want to adjust the end point (out by about 1 kHz) > and I took off the screw to adjust the end point, but the end point > adjustment screw looks like a spanner nut with a rubber center. Do I > just take a 1/8 inch blade screwdriver and have ho or is there something > I need to be careful of? I was expecting a slot and it looks like I > should stone a screwdriver to have parallel sides. Is this the case? > Thanks in advance.

Well, two months ago I didn't know what a Cosmos expert was, now I is one!

There are three "holes". The endpoint one is the one that is partially obscured by the transformer can. Removing the can might help get you access (especially if you have a stiff-bladed driver). BUT... I think there is "hot" wiring inside the transformer can so be careful if you do so. If you do not remove the transformer can you can use a metal screwdriver without fear.

The one next to the endpoint hole reveals all the little linearity adjustment screws. (I bought the 4-flute spline driver for these from McMaster, let me know if any of you need the official McMaster part number.)

And there's a third hole that reveals the thermostat set point. This is a BIG (in comparison) brass screw.

Not sure what a "spanner nut with a rubber center" is, but the endpoint inductor has a brass three-wing section that has an external nut which can tighten down on the brass adjustment screw. I think the purpose of the three-wing section is that it is adjusted to minimize wiggling/backlash of the internal brass adjustment screw. The brass screw is attached to the slug.

If you find you do not have enough adjustment range, you probably have to open to the PTO can and adjust the turns on the inductor. Others talk about removing whole turns, but for mine I found that removing half a turn (reversing the direction of the winding so it went from 2.75 turns to 2.25 turns) was the best choice. In my case removing a whole turn took me too far in the direction of increasing the span. But removing half a turn got me in the "sweet spot". Since you're only 1kHz off in endpoint, maybe you don't have to do this surgery. But if you find yourself with the brass screw all the way inside the three-wing clamper, or sticking out so far it would interfere with the threaded cover, then maybe it's time. Tim.

From: "Jon" <jonklinkhamer@comcast.net> Date: Sun, 19 Mar 2006 13:12:26 -0500
Subject: [R-390] Calibration issue

Hello Group,

I'm in the process of going thru electrical calibration on my R390A. I noticed a couple of things when I turned on the calibration signal. After I zero adjusted it to achieve zero beat frequency I can basically do two things in which I would have to zero beat it again. First by just going +/- say 50khz (or maybe even less) around the calibration point, in this case 09.000 I would have to re zero and there would be a good tone not just a little off beat. The other observation is by just sitting on the calibration mark and returning after about 15 minutes it again would be off. However not as bad. BTW the receiver has been warmed up for at least 2 hours in advance. I guess I'm trying to pin down whether the BFO or PTO is drifting or maybe the 100Khz signal is off. Thanks, Jon, KB1Dc

From: "Tracy Fort" <beerbarrel@cox.net> Date: Sun, 19 Mar 2006 13:05:59 -0500
Subject: RE: [R-390] Where would you start?

Thanks for all the replies guys. I write this as I sit here red faced....

It's amazing what happens when you put the Diode load jumper back in..... Tracy

From: ToddRoberts2001@aol.com Date: Sun, 19 Mar 2006 14:31:33 EST
Subject: Re: [R-390] Hosing those 390A, a short pictorial

writes: I used Simple Green and a water hose, perhaps I committed HariKari. Here are some pictures for your enjoyment.

Hi Fernando, thanks for the interesting pictures of your R-390As being sprayed with simple green and hosed off with a garden hose. There are several things I would worry about with this procedure. It looks like you left the tubes in their sockets? The dirt and muck loosened up from the simple green and water could settle in the sockets causing problems? I would also worry about water possibly migrating into the fiberlass insulation in the crystal oven and PTO and just sitting in there wet unless the covers were removed and allowed to air-dry. Not likely but water could get into the meters and it could also get inside the carbon pots and RF/IF transformer cans and sit in there. The only thing I would dare to give the radio like the R-390A a bath in would be something non-conductive like Kerosene or Diesel fuel. In that case you have to remove the small ceramic trimmers or else the kerosene will get into the rubber gaskets and cause them to swell up, but normally kerosene will not rust or short out electronic components. But your radios may turn out just fine if everything is allowed to thoroughly dry. I know people have rebuilt the Blue-Stripers and they were sitting out in the weather and rain for who knows how long. I once washed and hosed off a really dirty SP-600 with soap and water and it is the best working SP-600 I have. I put it in front of a dehumidifier for 3-4 days and it was bone dry but I did have to take the meter apart to dry it and took off all the covers from the IF cans, etc.to air dry the innards. Good luck and let us know how the R-390As turn out! 73 Todd WD4NGG

From: "Barry" <n4buq@knology.net> Date: Sun, 19 Mar 2006 14:30:51 -0600
Subject: Re: [R-390] Where would you start?

Tracy,

A few weeks ago, I replaced some out-of-spec components on the underside of one of my IF decks. When I put it back in place, I noticed the bandwidth selector no longer had any effect. I got the same bandwidth no matter what position I selected. I scratched my head for a while and then realized I had removed the bandwidth selector switch's shaft (the one that connects it to the front panel of the IF deck) so I could more easily get to some of the parts. Duh.

As if that wasn't enough, a week or so ago, I was fiddling around with the 5814A's in the same IF deck. I was seeing the differences one tube or the other made in the AGC amplifier socket. One of them gives good grid voltage and the others don't. When I started trying to listen to it again, I noticed some of the same symptoms you describe. I then looked and noticed I had failed to plug one of the 5814A's fully back into its socket.

Those kind of things happen. ;-) Barry - N4BUQ

From: "TChirhart" <sparks@codepoets.com> Date: Sun, 19 Mar 2006 16:22:55 -0500
Subject: [R-390] R-390A Front Panel restoration

Can anyone recommend where to get an R-390 front panel painted and re-lettered? It has the engraved panel. I have an Imperial 1963 that has the off Grey/Green front panel and I'd like to keep it the same color. The reasoning is that the 1956 vintage US Navy Destroyer I served 30 plus years ago had these same receivers with the same color front panels. The rear of the panel could be used for color matching and the only part I want painted in the front panel and perhaps the edges and outer margin on the rear. This color scheme matches the LS-474 speakers which I have. This color is not the typical Battleship Grey that most of us are accustomed to seeing. What is interesting is that the interior of the tin can I was on pretty well matched this color as well. The color is typical of the R-1051 line. Thanks in advance. 73's to all. Tom K4NCG

From: Larry Strong <l.strong@mchsi.com> Date: Mon, 20 Mar 2006 10:12:59 -0600
Subject: [R-390] Hosing those 390A, a short pictorial

What did you want for SSB adpapter for the R3909A Regards Larry Strong

From: aromero@rodio.com Date: Mon, 20 Mar 2006 18:18:52 +0100
Subject: [R-390] Tubes 26Z5

Many thanks for information. 73, Antonio, ea7ely

From: odyslim@comcast.net Date: Mon, 20 Mar 2006 18:08:35 +0000
Subject: [R-390] Lincoln Project/ Radio Mart

Does anybody know what the "Lincoln Project" was?

Radiomart has a radio on eBay he declares is from the Lincoln Project. Item 9700253375 Scott W3CV

From: Fernando Quinones N2FQ <n2fq@sbcglobal.net> Date: Mon, 20 Mar 2006 10:18:45 -0800
Subject: [R-390] FS: R-390A & SSB Adaptor

Whoa.. the response has been overwhelming and lost track as to who I've responded.

Sorry to say that I will not ship overseas. It's seem to be an undertaking just to ship across the state.

The first person bowed out from purchase and many want to know what I'm asking for the SSB unit.

Hopefully there is a person willing to buy the following package, and pick it up, as it makes it easier on my end.

Both Collins R-390A (engrave/labeled) + SSB Adaptor + rack = asking $1100. Failing that, then will sell separately.

Also want to thank all who responded to the hosing of these units. So far I don't see any water residue, though I haven't removed any units nor tubes.

Next step will be removing all subunits from one of my keepers. Will provide photos as well to show the progress of rebuilding.

I know this is nothing new to many, I'm not technical as many and can only provide bone head pictures. Still, I feel to contribute something for all the great reads I've had on this list.

Oh.. I will not go the eBay route, although I do have a burgandy fleece cloth and some blank tags that I can use. Hi. Fernando N2FQ<http://pages.sbcglobal.net/n2fq>

From: "Craig Anderson Ext 1365" <Craig.Anderson@saintpaul.edu> Date: Mon, 20 Mar 2006 12:22:54
Subject: [R-390] Re: Follow-up on "Washing Your R-390 390A"

An inexpensive and effective cleaning solution that I have found is to use the commercial version of Simple Green called "Crystal Simple Green". Crystal Simple Green is non-fragrant as opposed to the home version which has a strong pine smell. It comes in 1 gal. containers and is priced at about $16/ gal. at any Grainger outlet under their part number 3UP40. I use this in my heated ultrasonic cleaning tank for the individual modules as well as stand-alone with a soft brush and power washer when I am doing the R-390A frame. I always do a double or triple rinse with distilled water (de-ionized water is the preferred method for the individual modules if you can get it). I use an air compressor after the final rinse to blow out the trapped water, then a powerful hand hair dryer and then I place it in a box that I built containing 60-watt light bulbs, a small exhaust fan and a thermostat to maintain a temperature of 110 F - 120 F for 24 hours. The box is large enough to accommodate all of the R-390A modules plus frame at one time. I have one set of bulbs on all of the time and the other set is controlled by the thermostat to maintain the proper target of 115 F. The small muffin fan runs all of the time to exhaust any humidity.

I also do a lot of restoration work on old broadcast sets like Zenith, RCA, GE, Crosley and what a difference it makes after a good heated ultrasonic tank cleaning. I now do this prior to restoration! It is pleasure to begin a restoration with a clean chassis and clean components. Unfortunately my ultrasonic tank costs about $2,000 so it I probably not something everyone will rush out to buy unless you use it often as I do. Craig, W9CLA

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Mon, 20 Mar 2006 13:38:25 -0500
Subject: Re: [R-390] Lincoln Project/ Radio Mart

> Does anybody know what the " Lincoln Project " was?

I've only seen it referenced to as the military-industrial complex spin-off of MIT's Lincoln Labs, circa 1950's. Later became what is now MITRE. They did do radio stuff back then (but mostly RADAR).

> Radiomart has a radio on eBay he declares is from the Lincoln Project. Item 9700253375

No way MITRE was doing that stuff in 93 under the name "Lincoln Project". Tim.

From: "Cecil Acuff" <chacuff@cableone.net> Date: Mon, 20 Mar 2006 13:19:28 -0600
Subject: Re: [R-390] Re: Follow-up on "Washing Your R-390 390A"

Just my 2 cents worth but I would be very careful using ultrasonic cleaning on anything electronic. I have been told that it could create hair line cracks in many things like carbon resistors, ceramics and who knows what else.

Recently a very knowledgeable jewelry expert said it was not recommended for cleaning gemstones such as Ruby, Emerald, Sapphire....etc.

I would be hesitant to use it on radio gear with the exception of maybe the gear train...

Again just my opinion after hearing a jewelry expert speak on the topic... Cecil....

From: "Cecil Acuff" <chacuff@cableone.net> Date: Mon, 20 Mar 2006 13:26:15 -0600
Subject: Re: [R-390] Lincoln Project/ Radio Mart

MIT had a Lincoln Laboratory back during the 60's and 70's used for the development of Radar in conjunction with the military....may be that it was part of that effort and he just got the time line wrong.

Nothing special that I see except the rubber stamping on the manual that he is hoping to capitalize on.....

The above was found by doing a google search..... Cecil...

From: Tom B <tbryan@nova.org> Date: Mon, 20 Mar 2006 18:53:52 -0500
Subject: Re: [R-390] Lincoln Project/ Radio Mart

> Radiomart has a radio on eBay he declares is from the wrote: Does anybody know what the " Lincoln Project " was?
>
>Lincoln Project. Item 9700253375

Well, the manual looks like it was from the Lincoln Project.

It could be from the SAC missile silos at Lincoln Airport See here for more:
http://www.globalsecurity.org/military/facility/lincoln.htm Tom N3AJA

From: odyslim@comcast.net Date: Tue, 21 Mar 2006 01:56:26 +0000
Subject: [R-390] PTO cover $ antenna relay needed

I wonder if anyone has a spare PTO cover for an R390 for sale or trade. I would prefer a Collins since that is what the unit is but will take anything as long as it still in good shape.

I also need an antenna relay. Fair does not have them for the R-390.

I know I am going WAY out on a limb now but I also need an R390 " Collins " nomenclature tag.

I will pay a good price or trade NOS tubes or other parts. Regards, Scott W3CV

From: "Jim Shorney" <jshorney@inebraska.com> Date: Mon, 20 Mar 2006 21:43:58 -0600 (CST)
Subject: [R-390] Speaking of glow-in-the-dark clocks..

http://www.jogis-roehrenbude.de/Leserbriefe/Bruegmann-Digital-Roehren-Clock/Digital-Roehrenuhr.htm Anyone read German?

From: "Steve Hobensack" <stevehobensack@hotmail.com> Date: Mon, 20 Mar 2006 22:55:13 -0500
Subject: Re: [R-390] Hosing those 390A

Are not the coil forms of the R-390* made of cardboard? I have replaced an antenna coil due to the cardboard being scorched from excessive RF or a lightning strike. The slug wouldn't pass. Would not water dissolve the coil form? I would think that one would have to go to extreme measures to protect the coils from miosture during a water bath. ..Steve...N8YE

From: Dave or Debbie Metz <dmetz@ntelos.net> Date: Mon, 20 Mar 2006 23:06:02 -0500
Subject: [R-390] 6DC6 tubes

I hate to do this, but there was previous mention of the 6082 tubes on the bay. You might go to that sellers other items and he is listing 6DC6's for $2.89/ That seems like a pretty reasonable price. 73's dave

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Tue, 21 Mar 2006 08:13:48 -0500
Subject: [R-390] JAN vs JHS spec tubes, mixer specs, etc.

After buying some 6C4WA's recently, of course I found a huge stash (technically measured as a "metric buttload") of 6C4W's and 6C4WA's in my crawlspace. I probably bought them years ago and forgot about them.

That's the nice thing about chronic forgetfulness - every time I look somewhere I don't see everyday, I'm pleasantly surprised by stuff that I had forgotten it even existed. It's like Christmas year-round, and every day I get a new train set!

Anyway, this stash has the traditional mil-spec white boxes, but the tubes (Sylvanias) are labeled twice (once in grey, once in green) and the boxes declare them to be "JHS" instead of "JAN".

Can someone remind me what JHS means? If I asked this a few months ago when I last saw these boxes, you can remind me again, it'll be like I never heard the answer first time around!

And some further thoughts about how these tubes are used:

I recently opened up my copy of Seeley's "Electron Tube Circuits" and was looking through the section

on mixers. There he makes the comment that anything that lowers the gain of a mixer can greatly impact conversion efficiency, and this is related to the DC operating point and AC injection levels of the mixer.

This got me thinking of the three mixers in the 390A:

1. Each has a 27 ohm resistor on the grid, where the signal is fed in. The DC level on the grid comes from the AGC line (except for the 3rd mixer).

2. Each has a 2.2K resistor on the plate and a tuned circuit for extracting the output. 3. Each has a (bypassed) 2.2K resistor on the cathode, through which the oscillator feeds in. The oscillator outputs are all transformer coupled so the bottom of the 2.2K is at DC ground.

This exact circuit is replicated 3 times. Looking at the schematics the repetition is almost monotonous. Anyone care to comment on the circuit? The 3-time repitition looks like some kind of holy mantra this morning. My experience probing around with a scope is that the cathodes get several volts of oscillator signal. If I wanted to translate this circuit and levels to a conversion efficiency, I'd start by finding the voltages and currents for various grid biases (AGC voltages), and then reading the transconductance off the curves, right?

Where does the 27 ohm resistor on the grid come in? The DC impedances around the grid are in the Megohms, I don't really understand (off the top of my head) how the 27 ohm resistor does much of anything. Unless it is there to add a little bit of AC impedance so the previous stage's plate circuit doesn't get detuned by grid current? In which case the AC impedances must be in the tens of ohms? Isn't this a bit on the low side for a typical RF grid or plate circuit? Tim.

From: "n4buq@knology.net" <n4buq@knology.net> Date: 21 Mar 2006 14:06:12 -0000
Subject: [R-390] HP410B rectifier tubes

Many of you own the HP410B VTVM and use them on your R39* series radios. I have one and some time ago, I noticed the AC probe stopped working. Normally, after an hour or so, the probe will become warm due to the rectifier tube's filament and mine had stopped warming up.

Figuring the diode in the AC probe had died, I recently started looking for a replacement diode. As many of you also know, these tubes are becoming quite expensive. Knowing this, I decided to check everything out as the tube itself may not really be the problem.

Some of the meters use a 2-01C diode, some use an EA53, and others may have a probe where either type can be used (there are supposedly slight physical differences between the two tubes making them not completely interchangeable). Mine has an EA53 and I checked the specs for it. I noticed that the 2-01C uses a 5.0VAC filament while the EA53 runs on 6.3VAC. Checking in my manual, it states to set the filament voltage to 5.0VAC and that was what I did when I went through it a few years ago.

A little reading on the internet reveals that if your meter uses an EA53, you should set the heater voltage to 6.3VAC, not 5.0VAC and some manuals may even make mention of this (mine does not).

There is a variable resistor used with a ballast tube to set the heater voltage. I set the heater voltage at the probe to 6.3VAC and reinserted the EA53. I let it warm up for about an hour and, sure enough, the probe began to warm up again. It is again working in the AC modes; however, it reads quite low (about 30VAC where it should be seeing 120VAC). I think this is just a calibration thing and I can fix that.

I just thought I'd pass this along in case others may have experienced non- working AC probes and not realizing it may just be an incorrect heater voltage setting. Check the diode in your probe first, though! Barry - N4BUQ

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Tue, 21 Mar 2006 09:25:38 -0500
Subject: Re: [R-390] HP410B rectifier tubes

N4BUQ wrote:

> Some of the meters use a 2-01C diode, some use an EA53, and others may have > a probe where either type can be used (there are supposedly slight physical > differences between the two tubes making them not completely > interchangeable). Mine has an EA53 and I checked the specs for it. I > noticed that the 2-01C uses a 5.0VAC filament while the EA53 runs on > 6.3VAC. Checking in my manual, it states to set the filament voltage to > 5.0VAC and that was what I did when I went through it a few years ago.

It's also possible that a lower filament voltage makes the tube last longer and makes emission be more stable/predictable/slower-drifting. Not that I'm saying you or the internet or HP is right or wrong!

> There is a variable resistor used with a ballast tube to set the heater > voltage. I set the heater voltage at the probe to 6.3VAC and reinserted > the EA53. I let it warm up for about an hour and, sure enough, the probe > began to warm up again. It is again working in the AC modes; however, it > reads quite low (about 30VAC where it should be seeing 120VAC). I think > this is just a calibration thing and I can fix that.

I would've expected that boosting filament voltage would've improved emission and resulted in too-high of a reading compared to your old 5VAC calibration.

It is very odd for a filament to fail in a way that it "doesn't get hot" when it gets the same voltage that it always did, but that boosting the voltage gets it to some emission (but not as much as it used to). Is there any way you can measure the voltage really close to the tube, or measure the current through the filament circuit compared to spec? I'd be very suspicious of bad contacts/cables/etc. Tim.

From: "n4buq@knology.net" <n4buq@knology.net> Date: 21 Mar 2006 15:07:50 -0000
Subject: Re: [R-390] HP410B rectifier tubes

wrote : wrote: Some of the meters use a 2-01C diode, some use an EA53, and others may have voltage

There may be other factors involved here, I agree. I was measuring the voltage at the tube base. I did notice that when I first checked the voltage, it was not at 5.0VAC, but had drifted downward. I don't recall the exact value, but I think it was about 4.6VAC. I don't have a very convenient way to check the current draw the filament is creating, though. I plan to go through it again, checking testpoints, tubes, and calibration. I may find other things have gone downhill since I worked on it last. Thanks, Barry - N4BUQ

From: "James A. (Andy) Moorer" <jamminpower@earthlink.net> Date: Tue, 21 Mar 2006 07:41:05
Subject: Re: [R-390] Hosing those 390A

They are made of cardboard, but they are also impregnated with something-or-other. Water bounces off them as off a duck's back. The slugs themselves, however, are porous. The water doesn't hurt them, but they need to be dried out. Better to remove them first. The meters started out perfectly sealed, but they often aren't. James A. (Andy) Moorer www.jamminpower.com

From: "Francesco Ledda" <frledda@verizon.net> Date: Tue, 21 Mar 2006 10:27:57 -0600
Subject: RE: [R-390] Hosing those 390A

I have rebuild few 390a and other radios. Some were so dirty that water washing was required.

In the case of a 390A, I remove all the modules and put them aside. I wash the chassis with a mixture of water and Simple Green; I remove the excess water with compressed water and leave it in the sun (Texas sun) for few hours.

Next, I remove and label all the tubes from the modules.

Now, I wash the audio amp and the power supply modules; again, I use compressed air to remove the excess water, and I put the module in a oven at 130 degrees for 30 min or so.

I remove slugs and coils, from the RF group. I degrease and wash the RF group and dry it using the same methods mentioned above. I clean the RF coils separately with a humid cloth. I clean the variable capacitors, as well.

Now, before cleaning the IF module, I remove the BFO and the mech filters cover. Clean the top module with a humid cloth and a brush, and I wash the bottom part hot distilled water; I hold the module, on top the sink, and I spray water from the bottom, to minimize the possibility of water getting inside the coils. Dry everything and start putting things back together.

I have used the same methods for many other receivers and never had any problems. My best and favorite 390A is a blue stripper that I bought for about $100. It was a great satisfaction to bring it back to life. I repainted the front panel, knobs and redone the engraving.

By the way, I only replace failed components and black beauties. I would never wash meters or PTOs.

Regards, Francesco

From: "Francesco Ledda" <frledda@verizon.net> Date: Tue, 21 Mar 2006 10:49:16 -0600
Subject: RE: [R-390] Hosing those 390A

compressed air... not water

From: "Cecil Acuff" <chacuff@cableone.net> Date: Tue, 21 Mar 2006 10:51:27 -0600
Subject: Re: [R-390] Speaking of glow-in-the-dark clocks..

Darn they keep getting better....look at the build quality! Cecil.....

From: "Ziegenbein, Randy" <rziegenbein@volcanotherapeutics.com> Date: Tue, 21 Mar 2006 09:35:12
Subject: [R-390] New ID?

It looks like our R-M buddy may have a new seller id? lokkes43rfggeuja. There is nothing sure here but there is the red velvet with a typical characteristic description. I found it while looking for a KWM-2A. 73, Randy

From: "Rob Filby" <robsr390a@btopenworld.com> Date: Tue, 21 Mar 2006 17:42:49 -0000
Subject: [R-390] R389 and R390 faults

Hi.

I have recently bought an R389 and a pair of R390 rxs. They are all complete and in good condition.

At first appearance it seems as the PSU, Audio stage and IF strip are interchangable. I have a few questions which I would to ask the group and perhaps somebody could help me please.

1.Were any parts listings produced for the above rxs, ie detailing the wattage of resistors and the voltage ratings of other components?

2.Are there any common faults or other troublesome components that fail or give trouble that I need to be aware of?

3. I have a couple of R390A rxs which have a mechanical counter for the BFO, why was this used over the standard knob? Thanks for your help Rob.

From: Mark Huss <mhuss1@bellatlantic.net> Date: Tue, 21 Mar 2006 14:02:27 -0500
Subject: Re: [R-390] R389 and R390 faults

First, you may want to reference the R-390A manual at http://www.hausernet.com/r390a/ It should have everything you need. Pay particular attention to the Capacitor replacement listing. AWlso, for some reason, 2.2K resistors in the R-390A's seem to change value considerably. Otherwise, just watch the list. Good Luck.

The counter knob on the BFO was added to R-390A's used for RTTY reception. Makes tuning the BFO to FSK tones much easier.

From: "Paul H. Anderson" <paul@pdq.com> Date: Tue, 21 Mar 2006 14:09:30 -0500 (EST)
Subject: Re: [R-390] R389 and R390 faults

Be careful of the PS's - there are several mods for them, the first R-389 didn't have B+ in the same place as the R-390/R-391, so they in theory later modified the R-389's to match. If they didn't, then you will have no B+, or B+ on the wrong part of the connector.

My R-389 manual had some addendums that gave this information - I can't recall, but maybe one of the R-390 manuals I have did, too.

Other than that, the IF and AF I believe interchange freely. Paul

From: Barry Hauser <barry@hausernet.com> Date: Tue, 21 Mar 2006 14:42:14 -0500
Subject: Re: [R-390] R389 and R390 faults

Hi Mark, Rob

Not sure what comes first logically, but here goes:

First -- the R-390A Y2K manual on my website is the original, not revised version. If that's what you need, suggest you go to Al Tirevold's site for the later version.

Second -- Rob is asking primarily about the R-389 & R-390 (without the A) -- apparently, as the '389 is related to the '390, not the A. The Y2K manual on my website and Al's is strictly for the R-390A.

I am not that familiar with the R-389, but if the power supply and AF deck -- which is mostly power supply/regulation components is the same, same applies to both: The 6082's throw a lot of heat. The AF deck is mounted upside down so the heat rises and tends to cook the components under the chassis. In particular, it is recommended to replace the 47 ohm resistors (4 of them I think) as per Dave Medley's advice. In addition, it's a good idea to use a small fan set up to exhaust the heat from that side of the mainframe. R-390/URR's -- the pre-cost reduced edition -- do not exhibit the same capacitor failure patterns as the R-390A/URR's. Component and tube compliment are very different.

AS for the counter knob on the BFO, they are not vernier/gear reduction drives, just counters which were added to improve reset-ability of the BFO -- unless someone also added a 10-1 reduction drive as well, but it's not part of the counter-knob mechanism. hope this helps, Barry

From: Mark Huss <mhuss1@bellatlantic.net> Date: Tue, 21 Mar 2006 15:04:43 -0500
Subject: Re: [R-390] R389 and R390 faults

Opps, Caught by the R-390/R-390A confusion again! About the BFO Counter knob. Your right, it is not a vernier knob. But someone in the history of mine must have replaced the shaft extension with a 3:1 vernier reduction gear. Very handy.

From: Bill Cotter <n4alg@qx.net> Date: Tue, 21 Mar 2006 15:22:54 -0500
Subject: [R-390] WTB: R-390 IF deck

WANTED: R-390 IF deck

Please state cosmetic and electrical condition, and price shipped to 40356. Thanks - Bill N4ALG

Date: Wed, 22 Mar 2006 09:28:15 +1100
From: "bernie nicholson" <vk2abn@bigpond.net.au>

Subject: [R-390] 6C4 tubes

Tim the 27 ohm resistors in the grid Circuits are parasitic stoppers , they stop oscillations that are at an unrelated frequency some times VHF or UHF , these can be caused by unforseen resonances ie bypass caps ect , it is normal to include them in all sorts of circuits even audio , regards to all from Oz

From: Tom Norris <r390a@bellsouth.net> Date: Tue, 21 Mar 2006 19:49:56 -0600
Subject: Re: [R-390] R389 and R390 faults

> Opps, Caught by the R-390/R-390A confusion again!

No, if you read further down, Rob does ask about the 390A counter knob.

"3. I have a couple of R390A rxs which have a mechanical counter for the BFO, why was this used over the standard knob?" So you gave the correct answer Tom

From: Barry Hauser <barry@hausernet.com> Date: Wed, 22 Mar 2006 03:15:28 -0500
Subject: Re: [R-390] R389 and R390 faults

Hi Tom

Rob's primary message was a request for info on the R-389 and R-390/URR. Mark (as he later realized, having fallen prey to the R-390/R390A confusion syndrome) mistakenly referred him to the Y2K manual which is strictly R-390A. I fortunately noticed how Rob had referred to the interchangeablilty of certain modules which, although I am not intimately familiar with the R-389, was the tip-off that he truly meant an R-390 and the absence of the "A" was not accidental.

I was well aware that Rob was referring to his R-390A's regarding the BFO counter knob, but it doesn't really matter. While they are probably more often found added onto R-390A's than R-390's, they could have been added to either receiver -- and there I was merely amplifying on Mark's explanation. They do not have vernier/reduction built in and were probably originally manufactured to use with 10-turn pots. As it "turns out" though, Mark's receiver has a separate 3:1 vernier drive added behind the panel.

Now that all that is squared away ..... who's on first? heh heh Barry

End of R-390 Digest, Vol 23, Issue 38

From: "n4buq@knology.net" <n4buq@knology.net> Date: 22 Mar 2006 15:48:55 -0000
Subject: [R-390] Anyone have some of these?

I need 20 of these for an R390A project.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=7595731217

Seller doesn't want to sell in smaller quantity. I'll by 100 if I have to, but was wondering if anyone knows where I can get 20 or 30 of them, hopefully for a bit less money. Thanks! Barry - N4BUQ

From: "john d kopke" <jdkopke@cablespeed.com> Date: Wed, 22 Mar 2006 11:54:22 -0500
Subject: [R-390] TMC Help off-topic.

Gentlemen;

I have recently acquired a TMC Transmitter Type PAL 350 RFA 1, I am searching for a Power Supply Type PSP , and a Manual. If anyone can give me some direction, I would be very appreciative. Thank You; john kopke

From: "n4buq@knology.net" <n4buq@knology.net> Date: 22 Mar 2006 18:59:09 -0000
Subject: Re: [R-390] Anyone have some of these?

Unless I can find them somewhere else, I'll probably just buy the 100 pieces. If someone else wants some, I can work something out. Thanks, Barry - N4BUQ

From: "Craig C. Heaton" <wd8kdg@worldnet.att.net> Date: Wed, 22 Mar 2006 18:54:18 -0800
Subject: [R-390] WTB: 8KC mechanical filter

To All:

It appears that my R-390A has a 8KC mechanical filter heading south; and not for just the winter. When I reposition the receiver, such as stand it upright to check tubes, that are underneath; I loose sensitivity on the 8KC filter for a while. So far after a few days, it has come back and it is close to the other three filters using the carrier level meter as a standard.

So, does anyone on the list have a good and or NOS 8KC filter they wish to sell or part with??? Please contact me off list.

Item two; in the event 8KC filters are scarce as hen's teeth, does anyone have pictures, jpegs, drawings of the inside in the event I decide to operate on the little devil. I'd like to have an idea what's in there. I have been through the achieves and have noted others have been down this path. If it does fail, nothing to loose by going inside. Might be able to clean out the old gooey foam. Thanks, wd8kdg Craig

From: Dan Arney <hankarn@pacbell.net> Date: Wed, 22 Mar 2006 19:31:39 -0800
Subject: Re: [R-390] Hank Arney

Ron,

Here I BE HiHi.

I are now a TEXAN by transplant.
My addy is 1050 Overland Drive
in Lowry Crossing TX however the mail addy is McKinney TX 75069-4730 and
my phone is 469-742-8941 with an answering machine.
My Cell is still 818.

I am still unpacking and trying to get set up, not on the air yet. Maybe with a little luck an R7000 this weekend.

I plan on going to the Belton Hamfest on 4/21/22 and take some stuff to
sell. Hank KN6DI

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Thu, 23 Mar 2006 07:50:50 -0500
Subject: [R-390] Random tube sub of the day: 6AU6 for 6BA6

One tube sub I tested: 6AU6 for 6BA6. They are both 7BK base pentodes but the 6BA6 is remote cutoff (more appropriate for AGC action) and the 6AU6 is sharp cutoff.

Sticking the 6AU6 into various places in the IF strip resulted in changes in AGC action and carrier level meter. The changes were noticable but not horrendously bad. I did not tweak the GAIN ADJ for each sub. I only subbed one tube at a time.

What was more surprising was action in the PTO and BFO sockets: no oscillation at all! I had expected the cutoff details to be unimportant there, but I suppose it's possible that the 6AU6 is biased deep into cutoff where the 6BA6 isn't.

I have to find a tube equivalent of SPICE or something and start modeling some of the 390A's circuitry. Of course it's probably more fun to stick tubes into sockets and see what happens! I get to stare at computer screens all day at work, why should I think about doing that instead of playing with tubes and solder?

I think it's time to break out the tube handbooks and some graph paper. As a boss of mine once told me : "If you don't know how to do it, you don't know how to do it on a computer."

I know how to do graphical analysis of operating point and gain vs bias for single stages, but have never really tried it for a huge RF/mixer/mixer/mixer/IF/IF/IF/IF+AGC chain. Is there a tube receiver with more stages than a 390A? Tim.

From: Gord Hayward <ghayward@uoguelph.ca> Date: Thu, 23 Mar 2006 08:52:35 -0500
Subject: Re: [R-390] Random tube sub of the day: 6AU6 for 6BA6

Hi Tim,

More stages than a 390A? Yes, the 390 and the 392 have more in the IF. Cheers de Gord, VE3EOS.

From: "W. Li" <wli98122@yahoo.com> Date: Thu, 23 Mar 2006 12:27:18 -0800 (PST)
Subject: [R-390] re: I-177 question (OT)

I have a nice I-177 tube tester that serves me well. I recommend Nolan Lee's notes on calibration and maintenance found at http://www.acadiacom.net/nlee/

My question pertains to the Type 83 mercury vapor rectifier. Although it was designed to operate upright, it is actually mounted on its side in this particular tester. Clearly therefore, some care is needed

in use by letting it warm up for 10-15 minutes to prevent internal flashover.

My question is about converting this to a solid state device.

Replacement 83's are not exactly easy to find.... Inspecting the schematic, the HV takeoff is from the mid-point of the 5V filament winding. So is there an issue by removing the tube, and inserting two silicon 3A silicon rectifiers between this point and the plate pins 2 and 3? I would leave pins 1 and 4 unconnected to anything.

The other question is in regards to the 5Y3GT rectifier. Why does Nolan not recommend a solid state conversion here? It *looks* like the same sort of circuitry here. Obviously, 5Y3's are a lot more plentiful than 83's which makes that conversion less pressing.

To my thinking, one advantage of converting both rectifier tubes to solid state could be insuring balance in both arms of the HV windings. The others are immediate startup, and significant decrease in heat and energy consumed.

Am I missing something in this line of thinking?

Philosophically, I am more interested in preserving functionality of my gear than preserving *history.

Thanks W. Li Mercer Island, WA

From: Tom Norris <r390a@bellsouth.net> Date: Thu, 23 Mar 2006 14:28:42 -0600

wrote: > Is there a tube receiver with more stages than a 390A? More stages in general??

I have a WRR-2A, it has about 50% more circuitry and tubes than the 390A, more or less. It weighs about 3x as much as a 390 as well. Tom

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Thu, 23 Mar 2006 16:09:40 -0800 (PST)
Subject: [R-390] Y2K-R3 beta Update

GM List,

I've finished the Y2K R3 beta and have sent it to our esteemed three wise guys, uh I mean editors Al, Barry and Pete at the famous firm of Shorts, Arcs and Sparks for their consideration and posting.

The biggest change is in the chapter 7 parts. Besides pagination improvement I added the part information to each identifier so you don't have to go through the "same as" stuff for 4 or 5 pages.

In pdf form the total files are about 4.5 Mbytes. For us members of the Perpetually Doomed to Dial-up, it is broken down to 13 files, the largest of which it about 700K bytes. There will probably be a large single file for the high speed fortunate.

Now I'm working on the additional supplemental chapters. AKA "The Missing Links". This list is just a start from my brain and isn't set even in warm jello - let alone cement.

1. Roger Ruszkowski‘s Service Tips. He did R390’s service full time for 7 or 8 years!

2. PTO Servicing

3. Cleaning & Lubrication Materials

4. Gear Train Cleaning & Lubrication. I have Scott Scikel’s superb gear rebuilding article in 4 sections.

5. Spare Parts and Services Sources

6. Modification & Improvement Circuits- including SSB adapters.

7. Internet Resources. This includes other web sites, parts dealers, and related services.

I’d appreciate comments and collaboration. I still can’t download pdf files from my yahoo mail account. I’m going to get a hotmail account and see if that works. Will post address when it’s activated. I also need some help with picture format conversion and cropping.

Some material such as Chuck Ripple’s IF Deck Alignment is copyrighted. Although posted on the R390 reflector, I’m seeking permission to re-post it in the supplemental chapters.

It wouldn’t surprise me if the supplemental data didn’t end with the same amount of bandwidth. As per the R3 it will be kept into small pdf chunks. When I originally downloaded the R2 17+ Meg files, it took a week of trying to not have a broken connection. It tool 8 hours to download. I want everyone to be able to get the information easily no matter how far you are in the boondocks

Please contact off list if you contribute or help. Regards, Perrier

From: "Dan Merz" <mdmerz@verizon.net> Date: Thu, 23 Mar 2006 17:40:54 -0800
Subject: RE: [R-390] re: I-177 question (OT)

Hi, there was a substition of ss diodes published in Antique Radio Classified by Alan Douglas for Hickok testers, subbing for the 83. As I recall a resistor in series with each diode was involved and it was put into a tube base to be plugged in as a replacement. I'll try to find the article; the index for the 20 years or so issues that I have is not good. Douglas was quite familiar with the testers and I'm sure the sub worked just as well as the 83. Dan.

From: "Dan Merz" <mdmerz@verizon.net> Date: Thu, 23 Mar 2006 22:17:49 -0800
Subject: RE: [R-390] re: I-177 question (OT)

Hi, the substitute for 83 type tube described by Douglas for use in a number of Hickok tube testers used two 1N4007 diodes and two 10 ohm/1 watt resistors. Connect the proper end of one diode to pin 2 and the proper end of the other diode to pin 3, and join the other two ends of the diodes. Connect the joined ends of the diodes to pins 1 and 4 via a 10 ohm resistor to each of the pins, all mounted in an old tube base. He claimed this worked exactly like the 83 in the number of Hickok testers he had tried. The two 10 ohm resistors are in series across pins 1 and 4 (the filament pins) and their midpoint goes to the joined ends of the two diodes. Without looking at a tube tester schematic, I'm not sure exactly why the two resistors are wired this way but it works. I think I tried the wiring in one of my testers but reverted

to the 83 when I found one. If the hookup isn't clear from my description, I can scan a diagram he included to clarify. Dan.

From: Michael Crestohl <W1RC@Verizon.net> Date: Fri, 24 Mar 2006 05:31:21 -0500
Subject: [R-390] FS: Stewart Warner U S Navy R-390A $550.00

Hi Gang:

Here is a nice R-390A restoration project with a documented history. It is a 1960 contract (Order Number 20139-PC-60) Stewart Warner serial number 22XX, with both original meters in reasonably decent mechanical and cosmetic condition. This radio served with the US Navy (has the Diode Load jack on the front panel) and I even have documentation as to where it spent its' tour of duty at sea. However no other manuals are included. It has been in storage for several years and will need a good cleaning.

The major issue with the cosmetics is that along the way someone drilled a hole in the front panel to install a toggle switch used to turn the power on and off. It can of course be reversed and the hole filled with J B Weld but it is possible that the normal power switch is broken. I cannot give any indication on its' electrical performance because I have not powered it up. However I have some notes dated 12/24/2003 that were made by someone who did apply power to it and recorded his observations: "Receiver functions but audio is distorted and BFO signal is a bit weak for copying SSB." Other things I observed are: Modules seem to be original (at least the ones I can see). The ballast tube was replaced by a resistor and the power supply was modified for diode rectification. I am told that all Navy R-390As were so modified but I don't know if this is fact or fiction. The AC line filter on the back panel is missing and the line cord installation is jury-rigged but looks okay.

I would prefer local pickup (of course) and I am about two hours northwest of Boston and three hours north of Hartford CT. I can deliver to Hosstraders in May (but would expect payment earlier). I will ship it if necessary. I would ship in two cartons but this adds a bit to the cost. Buyer is responsible for packing costs and the actual freight charges. The total cost is dependent on distance of course. Estimate two 50 pound boxes from 05047. I figured that $650.00 plus shipping is a reasonable price for this radio. However the person for whom I am listing it decided to drop it by $100.00 to $550.00. If no one buys it for that amount reasonable offers will be entertained. Otherwise you all know where it will show up next ;~) It can be made very nice with a minimum of effort and completely restored with more effort. Photos are available. If interested please reply by e-mail. 73, Michael
W1RC*AT*VERIZON*DOT*NET

From: Roy Morgan <roy.morgan@nist.gov> Date: Fri, 24 Mar 2006 10:34:49 -0500
Subject: Re: [R-390] R-390A Front Panel restoration

wrote: > Howard Mills re-finished my R-388 (Collins 51-J4) front panel (and also the dial-drum) and did a stunning job. w3hm@nfis.com

Tom,

The contact info I have for Howard is: "Howard Mills W3HM" <w3hm@frontiernet.com>304-876-6483

Howard has already re-finished and silk screened panels on hand. I believe he operates on an exchange basis: you send a panel, he keeps it for later refinishing and sends you a completed one.

NOTES:

1) His panels, whether originally embossed or flat, have all been filled level, refinished and then silk screened. He does not supply embossed/stamped/engraved panels that I know of.

2) He has at least some Black finished panels with white lettering. These are stunning if you want black.

3) His price exchange some time ago was $150, likely plus shipping. If you send a panel that needs work to be useful to him (bends, holes), he has to charge for that work. Roy

From: Roy Morgan <roy.morgan@nist.gov> Date: Fri, 24 Mar 2006 11:34:18 -0500
Subject: Re: [R-390] Lincoln Project/ Radio Mart

wrote: >MIT had a Lincoln Laboratory back during the 60's and 70's used for the >development of Radar in conjunction with the military.... >Does anybody know what the " Lincoln Project " was? > >Radiomart has a radio on eBay he declares is from the>Lincoln Project. Item 9700253375

I believe that MIT's Lincoln Laboratory at least started at Lincoln, Mass. My memory is fading (I grew up in Mass) but Hanscom Air Force Base is located a few miles northeast of Lincoln, MA between Concord and Lexington. Here is a little about the relationship between Lilcoln Labs and MITRE.:

From:
http://www.mitre.org/about/index.html
"MITRE was formed in 1958 as a not-for-profit corporation under the leadership of C.W. Halligan. In the beginning, several hundred employees from the Massachusetts Institute of Technology's Lincoln Laboratories came to MITRE to create new technology for the Department of Defense-specifically the Semi-Automated Ground Environment, which used brand new digital computers. ..."

About 1980, MITRE (MIT REsearch) was located near MIT in Cambridge Mass. Now, they seem to have two locations, one in Bedford, Ma and one in McLean, VA.

BUT, It may have been on another list I read that Lincoln AFB in Nebraska is the likely reference for this R-390A. It was a SAC base and had an Atlas ICBM installation (for a relatively short time). For more, see: http://www.strategic-air-command.com/bases/Lincoln_AFB.htm or:
http://www.geocities.com/atlas_missile/Lincoln_AFB.htm Roy

From: Roy Morgan <roy.morgan@nist.gov> Date: Fri, 24 Mar 2006 11:54:44 -0500
Subject: Re: [R-390] R389 and R390 faults

wrote: > I have recently bought an R389 and a pair of R390 rxs. They are all > complete and in good condition. >At first appearance it seems as the PSU, Audio stage and IF strip are >interchangable.

Yes, they are. In the R-389, the widest (two(?)) IF bandwidths are not used. This is because of the inherent narrow bandwidth of the R-389 RF tuned circuits.

>1.Were any parts listings produced for the above rxs, ie detailing the >wattage of resistors and the voltage ratings of other components?

Yes. Find and study the manuals for both radios.

>2.Are there any common faults or other troublesome components that fail or >give trouble that I need to be aware of?

Yes.

1)You really need a fan on the voltage regulator sections. See: http://home.comcast.net/~roysmorgan/ click "fanplate"

2) the 47-ohm, 2-watt resistors in the voltage regulator section (audio deck) and in the power supply rectifier section should be checked. You will likely find them all drifted upwards in value at least somewhat. All should be replaced with modern, higher wattage resistors.

3) In the R-389, the MAIN TUNING KNOB has a clutch built into it. If it is frozen or corroded, it can lead to RUINOUS damage to the PTO if you force the thing by hand, or hold it while running the motorized tuning. The R-389 PTO is nearly unobtainable. I know of one and one only that has been sold in the last 10 years.

4) In the R-389 you are in danger of ruining the motors if you run them without new lubrication. One motor moves the main tuning dial and is controlled by a switch on the front panel, and one motor automatically changes RF tuning sections as the tuning is moved through it's range.

>3. I have a couple of R390A rxs which have a mechanical counter for the >BFO, why was this used over the standard knob?

It replaced the standard knob. It was used by intelligence gatherers doing radio intercept to both accurately set sideband and CW BFO offsets and to measure signal characteristics. They were, in fact, common ten turn counter dials which embodied both counting and mechanical reduction of motion. There is nothing secret or especially rare about the turns counters. What they were doing with them is possibly still classified. Roy

From: "john d kopke" <jdkopke@cablespeed.com> Date: Fri, 24 Mar 2006 12:16:07 -0500
Subject: Re: [R-390] R389 and R390 faults

Would anyone know if there are vernier Knobs available for the BFO on the R-390A, and at what price ?
john kopke

From: "n4buq@knology.net" <n4buq@knology.net> Date: 24 Mar 2006 19:28:06 -0000
Subject: [R-390] Slightly OT: Good Service

Many of us order mechanical parts of some kind or another for use on your R390 radios. I needed some small parts for an R390A project and I called McMaster yesterday afternoon with my (very small) order. This was sometime around 1pm or shortly thereafter.

Today, I went home at lunch and at 12:30pm, I looked on my front doorstep. The package was sitting there for me. This is less than 24 hours with UPS ground from Atlanta to north Alabama. I've ordered from them before and got very quick service, but this was pretty amazing.

Just thought I'd pass it along. I have no affiliation with McMaster other than being a very satisfied customer. Barry - N4BUQ

From: ToddRoberts2001@aol.com Date: Fri, 24 Mar 2006 17:59:21 EST
Subject: Re: [R-390] Slightly OT: Good Service

In writes: Many of us order mechanical parts of some kind or another for use on your R390 radios. I needed some small parts for an R390A project and I called McMaster yesterday afternoon with my (very small) order. This was sometime around 1pm or shortly thereafter.

Today, I went home at lunch and at 12:30pm, I looked on my front doorstep. The package was sitting there for me. This is less than 24 hours with UPS ground from Atlanta to north Alabama. I've ordered from them before and got very quick service, but this was pretty amazing. Just thought I'd pass it along. I have no affiliation with McMaster other than being a very satisfied customer. Barry - N4BUQ

Hi Barry - Dittos - McMaster-Carr has got to be one of the greatest things since sliced bread. I have gotten 2-day service from them in the past and never had to wait for a backordered part. With ordering so easy online I don't even bother to try to search the local hardware stores much anymore for stainless steel hardware or other hard-to-find parts. Most of the time the local stores never have what I need and the parts they do have are expensive. McMaster even has the 8-36 hex-key socket screws to fit the R-390A front panel knobs. By the time you have made a round trip, fought traffic, used gas and came up with nothing at a local store you will save money and time ordering online. They really give A-1 service. 73 Todd WD4NGG

From: "Bruce Ussery" <twc9198764412@earthlink.net> Date: Fri, 24 Mar 2006 18:02:55 -0500
Subject: Re: [R-390] Slightly OT: Good Service

I've had similar good results with those guys, mostly workplace related but also hobby related stuff like specific replacement drill bits and hardware. (Ever get tired of having to buy complete sets just to replace that 1/8 in. you wear out or break?) They have everything, including the kitchen sink- several sinks if I recall correctly. Everything seems to be in stock, no matter how arcane. I'd love see the warehouse(s). 73, Bruce WA4ZLK

From: Dan Arney <hankarn@pacbell.net> Date: Fri, 24 Mar 2006 17:20:30 -0800
Subject: Re: [R-390] Slightly OT: Good Service

In LA I used to order by noon and get the order by 5:00 PM in most cases. They were about 40 miles away Great service. Hank KN6DI

From: Dan Arney <hankarn@pacbell.net> Date: Fri, 24 Mar 2006 17:24:31 -0800
Subject: Re: [R-390] Slightly OT: Good Service

The Santa Fe Springs warehouse (LA) is huge like 3 WalMart Super centers at least. Hank KN6DI

From: Tom Norris <r390a@bellsouth.net> Date: Sat, 25 Mar 2006 01:27:47 -0600
Subject: Re: [R-390] Slightly OT: Good Service

They have great service, and they have EVERYTHING!

The only thing they've not had that I've wanted is a *PRINT CATALOG* While the web site is very good, sometimes it's nice to have paper in your hands to be able to flip through to see what it is you're looking for. This year it'll be 6 years of trying every 6 months of asking. Interesting. Ahhh, no biggie. Tom NU4G

From: Dan Arney <hankarn@pacbell.net> Date: Sat, 25 Mar 2006 05:21:53 -0800
Subject: Re: [R-390] Slightly OT: Good Service

Tom,

The catalogs are hard to come by. They now are issued every other year or so to Regular customers that have a steady purchase history over a period of time and I seem to remember they look for an annual purchase history of around $1500.00 or so a year.

I had 2 of them and if they both made it to TX I can send you the oldest one for postage. They are big and if you have wish list it will be in it.

W.W. Grainger now only sends out one every other year or so. Same deal, but if you know they have new ones if you have an account and walk into the store they will give you one. Hank KN6DI/5

From: Robert Watson <kn4hhptc@yahoo.com> Date: Sat, 25 Mar 2006 06:02:16 -0800 (PST)
Subject: [R-390] R390A interconect cables

I am restoring a Stewart Warner R390A and I have discovered that the coaxial interconnect cables are in pretty bad shape (insulation cracked and braid and or center conductor broken). Does anyone know of a good currently available cable to rebuild the original ones. One suggestion was RG-174 which is small 50 ohm cable. I'm just not sure how critical the cable impedance is.

Thanks for any other suggestions. 73, Bob, KN4HH near Atlanta

From: roy.morgan@nist.gov Date: Sat, 25 Mar 2006 10:27:46 -0500
Subject: Re: [R-390] R390A interconect cables

Quoting >... the coaxial interconnect cables are in pretty bad shape... Does anyone know of a good currently available cable to rebuild the original ones.

RF Connections has the correct wire. http://users.erols.com/rfc/index1.htm Send an email or call if it is not listed on the web page.

One suggestion was RG-174 which is small 50 ohm cable. I'm just not sure how critical the cable impedance is.

The impedance is NOT critical. Impedance is important when the electrical length of the cable is a significant part (20 percent or more) of a wave length at the operating frequency. Roy K1LKY

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Sat, 25 Mar 2006 11:18:35 -0500
Subject: Re: [R-390] Slightly OT: Good Service

wrote: > They have great service, and they have EVERYTHING! > > The only thing they've not had that I've wanted is a *PRINT CATALOG* > While the web site is very good, sometimes it's nice to have paper in > your hands to be able to flip through to see what it is you're > looking for. This year it'll be 6 years of trying every 6 months of > asking.

Cribbed from a Usenet thread by Scott Moore:

I wanted to find out once and for all what determines who McMaster-Carr sends a catalog to, and when.

Turns out they are operating under goverment decree !

The weight of the catalogs was causing landmass depressions in sections of the country. Combined with depleted oil resources and mining, the excess weight was actually causing several large areas of the US to sink, inches or even feet in some cases. It was determined that the weight of McMaster-Carr catalogs, along with old copies of the National geographic, were affecting this problem.

They are still allowed to sent the catalog out, but must distribute them in an order that will keep the weight ballanced across the USA. Because this algorithim is not apparent unless you know the exact current distribution of both the old catalogs, and old National Geographic copies, the distribution will seem quite random !

More seriously, McMaster has some competition from MSC etc., and MSC is much more liberal with their catalogs. My buys from them come to maybe $100-$150 a year and they sent me their big catalog (I could see the UPS truck come up on its springs a little bit when he put it on the hand truck and wheeled it to my door.) Their website (http://www.mscdirect.com/) isn't quite as useful as McMaster-Carr's but it's close. I get next day delivery from either of them most of the time (but occasionally something will have to come from the left coast and take a whole week to get here.) MSC sends me 10 and 20 percent coupons every couple of months.

But... MSC doesn't have spline keys! They don't have quite the selection of oddball fasteners. They have a bit more of a machine tool orientation (not that McMaster is a weakling in that area either.) Tim.

From: "Scott Overstreet" <scott@becklawfirm.com> Date: Sat, 25 Mar 2006 10:28:04 -0800
Subject: Re: [R-390] Slightly OT: Good Service

And McMaster's on line catalog is so good at helping to find the part needed that I prefer starting there rather than with their printed catalog----it is faster, easier and they do their best not to let you miss something that you shouldn't. And their quick delivery is ledgionary---- Scott

From: "Bill Feldmann" <n6py@qnet.com> Date: Sat, 25 Mar 2006 10:29:59 -0800
Subject: [R-390] Bad Overseas EBay Experience

Hi All,

Been reading with interest on this and other reflectors about bad EBay experiences. I just had a real bad one with trying to purchase a item from Italy.

My item was a GRC-9/BC1306 7 foot power cable that I bid on in late January and won. The seller was serlet4446 and instructed me to send him a bank cashiers check for the item plus shipping. One strange thing was he upped the shipping price in his email to me by $5 over what he quoted on the winners notice from EBay. But because we all can make mistakes I included the additional $5 in my check. I promptly sent him the check by registered mail and got the mail card back in three weeks showing himself or his company received the check.

A month later I got a notice from EBay saying he had not been paid and I could be black listed from EBay. I contacted him personally using a email with an attached scan of the signed mail card. He still claimed he didn't get the check. After many emails with him that were hard to understand because of his poor English I contacted EBay customer service by email.

I got a form email from Vincent K at EBay instructing me to pay him using PayPal with my credit card, which I promptly did. At this point I assumed he was maybe honest and the check was lost in his company and never cashed so I sent a second payment for the cable to serlet4446 by PayPal.

Then last week I get another notice to pay again for the cable from EBay. But the notice instructions were in Italian which I can't understand. I again contacted serlet4446 and he claims he didn't get the money from PayPal even though I have a email receipt from PayPal showing the transfer of funds and my credit card statement shows the money went to him through PayPal.

I also contacted my bank and found the original check was cashed by him or his company. But my bank will try to get my money back for the check. The PayPal money is most likely gone since I paid using them later than 30 days after the closing of bidding as just a money transfer.

I also contacted the Post Office because this may be mail fraud but they really can't do much since serlet4446 is not in Italy where the mail fraud laws are not strong.

Yesterday I put a negative notice on EBay about him to at least warn others. He does have a good EBay, record up to now, and my not be a crook but could run a company with very poor records and controls. I'm sure he has a surplus company because he sells lots of military radio parts on EBay and also sells GRC-9 power supplies.

I will most likely never see the cable or my PayPal money but this is a good lesson about buying off shore through EBay. EBay is not a company staffed with people like Sears or Costco that can help in a situation like this. There is no person to call to get help, the company is just a bunch of computers, programmers and servers that can only crank out form letters. Also EBay is set up for sellers and not for the buyers. When I put a negative feed back about serlet4446 on EBay they had me take a test with some confusing questions before submitting the report. Others have told me they have given up trying to submit negative feed back because of this. They do all they can to discourage negative feedback but my

report is on him should be a warning to others.

I will most likely never use EBay again for an overseas purchase. In fact they my do me a favor and black list me since I'm not sending him any more money. In the future I will try to buy only from individuals or using the mail in the USA where there are some mail fraud laws and the seller speaks English.

But a few suggestions for those of you that must use EBay for over seas purchases.

1. Only pay promptly by PayPal so you have some insurance from PayPal. If the seller doesn't use PayPay, don't buy. Also the advice from my bank was to only use a credit card with PayPay and not a bank account number or debit card, you could be cleaned out by a hacker. EBay and PayPal have very poor security as illustrated by myself always getting bogus EBay email asking for personal financial information after completing EBay transactions.

2. Only buy from sellers in English speaking countries unless you speak and write the sellers language to avoid confusion and disputes. Also English speaking countries usually have stronger mail fraud laws.

3. Always check out the seller's feed back, but this should be taken with a grain of salt since it is difficult to file a negative report on EBay and many buyers don't like to advertise that they got took.

So I hope this will be a warning to the rest of you, in my case the loss was around $100 with paying twice and the cost of the $12 registered mail to send the original check and I still don't have the cable. Bill N6PY

From: "Dan Merz" <mdmerz@verizon.net> Date: Sat, 25 Mar 2006 10:49:58 -0800
Subject: RE: [R-390] Slightly OT: Good Service

Hi, I'm still using the 1992 McMaster catalog that I took with me when I retired. So far, most of the old catalog item numbers are still valid. It's the only one I've ever had and there weren't many of them around the work location. I requested it one year when I was ordering a lot of items from them. It still is very useful, Catalog # 98. Generally putting in the item number gets me to the current listing, and price which usually has changed !! Dan.

Date: Sat, 25 Mar 2006 14:26:11 -0500 (EST)
From: John Lawson <jpl15@panix.com>

Reading your narrative, and looking at the Feedback histories involved - I'm wondering if you haven't been "spoofed" by someone who might be intercepting, or impersonating, selet4446...?

Why on earth would anyone from eBay ask you to send a PayPal to someone who does not have an account, as serlet4446 apparently does not... this makes 0 sense. All the 'facts' here just don't add up. Serlet seems to be a person I'd be glad to do business with... as you say, he's got great feedback over more than a thousand transactions! Did you try to submit the letter you got to one of the on-line translation servies to see what he's saying to you? Know anyone who reads Italian, maybe?

[And as for the rest of your "points" - "Only do business with English-speaking sellers..?" Look, I know that you've had a genuinely bad experience - but what's wrong with you learning Italian? Why

does the bulk of humanity have to conform to your middle-class USA value system?]

I've made dozens of international transactions via eBay - some for substantial amounts. Along the way, I've had several 'scams' attempted - none were successful because I just used a bit of common sense and 'swap meet logic'. In fact, I just had a listing for an electronic trinket that was bid on for $1, then the buyer simply disappeared - a 0-feedback, 'new' buyer - probably someone messing around - anyway, I've forwarded the dispute, the buyer is no longer registered on eBay, and I'll get my listing fee back. No harm, no foul.

It's not that one is 'safe' from getting screwed on eBay - especially on international transactions where 'real' money is involved - but it works both ways. I just sold several rare tubes to a guy in Hong Kong - never done any business with me before - he sent me the full amount via PayPal and I sent him his tubes - there's no "escrow" for this - he trusted me to hold up my end. And I did. Had I not, I imagine the only real recourse to him would have been to have me thrown off eBay/PayPal - but I still would have had his money and his tubes....

I'm truly sorry you have a bad experience right out of the gate - but something's fishy about the whole thing - perhaps you and serlet have both been scammed.... but I don't think eBay itself holds the blame for this one. Just my 200 millidollar..... Cheers John KB6SCO

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 25 Mar 2006 13:47:31 -0600
Subject: Re: [R-390] Bad Overseas EBay Experience

Bill,

I have traded by your recommendations for years with the exception that I don't do business with out of the country sellers, period nor do I sell to out of the country buyers....too much of a hassle and too risky as well.

I agree with never doing business with anyone that wants to be paid only by money order, certified check etc....that's a big flag with me that something's up. Granted there are those that don't trust Paypal or BidPay or any online type of financial service and just want to be paid but I can do without anything one of those guys has due to their concern with using technology to do business because of the added risk of no recourse if things go wrong....

I personally refuse to use Bidpay. I once used it to pay a guy for a Tek O'scope and it took weeks to get things settled. They send a western union money order to the seller. They send you this nice email telling you the tracking number of the money order and when you have a problem you go to the western union site and they don't know anything about the money order number because Bidpay buys them in bulk and western union does not track those. Then the seller finally gets the money order and it can only be cashed at a western union location which in his town was a small drug store where they had to wait until they had collected enough money in their register to cash the thing....what a nightmare. He might have been able to deposit the thing in his bank account or something but he didn't think so.

Won't do that again.

I've had good luck with Paypal after using them for probably 10 years. I think they have good security in place...the emails you get...and I get on bogus ebay stuff is not the fault of ebay's security...it's the creativity of the bad guys. Nobody has gotten into your account unless you have answered those bogus

emails and given away vital info.

I forward them all to the ebay security folks and for the most part over the last year or so they have stopped....

On credit card transactions through paypal....have the credit card company reverse the charges. It takes a while but they will credit your credit card account and get the money back from Paypal...it's then up to Paypal to settle with the seller. I've done that before...works fine!

Good Luck... Cecil Acuff WB5VCE

From: Barry Hauser <barry@hausernet.com> Date: Sat, 25 Mar 2006 15:40:56 -0500
Subject: Re: [R-390] Bad Overseas EBay Experience

Hi Cecil & list...

I've used Bidpay over 100 times with no problems. I was able to check on the Western Union MO's by calling the 800 number and keying the MO serial number. They could basically just tell you whether it was cashed or not. One got lost in the mail one time, but they replaced it.

However, doesn't matter anyway -- Bidpay, which was part of First Union (which I think still owns Western Union), shut down at the end of last December. They kept the original website up for a couple of months for follow-through, but now it's gone. I just checked the bidpay URL and there is an announcement that Cybersource Corporation bought it out and they "hope to relauch" sometime in the Summer.

Still prefer paypal -- bidpay was paid for by the buyer and rather pricey -- but much more convenient and somewhat safer for the buyer than trotting down to the post office, finding a parking space and waiting in line. Also you bought the MO's with credit card so didn't have to run around with wads of cash at risk.

There is a note on the Cybersource site that warns that scammers are still "paying with bidpay" -- sham emails, etc. -- and seems to be associated with those great money making deals from Nigeria and Lagos. Barry

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 25 Mar 2006 14:50:19 -0600
Subject: Re: [R-390] Bad Overseas EBay Experience

Guess I got lucky with my one experience.... I wonder why they went under? Think I'll stick with Paypal... Cecil...

From: Dan Arney <hankarn@pacbell.net> Date: Sat, 25 Mar 2006 14:59:35 -0800
Subject: Re: [R-390] Bad Overseas EBay Experience

Well Guys,

I have had good luck selling and buying from overseas. My understanding is Bidpay is no longer in business or not doing ebay. Hank KN6DI

From: "Christian R. Fandt" <cfandt@netsync.net> Date: Sat, 25 Mar 2006 16:19:32 -0500
Subject: [R-390] WTB: Hi Power Resistive (Dummy) Load (sort of OT)

Hi folks,

I'm looking for a 50 ohm dummy load to repair and maintain an industrial RF generator used to excite a 1 kW laser cutting system (namely, a Trumph TLF 1000). I searched the usual suspects (Google, e*ay, etc., including Fair Radio). Finally found one used equipment outfit in California that lists several of them being available but doesn't bother to take the time to reply to my price and delivery requests. I'll try again, but . . .

The ideal would be a brand new Bird 8931-115SC13 with an optional 7/16 connector installed (reference: http://www.bird-electronic.com/products/product.aspx?id=625). However, my friend who owns the shop that uses the laser almost passed out after hearing the $4400 price. It would be used once to repair the system and left setting until the next time, whenever that is. He just spent over $5k to replace the final tube per conclusion of a third-party laser cutting machine maintenance outfit. They reportedly said that was the problem causing the too high reflected power (the original problem that needs to be solved). Uh-huh! And the tech did not even have a dummy load with him to check the RF generator's performance and tuning after he came back to install the new tube. He left it back at the shop (~700 miles away) because "he didn't think he needed it".

My task is to isolate the source of the high reflected power between either the laser "resonator" (which is the laser itself), the RF generator, or the coax cabling between the units and attack the problem. Hard to know were to solve the problem without ruling out portions of the system which are not the cause.

Hence, my approach to these two groups for leads. You have been known to be a wellspring of information over the years.

The RF power output is 6.5 kW maximum at 13.56 MHz which means a 7.5 to 10 kW load is needed. The connector is the 7/16 type (reference: http://www.amphenolrf.com/products/716.asp) and I'd need to make an adaptor of some sort between whatever load I find and the system under test, if required. I work in a 2-way radio shop for my day job and I should be able to find components to make that up. We only know of loads available up to around 2 kW from all our sources; our typical max TX power we ever get into is 100-125 watts, even for base stations.

FYI: The 7/16 connectors are a DIN standard commonly used in Europe for high power applications.
FYI: 13.56 MHz is an unlicensed frequency assigned for use in industrial applications.

Please reply off list as this is not too on-topic. Thanks very much for your help! Regards, Chris F.

From: "Brent Taylor" <btaylor@nbnet.nb.ca> Date: Sat, 25 Mar 2006 18:02:24 -0400
Subject: FW: [R-390] Bad Overseas EBay Experience

John, I think Bill was very clear about the English language issue. He advised against dealing with non-English-speaking sellers in case there was a dispute later. He said so, specificially. Are you suggesting Bill learn Italian so he can solve this problem or buy from Italians in the future? Bill, for the record, did not say "only do business with English-speaking sellers." He said, in fact, that one should do business

with English-speaking COUNTRIES, in no small part because they are more likely to have better laws against fraud.

And Bill was not making some kind of clarion call for the "bulk of humanity to conform" to his value system. He is warning a specialized list about something that is very important. Your criticism of his post, and inability to comprehend what he really wrote, is unfair to Bill and this list. I am glad, for one, that Bill has taken the time to outline his experience and warn the rest of us.

I usually lurk, so most of you have never heard of me. I enjoy the list, and will now go back into the fox hole. Keep up the good work Bill. John, I think you should reread what Bill wrote and reconsider what you wrote. Respectfully, Brent Taylor, VE1JH

From: "Walt Van Arsdale" <varsdale@verizon.net> Date: Sat, 25 Mar 2006 19:07:36 -0600
Subject: RE: [R-390] Bad Overseas EBay Experience

RE: [And as for the rest of your "points" - "Only do business with English-speaking sellers..?" Look, I know that you've had a genuinely bad experience - but what's wrong with you learning Italian? Why does the bulk of humanity have to conform to your middle-class USA value system?]

This is a truly bizarre statement. To think that someone would be expected to learn a new language in order to deal with a transient event in one's life is insane.

You can't deal with those with whom you cannot communicate... on eBay or otherwise.

From: "WF2U" <wf2u@starband.net> Date: Sat, 25 Mar 2006 21:17:53 -0500
Subject: RE: [R-390] Bad Overseas EBay Experience

I've had eBay dealings with sellers from Austria, Germany, Italy, Holland, Canada the UK and Australia and the transactions were flawless. My only bad experience was with one "seller" from Australia. In June 2004 I won an auction for an "Australphone" Australian made military HF transceiver, and I transferred to the seller's bank account by direct wire transfer $350 , which included the price and $218 surface parcel post charges. I never received the item, the seller ceased being an eBay member shortly after the transaction, and my repeated e-mails and registered "snail" mails were never answered. So I'm out $350 and had no idea how to try to either retrieve the money or get the equipment... 73, Meir WF2U Landrum, SC

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sat, 25 Mar 2006 21:06:16 -0600
Subject: Re: [R-390] Bad Overseas EBay Experience

Bizarre...ain't that the truth....

And our so called "Middle Class" value system looks like royalty to a many countries I've visited.

We haven't imposed the American value system on the world the world has made it own choice. Remember we are the only country in the world that hasn't adopted the Metric system of measures.....kinda set in our ways I guess...but we aren't imposing our backwards American system of measures on the world....the world made it's own choice.

The ole US of A is still the country that people of many other nations seem to be willing to give their left arm to become a citizen of.....evidenced by our ever growing diverse culture. I'm not sure it's in our best interest in today's world but it's what we are about.

Must be doing something right.....

Or maybe it's because we have more of the worlds R-390A's and everybody I know wants one or more of those! (ended on topic after all!) Cecil..... WB5VCE Gulfport MS...USA

From: John Lawson <jpl15@panix.com> Date: Sun, 26 Mar 2006 00:34:14 -0500 (EST)
Subject: RE: [R-390] Bad Overseas EBay Experience

wrote: > RE: > > This is a truly bizarre statement. To think that someone would be expected

Um - delete the words 'truly bizarre'. Insert 'mildly sarcastic' in their place. Re-parse Enjoy! Cheers. John KB6SCO

From: "paolo gramigna" <paolo.gramigna@controllo.it> Date: Sun, 26 Mar 2006 10:59:15 +0200
Subject: [R-390] Bad Overseas EBay Experience

Hi all,

Well, I'm from Italy; I have a 100% positive feedback of about 360 on eBay, both as a seller and a buyer; my eBay ID is pgram. I use paypal, I did use bidpay (now closed) and I have a corporate UPS account for shipping. I also had a few chances to deal with serlet4446, both directly and on eBay; and my experience was always positive, even with delicate and expensive instruments.

The problem is, sh**t happens. Once upon a while, I have sent a registered-mail remittance to a very estimated seller in UK, and the content was stolen; I have been sent postal money orders that I was unable to cash, for complicated reasons... It happens, both in real life and in the "virtual" market.

The language barrier is indeed a factor; but if you feel uncomfortable with the seller's English, don't bid. If it does not answer properly to your emails, don't bid. If a bidder has less-than-optimal feedbacks, don't sell; you have the right to refuse bids, say it in the description and simply do it.

Several times I was able to convince the seller, initially not willing to sell overseas, to accept my bid; a few times I even phoned him (if you use Skype, then the intercontinental call will cost as a local one) and having somebody at the phone clears most of the muddle...

Then there are sellers like Radio Mart. When I read one of his descriptions, I recall those Snake-Oil sellers, trumpeting from a wagon at the Market Square times. Even if it's American, he sells here and there like a windmill; and for every flame exploding in the list, there are a dozen of fools buying that "Extremely Sought And Rare R-390A, Designed By Art Collins", where "All The Tubes Have Been Replaced IF AVAILABLE...." Cheers, IK4YNG Paolo from Italy

P.s. English is not my maiden language.... Please be sympathetic for my mistakes...

From: "paolo gramigna" <paolo.gramigna@controllo.it> Date: Sun, 26 Mar 2006 11:05:16 +0200
Subject: [R-390] How to reply to a message?

Hi all,

I receive all the messages on the list on my email account. When i want to reply to a messege, my outlook puts the email address of the originator in my "To" field, instead of the mailing list address, so the reply goes directly to him instead of the list. Where am I wrong? Paolo from Italy

From: ampop@comcast.net Date: Sun, 26 Mar 2006 09:33:15 +0000
Subject: Re: [R-390] Bad Overseas EBay Experience

I have dealt with Paolo and it was a great Ebay experience. And I agree with his comments which I thought were very well expressed. His Italian sounded prettry good to me. His English isn't too bad either.

Dealing on Ebay is an awful lot like Baseball. You Win some, You Lose Some and some are Rained Out. Some probably should have never been scheduled. If you don't like the Game, Don't Play. Bob Wagnerf, Odenton, Maryland

From: Barry Hauser <barry@hausernet.com> Date: Sun, 26 Mar 2006 07:39:59 -0500
Subject: Re: [R-390] How to reply to a message?

Hi Paolo:

The lists vary somewhat, but on this one, if you wish to post to the list instead of only replying privately, choose "Reply All" and it will include the reflector's email address as well as the individual(s). Your previous post came through fine. ciao Barry

From: Jim <jclark6@gmail.com> Date: Sun, 26 Mar 2006 06:57:54 -0600
Subject: Re: [R-390] Bad Overseas EBay Experience

I resent having my value system call middle class I think I have at least obtained upper middle class values, some time it slips down to Bubba class depending on how much beer is involved. In a effort to improve my language skills on ebay I have decided to learn several languages.

John KB6SCO que eu quis apenas verificar e ver como bom vocÃª se comunica em outras lÃ-nguas e se vocÃª pudesse identificar estas lÃ-nguas, eu nÃ£o posso. 73 Jim N5TJZ

John KB6SCO die ik enkel heb willen om controleren en zien hoe goed u communiceert in andere talen en als u kunt deze talen identificeren, ik niet kan. 73 Jim N5TJZ

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sun, 26 Mar 2006 09:43:42 -0600
Subject: Re: [R-390] Bad Overseas EBay Experience

Your English is fine.....so is your attitude about such things. I agree with all you have said.... Cecil....

From: "Cecil Acuff" <chacuff@cableone.net> Date: Sun, 26 Mar 2006 09:50:15 -0600
Subject: Re: [R-390] Bad Overseas EBay Experience

None of them were American Redneck so I had a little problem....I always got the first couple of words and the last couple of words but missed the text in the middle....reminds me of my CW skills.

I'm sure what was in the middle was quite interesting.....I would have liked to watch you type all of that up....changing them keyboards back and forth had to be a real pain....;-) Cecil....

From: "Gene Dathe" <dathegene@hotmail.com Date: Sun, 26 Mar 2006 16:12:25 +0000
Subject: [R-390] minuteman radios

Off topic, but someone here probably worked on 'em.... Does anyone know what transceivers, HF and UHF, were used with LGM30G, Minuteman?

Someone told me that he saw a 390 in a very early installation, I find that hard to swallow...Thanks for the info! 73 de NAØG Gene

From: "Francesco Ledda" <frledda@verizon.net> Date: Sun, 26 Mar 2006 10:26:09 -0600
Subject: RE: [R-390] minuteman radios

I visited the Minuteman museum site is southern Arizona. This had a radio similar to the R-1051. I have been told that the R-1051C was expressly designed for the SAC Minuteman sites. Regards, FL

From: Robert Nickels <w9ran@oneradio.net> Date: Sun, 26 Mar 2006 11:27:12 -0600
Subject: Re: [R-390] minuteman radios

wrote: I have been told that the R-1051C was expressly designed for the SAC Minuteman sites.

That's what I saw when I toured an LCF in 1976. They covered up the frequency readout for the tour which was offered to neighboring landowners as a good will gesture. The commander showed me their survivable HF array which consisted of multiple vertical elements that were normally underground but could be raised pneumatically. While the LCFs had two-way capability, their primary need was to receive the EAM messages on both HF and VLF. The ground crews used both military and commercial VHF/UHF FM gear, a buddy used to service their repeaters and mobiles when he worked for a GE shop in Cheyenne. 73, Bob W9RAN

From: Rbethman <rbethman@comcast.net> Date: Sun, 26 Mar 2006 13:09:25 -0500
Subject: [R-390] Working on R-390A IF Deck

Gang,

I've been working on an R-390 Collins IF deck. It is an early one with no trimmers on the filters. (Just

reference info!) I had to replace Z-501 due to a broken slug and broken off adjustment "head".

What would be the most reliable way to set this oscillator system "on the money" for 455kHz? Scope, Sig Gen., and Freq counter are available on bench. Bob N0DGN

From: Tom Norris <r390a@bellsouth.net> Date: Sun, 26 Mar 2006 13:18:30 -0600
Subject: Re: [R-390] Bad Overseas EBay Experience

wrote: Dealing on Ebay is an awful lot like Baseball. You Win some, You Lose Some and some are Rained Out. Some probably should have never been scheduled. If you don't like the Game, Don't Play.

In that manner, it's not much different than hamfests. I think I've had better luck on Ebay than I've had at some hamfests in the past.

As far as selling to various countries, my list is similar to Mier's - I've sold to the UK, Italy, Austria, Germany, Switzerland, Australia and Japan. All the buyers were honest and a pleasure to deal with, and I'd deal with them again. I've bought a few items from Germany, UK and Japan, but the main thing I see on listings from most EU countries are they seem to be unwilling to sell outside the EU or even outside their country, even on small non-milsurplus items such as car parts. Maybe it's just been good luck, but I've not had a problem with any foreign transaction. Any language problems I had were usually helped with online translators, a Berlitz or someone locally that spoke the language. The only problem transactions were with folks in the US. YMMV, of course.

One thing to be sure of, if you're shipping a large item such as an R-390 is to be sure that it's packed to survive at least a 3 foot drop or so. My biggest obstacle seems to have been packing items to meet the maximum size and weight limits for a certain parcel class so the poor buyer doesn't have to mortage his dogs and cats to pay for the next level of postage. 73 Tom

From: Gary Pewitt <n9zsv@cei.net> Date: Sun, 26 Mar 2006 14:33:30 -0600
Subject: Re: [R-390] How to reply to a message?

Where you are wrong? You are using Outlook. Get a copy of Eudora. It's free or you can pay a little and get the full version. Sooooo much better and none of Microsoft's built in bugs and hacker holes. Oh, excuse me those aren't bugs, they're features. Ha Ha. 73 Gary

From: "K3PID" <k3pid@sbcglobal.net> Date: Sun, 26 Mar 2006 14:59:10 -0600
Subject: Re: [R-390] How to reply to a message?

Paolo, If you think about it, a reply would correctly go to the sender as it does when you click "Reply". If you want to reply to the list, click "Reply All" and then delete the sender since most lists moderators get upset with multiple recipients. Another way is to make an entry in your address book for the list then use the address book icon next to the TO: field to add the list to the recipients. 73 K3PID, Ron H.

From: "Mort Denison" <bmg50pa@suscom.net> Date: Sun, 26 Mar 2006 16:20:25 -0500
Subject: [R-390] Central Electronics Model B Signal Slicer w/R-390A

Has anyone ever connected up one of these to an R-390A? I've got the one with the built in Q multiplier and am curious if it's possible to hook it up without having to modify the receiver too much. Or would it not be worth the trouble?

From: "Barry" <n4buq@knology.net> Date: Sun, 26 Mar 2006 16:02:26 -0600
Subject: Re: [R-390] HP410B rectifier tubes

I had a chance to do a little more testing. It seems the diode is only pulling about 11 microamps (depending on the accuracy of my meter) which is not correct (should be 500 microamps). I'm seeing approximately 6.3VAC at the socket and the tube itself has slight resistance across its filament so I must have something else going on. Looks like another "project". Barry - N4BUQ

From: "Francesco Ledda" <frledda@verizon.net> Date: Sun, 26 Mar 2006 18:40:43 -0600
Subject: RE: [R-390] minuteman radios

I have an R-1051C. It is the only 1051C I have ever seen in the surplus market. It came without the six-pack; the strange thing is that a 1051B six pack does not work without modifying the main chassis.

From: odyslim@comcast.net Date: Mon, 27 Mar 2006 02:27:18 +0000
Subject: [R-390] Hamfest, Timonium MD

I went to the Timonium Hamfest both Saturday and Sunday. It was probably the smallest event I have seen there. It used to be huge. I guess eBay has taken its toll on everything.

That said, I did get a very nice clean R-390 for $400.00. I also picked up 100 tubes from one seller. All for the R-390X radios at a decent price. Every one was new as promised.

Lucky for me the hamfest was small, I may not have got the rADIO :-) sCOTT w3cv

From: "Barry" <n4buq@knology.net> Date: Sun, 26 Mar 2006 21:42:33 -0600
Subject: Re: [R-390] HP410B rectifier tubes

Did some more digging. With the cover off, I can measure the filament voltage for the EA53 while it is in circuit. I had to crank the resistor quite a bit farther "up" to get 6.3VAC across the filament. This did cause the probe to get really warm like it used to; however, the probe still doesn't check AC properly (low reading).

I did some checking in the manual. It states to check the resistance "below" the ballast tube with the ballast tube removed from the circuit. This should produce 4 to 6 ohms. If it doesn't, most likely something has been "shorted" (I assume it means something has damaged the rectifier). Mine checks a little over 2 ohms, regardless of the setting of the variable resistor. Looks like I probably do have a damaged EA53. I checked the rest of the wiring and some of the test point voltages and nothing was particularly too badly awry. Looks like I'm back to looking for an EA53 :-(Brry - N4BUQ

From: "Barry" <n4buq@knology.net> Date: Sun, 26 Mar 2006 21:46:48 -0600

Subject: Re: [R-390] HP410B rectifier tubes

Oops. Make that 300mA heater current; not 500uA. I was looking at the wrong part of the specification. Barry - N4BUQ

From: wabate <wabate@verizon.net> Date: Sun, 26 Mar 2006 23:47:34 -0500
Subject: Re: [R-390] HP410B rectifier tubes

Barry,

You sure you don't want a 2-O1C? That's what I have in my 410B. You can use the EA53 but it requires a different plate contact and attaching spring. Also the filament voltage is different. Don't know if HP made a design change or if they just allowed for a different repair part. I have an NOS HP replacement part, 2-O1C. Let me know if you are interested. 73, Bill, K3PGB

From: "Drew Papanek" <drewmaster813@hotmail.com> Date: Mon, 27 Mar 2006 00:09:14 -0500
Subject: [R-390] re: I-177 question (OT)

Dan Merz wrote:

>Hi, the substitute for 83 type tube described by Douglas for use in a >number of Hickok tube testers used two 1N4007 diodes and two 10 ohm/1 watt >resistors. <snip> He claimed this worked exactly like the 83 in the >number of Hickok testers he had >tried. <snip>

The information I have read on this modification states that the tester's calibration would be affected and would need readjustment. IIRC, the calibration standard is a selected 6L6 supplied by Hickok. Drew

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Sun, 26 Mar 2006 21:32:06 -0800 (PST)
Subject: [R-390] Our radio buddy

Wrote> has a radio on eBay he declares is from the Lincoln Project.

We all "profile" individuals before a purchase. For example if we park in a shopping mall lot and a rather scruffy looking individual come up to us and says "hey man, youse wanna buy a genuine whatever? It have lifetime warranty. For you and you alone today it only be $100? " Our "profile analysis" would be to hold on to our wallet and yell for the cops.

Well perhaps we can do a bit of profile analysis for Radio-Mart, Inc.

Here is a current quote for a Collins 51S1 Receiver.

"Using my variac I spent 24 hours bringing it back up to operating voltage and am pleased to say that it is working fine, last week I put it through my workshop and I have completely aligned it, re tubed it with the VERY BEST spec tubes, tested every single component and Xtals and replaced any out of tollerance devices, do yo uknow just how long that takes to do it right? and now have it working to better than book specs." [Bold face type by me. Spelling and grammatical errors are a direct quote.]

Marty is really very shy. Interesting. He lists a cell phone: 859-221-8015 but it isn't listed to his business.

He doesn't list the fact that in-state residents are required to pay 6% sales tax and he is required, by law, to collect it.

The item listed with a "Negotiable shipping" cost refers to buying multiple items.

I've had to re-write this completely as it keeps getting rejected as spam by the mail filter.

Go to the secretary of state in Kentucky and enter the number 0510329 or his business name. It will then give you his full name and addresses. The business is listed as inactive with a bad standing. The last required annual report was not filed. Work place: 205 Salem Road. Sadieville, Ky. 40370. House: Martyn G. Allison [No telephone number available] 872 Burton Pike Georgetown, Ky. 40324

No annual reports filed for years? No publicly published business address? Tax evasion? Bad corporate standing? Does he really live at his stated address?

Me? I'd skip his R390's et all; and take the whatever deal. It's far better. Regards, Perrier.

From: Commtekman@aol.com Date: Mon, 27 Mar 2006 00:37:07 EST
Subject: Re: [R-390] Our radio buddy

You got that right! Bob K6OSM

From: Rbethman <rbethman@comcast.net> Date: Mon, 27 Mar 2006 00:42:21 -0500
Subject: [R-390] Working on R-390A IF Deck

Gang,

I've been working on an R-390 Collins IF deck. It is an early one with no trimmers on the filters. (Just reference info!) I had to replace Z-501 due to a broken slug and broken off adjustment "head".

I have the TMs, the Y2k manual and all procedures. This is the SECOND one I've brought back to life. It IS a Blue Striper. For some miracle, it is in VERY good shape otherwise. Just some grit in the chassis, NO corrosion. It MUST have been buried in the center of St. Juliens!

RF deck is in great shape. Harness is is normal shape for a radio on the '51 contract. All modules EXCEPT the AF deck and the PTO are ALL Collins. Even missing ONE fuse holder on back.

Replaced BBODs.

What would be the most reliable way to set this oscillator system "on the money" for 455kHz? Scope, Sig Gen., and Freq counter are available on bench. Bob N0DGN

From: "Drew Papanek" <drewmaster813@hotmail.com> Date: Mon, 27 Mar 2006 00:43:15 -0500
Subject: RE: [R-390] Random tube sub of the day: 6AU6 for 6BA6

wrote: >One tube sub I tested: 6AU6 for 6BA6. They are both 7BK base pentodes but the 6BA6 is remote cutoff (more appropriate for AGC action) and the 6AU6 is sharp cutoff.

>Sticking the 6AU6 into various places in the IF strip resulted in changes in AGC action and carrier level meter. The changes were noticable but not horrendously bad. I did not tweak the GAIN ADJ for each sub. I only subbed one tube at a time.

Since there are a multiplicity of gain-controlled stages, losing control in just one stage (as by sustituting a sharp cutoff tube for the original variable mu tube) would have mostly minor effect.

AGC is applied to the R-390A's mixer stages; some have written on the topic of the receiver's oscillator frequencies being pulled by reflected capacitance changes at the mixer cathodes induced by AGC. If such be the case, less pulling could be had by removing AGC from the mixers. Makes me wonder if less pulling combined with less AGC control would be a worthwhile tradeoff.

The Final Engineering Report (Cost Reduction version) mentions that AGC was added to the R-390A's mixer stages to compensate for ACG control lost by having one less RFstage and a couple less IF stages (as part of transforming the R-390 into the R-390A). Is all that AGC control range necessary in our applications?

'Tis interesting that a few folks have found R-390A's with the third mixer stage modified to use a 6BE6. The 6BE6 pentagrid mixer would offer superior isolation from AGC-induced capacitance changes as compared to the original 6C4 triode mixer. The 6BE6 would also be vastly inferior to the 6C4 in terms of resistance to overload, and would be far, far noisier. (The accounts I have read all mentioned reversing the modification).

>What was more surprising was action in the PTO and BFO sockets: no >oscillation at all! I had expected the cutoff details to be >unimportant there, but I suppose it's possible that the 6AU6 >is biased deep into cutoff where the 6BA6 isn't.

Interesting. One SSB conversion I read about recommends swapping the 6BA6 BFO tube with a 6AU6 to obtain increased BFO signal amplitude. Maybe your 6AU6 has low transconductance? Drew

From: "n4buq@knology.net" <n4buq@knology.net> Date: 27 Mar 2006 12:49:35 -0000
Subject: Re: [R-390] HP410B rectifier tubes

It has an EA53 in it. I glanced at my other meter's (ME-26) 2-01C and it didn't appear at first glance that the 2-01C would fit in my HP-410B's probe, but I'll give it a second look. Maybe someone put an EA53 in this probe and I'm just assuming a 2-01C won't fit. It sure would be great if it does as the 2-01C is generally a less-expensive tube these days. 73, Barry - N4BUQ

From: "Mark Richards" <mark.richards@massmicro.com> Date: Sun, 26 Mar 2006 08:04:01 -0500
Subject: RE: [R-390] Bad Overseas EBay Experience

wrote: “I resent having my value system call middle class I think I have at least …”

Better stick with English, OM. :) /m

From: "Mark Richards" <mark.richards@massmicro.com>
Subject: RE: [R-390] How to reply to a message? Date: Sun, 26 Mar 2006 07:28:55 -0500

I find that frustrating, but it's the way the list has been set up. If you use "Reply to All", then the list address will be included. /m

From: DJED1@aol.com Date: Mon, 27 Mar 2006 10:16:42 EST
Subject: Re: [R-390] Working on R-390A IF Deck

""What would be the most reliable way to set this oscillator system "on the money" for 455kHz?""

I'd vote for the frequency counter to start. I use a scope probe to connect using a high impedance input on the counter. Once the radio is all otghther and working, you can check the BFO setting by peaking the calibrator signal in the narrowest filter bandwidth, then zero beating the BFO. This will account for any variation of the crystal filter frequency. Ed

From: "Bill Hawkins" <bill@iaxs.net> Date: Mon, 27 Mar 2006 11:37:12 -0600
Subject: RE: [R-390] Working on R-390A IF Deck

The thing that determines the value of the IF frequency is the crystal filter at the narrowest bandwidth. You should center the IF in the crystal passband. In some cases that might be 455.00, but not always. Crystals move a bit with frequency, as well.

You really don't need a counter to align the set. Certainly the military didn't have many of them in the 50s. The HP 522B would work all the way up to 100 KC.

If the IF is peaked near 455, set the bandwidth to 100 Hz and tune the generator for maximum output from the IF. Do this after the set and the generator have warmed up. You would need a counter if the generator drifts, but just to keep the frequency at the crystal filter center.

Once the IF is aligned, go back and realign the RF and variable IF sections - unless you didn't move the IF more than a few hundred cycles. The bandwidth of the RF deck is about 16 KHz, right? At least, that's what I'd do ... Bill Hawkins

From: Flowertime01@wmconnect.com Date: Mon, 27 Mar 2006 13:03:45 EST
Subject: Re: [R-390] Working on R-390A IF Deck

Fellows,

Bill Hawkins, is right on this stuff.

If you do not have a counter on the signal generator. First run the 455 into the test point on the last stage of the RF deck. point E211.

Use what ever signal level you need to get a good meter reading on the diode load with the BFO off

and signal generator modulation off.

Trim up the z501 cap C510 and coil L503 using the manual for setup of the bandswitch and when to adjust each item.

Also trim up T208 and leave it alone after this. Unless you change the 6C4 in the mixer stage. Then retune T208

You have pushed this coupling stage to best pass through your receivers 455 crystal and that's the best you can do.

It may not be exact 455 but it sure is the peak band pass of your receiver.

Work the signal gen frequency into the 455 crystal and peak every thing for maximum output on the diode load.

This gets the "IF" aligned into the center of that crystal and does it with the balanced input from the RF deck to the IF deck in place.

Some times you can get a little more out of the receiver this way.

If you are doing CW and narrow band stuff TTY and computer stuff this is worth the effort.

Once you find the peak 455 for your receiver and signal generator then go to the single end input to J518 and adjust the rest of the IF deck.

Leave Z501 alone.

The mechanical filters will lay over the crystal center. We have seen from testing earlier this year that peaking the mechanical filters does not change their center frequency but will change the signal level.

The mechanical filter trim caps act more like gain adjust than frequency shift adjust.

Trim up the IF slugs.

To stager or not to stager.

If you are a wide band AM listener try the stager tune in 16KC band width. If you have a sweep generator adjust for nice band pass in 16KC band width

Else center adjust for 455 and 2KC band width. Roger AI4NI

From: "Dan Merz" <mdmerz@verizon.net> Date: Mon, 27 Mar 2006 10:25:25 -0800
Subject: RE: [R-390] re: I-177 question (OT)

Hi, I wonder if the same information recommends calibration of the tester when the 83 is replaced with another 83? I no longer have the one I-177 that I once had, but I have Hickok 600, 750 , and TV-7 testers. If I can find the ss diode sub I made up, I'll check my three testers with an 83/ss diode substition

and an ordinary 6L6 to see if there's much difference when the switch is made. My 750 shows calibration sticker in 1977 by an airport agency. I don't think I've ever calibrated a tube tester and don't consider it very important in the overall scheme of things. The challenge of finding a reference tube for calibration is more than I want to undertake unless someone has one to pass around along with the "certified" values.

Douglas provided the steps to calibrate a Hickok tester using a current source between the plate/cathode pins with the tester set for a 6L6 tube and providing 5 mA current in the plate circuit. The only way to tweak the tester was to shift the position of a magnetic shunt plate on the meter to change it's sensitivity. But aside from tweaking the meter, his test gave an indication of how well your tester indicated the benchmark reading. Replacement of bad resistors is the next remedy if the meter is way off. All this stuff is discussed on Padgett's Hickok page, which I just casually checked to see if it mentioned calibration. In reality, 83 tubes seem to last a long time (I think I've replaced one in 15 years) so I consider the ss diode replacement an emergency measure until an 83 can be found. Maybe I can find the ss sub and provide a little more info, best regards, Dan.

From: Jim <jclark6@gmail.com> Date: Mon, 27 Mar 2006 18:47:09 -0600
Subject: [R-390] Kollins Radio

Now if I could pay for this with virtual money I might bid. Ebay item 970457381673 De Jim N5TJZ

From: "Steve Hobensack" <stevehobensack@hotmail.com> Date: Mon, 27 Mar 2006 20:06:37 -0500
Subject: [R-390] Re: HP410B rectifier tubes

I had a similar problem with my ME-26D/U (a 410b clone) AC probe. The measured voltage was way off. It was a shorted capacitor just after the needle and in front of the 2-01c diode tube. A replacement cap can be fashioned from a disc ceramic cap and a dremmel tool. If you need that special cap, dremmel off the coating on a suitable capacitor plus the leads until you end up with a pill shaped ceramic cap. It was tricky to install. The cap is easily ruined by trying to measure over 300 vac. 73...Steve...N8YE

From: "Barry" <n4buq@knology.net> Date: Sun, 26 Mar 2006 21:42:33 -0600
Subject: Re: [R-390] HP410B rectifier tubes

Did some more digging.? With the cover off, I can measure the filament voltage for the EA53 while it is in circuit.? I had to crank the resistor quite a bit farther "up" to get 6.3VAC across the filament.? This did cause the probe to get really warm like it used to; however, the probe still doesn't check AC properly (low reading).

I did some checking in the manual.? It states to check the resistance "below" the ballast tube with the ballast tube removed from the circuit. This should produce 4 to 6 ohms.? If it doesn't, most likely something has been "shorted" (I assume it means something has damaged the rectifier). Mine checks a little over 2 ohms, regardless of the setting of the variable resistor.? Looks like I probably do have a damaged EA53.? I checked the rest of the wiring and some of the test point voltages and nothing was particularly too badly awry.

Looks like I'm back to looking for an EA53 :-(Brry - N4BUQ

From: "Cecil Acuff" <chacuff@cableone.net> Date: Mon, 27 Mar 2006 19:33:54 -0600
Subject: Re: [R-390] Kollins Radio

What's the point...did I miss something?

They don't sell radio's with red velvet bed spreads behind them with virtual descriptions and virtual feedback scores?

Maybe I do get it....finally a safe place to trade....even internationally. Cecil...

From: Bonddaleena@aol.com Date: Tue, 28 Mar 2006 08:49:50 EST
Subject: Re: [R-390] Our radio buddy

writes: > has a radio on eBay he declares is from the Lincoln Project.

I've been to his house. Believe me he has NO workshop. He 'works' in a dimly lit room in an old farm house. His workbench is a couple of old cardboard boxes. Oh yes, the infamous 'red velvet' is in this room also! If you could only see the pile of crap around it.

His 'antenna farm', is a dipole about 12 feet off the ground. Gee, it MIGHT have been me that reported him to the Kentucky Revnue and Tax people after he ripped me off... ha ha ron N4UE

From: ampop@comcast.net Date: Tue, 28 Mar 2006 16:07:57 +0000
Subject: Re: [R-390] Our radio buddy

Martyn is a lot like P. T. Barnum and his Ebay adds are like the Sideshows (Freak Shows) at the Old Time Carnivals and Circus. He is the equivalent of what they used to call a 'Talker" or "Barker" and he feeds on the "Curious" amoungst us. P. T. Barnum was know as "The Prince of Humbugs" and I think Martyn fits the bill in the same manner. The folks that pay their Dollar and enter the "Tent" are the losers. Most of the folks that suscribe to this list are those that just stand outside and look at the canvas depicting the Freaks displayed on the carny billboards. I think Martyn would suscribe to the theory that "THERE IS A SUCKER BORN EVERY MINUTE." In the meantime, I would suspect that he is laughing all the way to the Bank. Bob Wagner, Odenton, Md

From: "Cecil Acuff" <chacuff@cableone.net> Date: Tue, 28 Mar 2006 13:14:17 -0600
Subject: Re: [R-390] Our radio buddy

Strange but Martyn has nothing listed for sale at this time...Last group went out on the 26th. Maybe that's a normal pattern for him...don't know. Cecil...

From: "K3PID" <k3pid@sbcglobal.net> Date: Tue, 28 Mar 2006 16:20:23 -0600
Subject: Re: [R-390] Kollins Radio

The guy will probably get rich! Sort of like a virtual pet rock! I can see it now, I can visit my virtual

shack and look at my virtual toys. hmmm.... come to think of it, if I were going to have some virtual toys, they might not be radios.... Another million dollar idea!!! K3PID Ron H.

From: "john d kopke" <jdkopke@cablespeed.com> Date: Tue, 28 Mar 2006 19:23:58 -0500
Subject: [R-390] Slightly off topic:

Gentlemen;

I have recently acquired, as a companion for my R-390 A's, a TMC Transmitter a PAL-350 RFA-1, and am searching for a Power Supply a PSP_350 or a PSP_500. Any direction will be appreciatively accepted. THANK You; john

From: DW Holtman <future212@comcast.net> Date: Tue, 28 Mar 2006 19:45:39 -0700
Subject: [R-390] SSB R-390A?

It this a factory job? Ebay number 9705221146. This guys feedback reminds me of radio mart. 73's DW Holtman WB7SSN

From: DJED1@aol.com Date: Tue, 28 Mar 2006 23:03:25 EST
Subject: Re: [R-390] SSB R-390A?

I took a look at Chuck Rippel's photos, which are the most authentic view of the radio I can think of. The advertised radio has the extra module in the right place (in front of the audio module), and is connected to the IF module in the correct manner. However, Chuck's photo shows a module with two metal cased crystals, similar to the other crystals in the radio. The eBay radio has surplus FT243 crystals, which in my mind would make it a homebrew setup. But these are rare enough that I could be wrong. Ed

From: "Cecil Acuff" <chacuff@cableone.net> Date: Tue, 28 Mar 2006 22:12:43 -0600
Subject: Re: [R-390] SSB R-390A?

Yes but..... It aint worth $4000.....I realize prices are up but not that much. Just my 2 cents worth... Cecil..

From: "Francesco Ledda" <frledda@verizon.net> Date: Wed, 29 Mar 2006 05:12:53 -0600
Subject: RE: [R-390] SSB R-390A?

The crystals came from a BC-604.

From: "Les Locklear" <leslocklear@cableone.net> Date: Wed, 29 Mar 2006 05:47:27 -0600
Subject: Re: [R-390] SSB R-390A?

Some that had that modification had the tube and x-tals mounted behind the front panel. Depot job? Not hardly, Columbia Systems did most of the mods and someother outfit in California whos name escapes

me at the moment. Just remember what P. T. Barnum said..... Les Locklear

The two most common elements in the universe are Hydrogen and stupidity. Harlan Ellison (1934-

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Wed, 29 Mar 2006 07:50:25 -0500
Subject: Re: [R-390] SSB R-390A?

> It this a factory job? Ebay number 9705221146.

I don't know what an official factory job looks like, but it looks pretty well done.

The frequencies printed on the crystals seem to be 22.8 and 24.5 MC? They look like WW2-surplus tank radio crystals, and I try to work out how 455kc gozinta those and end up with multipliers like 54. Does that ring a bell? 54 = 3*3*3*2, and 24.5/54 = 453.7kc. I know that 50's/60's era ARRL handbook BFO crystal articles had a table or formula relating tank radio crystal channels to IF-like frequencies. > This guys feedback reminds me of radio mart. Hard to tell. Other guys have drawn a similar conclusion from other auctions by this guy (esp the red velvet in some other pics), but I don't see all of radio mart's stupid boilerplate. Superlatives in the description are similar though. Tim.

From: "Cecil Acuff" <chacuff@cableone.net> Date: Wed, 29 Mar 2006 07:38:46 -0600
Subject: Re: [R-390] SSB R-390A?

Looks like 32.8 or 32.0 if the zero is slashed....Hard to read. The other does look like 24.5 mc.

I'll have to dig out a book and look at the math... Cecil....

From: "Tom Bridgers" <Tarheel6@msn.com> Date: Wed, 29 Mar 2006 08:59:43 -0500
Subject: Re: [R-390] SSB R-390A?

Columbia Electronics modified a bunch of R-390A's for the government, including putting the selectable upper and lower sideband mod on them. The SSB mod Dick Walser showed me was on an L-bracket, much like the one pictured in the auction, but they also repainted the front panel so that the BFO selector (upper, lower and on, off) looked original.

Every (most) R-390A they remanufactured received a new Columbia Electronics tag. I have several of them that Dick gave me.

Columbia Electronics (also known as Airborne Electronics) was owned by Dick Walser and his partner (whose name I cannot remember right now). I met Dick about 8 years ago and was a super person who knew EVERYTHING there was to know about R-390As. I wrote an article about Dick and ER ran it. Sadly Dick passed away about 2 years ago. 73's, -tom

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Wed, 29 Mar 2006 09:05:33 -0500
Subject: Re: [R-390] SSB R-390A?

Roy wrote: > 422.222 and 453.703 KC, respectively.

I did the math for the other crystal but figured my eyesight was too poor to actually read the marking :-).

The 422.222 cannot possibly work as a SSB BFO, can it? I'd expect the other sideband's BFO to be 456.3 kc +/- for symmetry, which would be channel 46 (455.55kc) or channel 47 (457.something)

Even as some funky RTTY shift it wouldn't be at 30 kc offset, would it? (Somebody can tell me about a RTTY demod that took that if they want...) Tim.

From: "Les Locklear" <leslocklear@cableone.net> Date: Wed, 29 Mar 2006 08:07:07 -0600
Subject: Re: [R-390] SSB R-390A?

Airborne, that was it. Thanks Tom! I hadn't had enough coffee before replying and I had a senior moment.....:-)

That wasn't a "Depot" job, depots didn't do modifications except for factory approved field mods. All the ones I have seen (they aren't rare at all) have the HC-6U? smaller x-tals, looks like somebody had a bunch of surplus FT-243's to use up. Maybe he had Martyn write up that "hype" for him? Les Locklear

From: Mark Huss <mhuss1@bellatlantic.net> Date: Wed, 29 Mar 2006 09:34:18 -0500
Subject: Re: [R-390] SSB R-390A?

wrote: Airborne, that was it. Thanks Tom! I hadn't had enough coffee before replying and I had a senior moment.....:-)

So, has anybody documented this mod, say schematics?

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

From: Dan Arney <hankarn@pacbell.net> Date: Wed, 29 Mar 2006 09:16:08 -0800
Subject: Re: [R-390] SSB R-390A?

Les & Tom,

I met Dick about 2 years or so before he died and we became close friends. I wound up buying his radio stuff from his estate after he became a Silent Key. The last time I saw him he was redoing the roof on his house in No. Hollywood at 86 years young as he said. When I left that day he asked if I wanted some Tangerines from his tree. I said sure, so he grabs a three legged orchard ladder and sprints up it to pick me some off of the tree.

Anyway to the point. Yes he did the mods for the SSB on the R-390-A and had about 100 panels refinished with the SSB mods silk-screened on the panels. At that point in time I posted to a few of the reflectors that I had the components to make up the complete kit if there was enough interest. I received about 4 or 5 replies to the affirmative. I also had a bunch of Columbia tags also.

Unfortunately in my move from CA to TX while I was laid up with a broken shoulder and a foot infection my brother in law decided that most of the parts and a lot of my radios were pure junk after I pointed out to him that they were salable parts, which he promptly sold for .10 a pound to a local junk dealer. Three 2 1/2 ton stake bed loads plus what the helpers carted off as scrap metal. Which also included nearly complete R-390A and some frames plus lots of modules. He was judge, jury and executioner all in one. That is the end of Airborne Engineering sadly to say. Hank KN6DI/5

From: "rdavis7" <rdavis7@comcast.net> Date: Wed, 29 Mar 2006 10:20:34 -0500
Subject: [R-390] Re: R-390 Digest, Vol 23, Issue 50

Beware of this guy, he switched to Private Bidder for a reason. He ripped off a friend of mine-sent him a corroded piece of crap and wouldn't make amends(sound familiar?). There is a legitimate reason some use Private Bidder-to prevent scammers from offering second chance buying options on high dollar auctions, but this guy is right in Martyn's league.

From: "Les Locklear" <leslocklear@cableone.net> Date: Wed, 29 Mar 2006 09:43:48 -0600
Subject: Re: [R-390] Re: R-390 Digest, Vol 23, Issue 50

User ID: 217stufforsale
Name: KELLY NACCARATO
Company:
City: GUILFORD
State: CT
Country: United States
Phone: (203) 640-3415
Registered Since: Thursday, Jul 15, 2004 10:30:17 PST

He has a bad reputation among the lists (Boatanchors, Hallicrafters, Collins) some have had pretty good luck with him, most have not. Buyer Beware. Les

From: "Les Locklear" <leslocklear@cableone.net> Date: Wed, 29 Mar 2006 09:45:23 -0600
Subject: [R-390] R-390A ssb

User ID: 217stufforsale
Name: KELLY NACCARATO
Company:
City: GUILFORD
State: CT
Country: United States
Phone: (203) 640-3415
Registered Since: Thursday, Jul 15, 2004 10:30:17 PST

He has a bad reputation among the lists (Boatanchors, Hallicrafters, Collins) some have had pretty good luck with him, most have not. Buyer Beware.

From: Roy Morgan <roy.morgan@nist.gov Date: Wed, 29 Mar 2006 10:58:00 -0500

Subject: Re: [R-390] SSB R-390A?

wrote: wrote422.222 and 453.703 KC, respectively.: The 422.222 cannot possibly work as a SSB BFO, can it?

That is right.. I was just reading the crystal table with the frequency from the earlier email.

>Even as some funky RTTY shift it wouldn't be at 30 kc offset, would it?

No, very unlikely (the IF is not that wide.) Roy

From: Dan Rae <danrae@verizon.net> Date: Wed, 29 Mar 2006 08:23:19 -0800
Subject: Re: [R-390] SSB R-390A?

32.8 divided by 72 = 455.55 Kc/s 24.8 divided by 54 = 453.7 Kc/s there were two series of these WW II tank radio crystals available on the surplus market, much in demand by hams, but I find it hard to believe they were used officially. dr

From: Rich MC Clung <wa6knw@sbcglobal.net> Date: Wed, 29 Mar 2006 08:29:40 -0800 (PST)
Subject: [R-390] RE: SSB R-390A?

Come on guys,

You all are sounding like a bunch of neighborhood women talking about the new young single woman who just moved into the neighborhood.

Let's see..... the original XTALS could have been missing and the junk box provided the replacements.

422.22 in lower than 455 so they could be hand ground to the required frequency for USB/LSB.

Why does everyone immediately suspect the worse of a situation? Take some time to survey the situation and make a studied estimate instead of shouting, "The sky is falling."

Well, I've thrown in my 2 pfennigs..... RICH WA6KNW

From: "Tim Shoppa" <tshoppa@wmata.com> Date: Wed, 29 Mar 2006 11:37:40 -0500
Subject: Re: [R-390] RE: SSB R-390A?

> 422.22 in lower than 455 so they could be hand ground to the required frequency for USB/LSB.

Wow, you must be a lot better at crystal lapping than me to get that much rubber. I was lucky to shift frequency by a few kc at 7Mc before the crystal quit oscillating!

The 32.8/72 = 455.5kc as supplied by Dan seems far more likely.

> Why does everyone immediately suspect the worse of a situation?

In fact I assumed that one of my assumptions or reading of crystal frequency was flaky. Tim.

From: W4QG <w4qg@cfl.rr.com> Date: Wed, 29 Mar 2006 11:46:26 -0500
Subject: [R-390] ssb r-390a on ebay

All,

217stufforsale is Martyn (radio-mart) just another of his alias. He purchased a TS-940S from me a few months ago using that ID. I'm happy to say he lost money on it when he resold it on ebay. 73, Paul W4QG

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Wed, 29 Mar 2006 10:11:36 -0800 (PST)
Subject: [R-390] Noise Floor question

In ads for the R390A the term of "noise floor close the theoretical limit" yada yada yada. is often mentioned. A search on google didn't yield anything comprehensible.

If we follow Roger Ruszkowski's method for achieving a 30db ratio, then by logical definition we are lowering the noise floor by a ratio-metric method.

I know the receiver has a very low "noise floor" but how would us mere mortals measure it? Short the antenna input, terminate the audio out put with a 600 ohm resistor turn up the RF gain and audio controls and then measure the AC voltage on the termination resistor with a micro-voltmeter?

If one did Chuck Ripple's audio improvements are we lowering the noise floor or just making a better sounding audio output or both?

Inquiring minds ever seek knowledge for improving our radios. Regards, Perrier

From: Perry Sandeen <sandeenpa@yahoo.com> Date: Wed, 29 Mar 2006 10:15:09 -0800 (PST)
Subject: [R-390] Missing Martyn

On Radio buddies web site he announced that he would be shutting down for a week to go "racing" Since it's a month too early for him to selling "genuine Art Collins authorized" tout sheets to the betters, it's got to be something else. Maybe an "American Slimeball Idol" race? He'd be an odds on favorite! HiHi. Regards, Perrier

From: Bonddaleena@aol.com Date: Wed, 29 Mar 2006 13:33:14 EST
Subject: Re: [R-390] Missing Martyn

writes: On Radio buddies web site he announced that he would be shutting down for a week to go "racing"

He also sells a lot of motorcycle parts on that e place. Japanese crotch-rocket (Yamaha, if I remember correctly).... ron

From: "Tom Bridgers" <Tarheel6@msn.com> Date: Wed, 29 Mar 2006 13:46:50 -0500
Subject: Re: [R-390] Columbia Electronics tag & SSB mod

Hi Ric and list members:
The Columbia Electronics tag, I have #2043, reads as follows:

RECEIVER, RADIO R-390A/URR
  serial no 2043
  supplied by
COLUMBIA ELECTRONICS INT'L. INC.
  Los Angeles, California U.S.A.
115/230 VAC 48-62 ~ 220W

The USB/LSB mod is documented in Paolo Viappiani's book, R-390/URR - R-390A/URR HANDBOOK, published by Editrice Il Rostro. See pp 55-56. The book is written in Italian; however, the circuits are in English.

Paolo also covers the AGC mods, the Kleronomos audio mod, and several 3TF7 mods.

I heard the book was available now in the US, but unfortunately I don't know from whom. Maybe Amazon? 73's, -tom

From: Roy Morgan <roy.morgan@nist.gov> Date: Wed, 29 Mar 2006 14:06:56 -0500
Subject: Re: [R-390] Noise Floor question

wrote: >In ads for the R390A the term of "noise floor close the theoretical limit" >... how would us mere mortals measure it?

Others will have more modern and authoritative answers, but here is mine, briefly:

Basic ideas:

1) The front end of the radio, that is the "antenna", the rf coils, and first RF amplifier tube contribute most of the noise to the radio.

2) The stuff in the front end, without any external signals, makes noise just because it has warmth compared to absolute zero. Thus, there is an equation that tells the theoretical noise floor contributed to these parts. And thus, folks in radio astronomy at least used to put liquid nitrogen onto their first amplifier tubes to reduce the noise they generated.

3) If we assume no or little noise is contributed by the later stages in the radio, and the amplifier is perfectly noise free, then this calculated amount of noise would show up at the speaker terminals and we can measure it. This would be the theoretical minimum noise or noise floor. In addition, in normal real radios, the first RF amplifier contributes some noise, thus we get the real minimum noise or noise floor.

NOW:
If we add a carefully controlled amount of additional noise at the antenna terminals, by magic or by careful engineering, and the noise measured at the audio output DOUBLES, then we have added noise equal to the actual noise generated by the front end. There you have it. This is not impossible for us average folks to make an approximation of. Just make an input network (attenuator at the antenna input) that presents the needed impedance to the radio, and have a way of injecting a calculate-able amount of noise extra. A noise generator or maybe a URM-25 and a 100:1 attenuator would let you at least get started on this.

If you use a switched noise generator (pulsed on and off) and look at the receiver output noise with a scope, you can see a sort of square wave and easily get an approximate setting for the added noise to guess the self noise of the radio. Make adjustments to reduce this self noise, and you have made an improvement in the radio. This is more or less what Roger's method does, though with different noise levels being compared. And this is exactly what is done with converters, either with a manual knob-controlled noise generator, or with a pulsed one and a scope to see the effect of adjustments.

> Short the antenna input, terminate the audio out put with a 600 ohm resistor turn up the RF gain and audio controls and then measure the AC voltage on the termination resistor with a micro-voltmeter?

Yes. but you won't need a MICRO voltmeter - it will be plenty loud enough to measure with more normal voltmeters. Don't short the antenna terminals, use the expected antenna impedance.

>If one did Chuck Ripple's audio improvements are we lowering the noise floor or just making a better sounding audio output or both?

If the plain noise of the audio section adds a LOT to the receiver's noise, the audio section needs fixing (such as replacement of leaky caps, bad tubes, and bad resistors.)

If the audio section makes *distortion* on normal sounds at normal levels (Which it most certainly does) then this distortion is noise to you listening, but is not from the front end of the receiver. Most audio section modifications are likely to reduce the distortion you get from the radio. This is why the diode load audio pick-off method sounds so good.

Chuck's method of setting the IF gain has the basic effect of making sure the IF gain is not set so high that the IF section contributes (lots of) noise itself. Most of the noise in a normal radio should be coming from the RF front end amplifier. Some modern and very expensive radios have no RF front end amplifier, partly in order to eliminate the noise from the active part (tube, transistor, traveling wave tube, or whatever).

>Inquiring minds ever seek knowledge for improving our radios.

Improving our understanding of what's going on is a very good start. I hope this helps, and expect that other comments/posts will help, too. Roy

From: "Bill Feldmann" <n6py@qnet.com> Date: Wed, 29 Mar 2006 11:53:02 -0800
Subject: Re: [R-390] Noise Floor question

Perry,

You may want to take a look at the noise floor measurements I did as a comparison of the R-390 and R-390A and the description of my method of measuring noise floor in the March Electric Radio. The article is really on a method for better audio on the non-A R-390 but had to be broken in half for a two part article where the first part is mostly just on the R-390. The April half will get down to business and talk about audio performance.

Be very careful when someone gives a noise floor for a receiver and no information on how the testing was done. Noise floor numbers are often give as the minimum signal level in -dbm, db below a MW in power, that a receiver can successfully copy. The results are highly dependent on the test method, the receiver's IF bandwidth and the type of signal you want to copy.

All my tests are done to measure the noise the minimum strength CW signal that could be copied over through a receiver's internally generated noise even though most of the receiver I've lately tested, like my R-390's and SX-28's, I use for mostly AM reception.

But for comparing receiver noise floor and intermod performance I've found those that perform better using my CW method also perform better for AM when compared to other receivers. So when comparing noise floor numbers make sure the tests were all done under the same conditions using the same method, or better yet the same test fixture or equipment.

I test a receiver, like the R-390's in my ER article, using a narrow CW IF bandwidth like one kc or less and for a carrier 3db above the noise. I didn't use .1kc because I don't like that bandwidth for CW, it rings too much for my ears. This was the method suggested in some Ham Radio and QST articles back in the 1970's for testing high performance CW receivers I used to build my fixture.

I use this method because when I built my fixture over 20 years ago I was mostly using CW and want to compare the date on noise floor and intermod for the receivers I've tested in the past. But to properly measure the AM performance of a receiver the tests should be run with a 5kc or wider bandwidth and a carrier of 10db over the receiver's internal noise. This is the method used for most of the data you will see on the R-390's. So the numbers in my article for noise floor will appear to be much lower than those quoted for most R-390 testing. If I was starting over again I would run my tests using both the CW and AM methods.

The equipment to measure noise floor isn't hard to obtain or build. You just need a well calibrated signal generator and attenuators. But it all has to be very well shielded and carefully constructed. You don't want any signal leaking around the attenuators due to a poor set up or cabling.

I was once testing a 75A4 I was working on and getting unbelievable low noise floor results. That darn noise flood was below 160dbm which was impossible. I had the bottom cover off the receiver and was using a digital frequency counter on my older HP signal generator. I then put the bottom back on the receiver and the noise floor came up around 10db. Then I unplugged the frequency counter form the raw output of the generator and retested the receiver. Then the numbers were reasonable and match those of other tests using my home brew fixture. The moral is a sloppy setup and an unshielded receiver's RF section can ruin your test results.

Also be especially careful of noise floor data in rice box adds with no explanation of their test method. In all my testing because, I'm using a home brew fixture whose calibration could be questioned, I like to only compare my radios using this same fixture to be sure I'm doing performance comparison tests under the same conditions.

Incidentally, I've found good performing R-390's or R-390A's have a noise floor that is far below what is required on any HF band, 160 through 10 meters. They are also very good candidates for use with converts for VHF and UHF reception. They also have outstanding intermod performance numbers along with frequency stability and selectivity. The R-390 just complete amazes me for a 1949 design, just imagine what it's introduction must have done to the moral at the competing old line military receiver manufacturers. No wonder a lot of them sure faded away fast.

I guess that's why we all collect, use and love these receivers. Bill N6PY

From: "Bill Hawkins" <bill@iaxs.net> Date: Wed, 29 Mar 2006 15:08:53 -0600
Subject: RE: [R-390] Noise Floor question

What you're looking for is thermal or Johnson noise. Try this:
http://www.dataforth.com/catalog/doc_1065.html

The firs t RF tube contributes noise because it is hot. Wonder what you could do to the noise figure of a 390 class set just by FETing the first RF? Don't even think of it if you're a purist or concerned about overload capability. But if noise is your first concern ... Bill Hawkins

From: Mark Huss <mhuss1@bellatlantic.net> Date: Thu, 30 Mar 2006 10:57:01 -0500
Subject: Re: [R-390] Noise Floor question

wrote: What you're looking for is thermal or Johnson noise. Try this:
http://www.dataforth.com/catalog/doc_1065.html

My understanding is that the 6DC6 in the R-390A was a compromise between low noise and overload performance. Since the highest sensitivity applications at the time for R-390A were in conjunction with high-noise antennas, such as Rhombics, it was a good match. A common MARS mod for R-390/R-390A/Sp-600's in the sixties were replacing the First RF Amplifier with a Cascode VHF dual triode. This supposedly reduced the First RF noise (esp. in the SP-600), but dropped the overload performance. As for me, after some research in this mod, I decided that unless you live more than five miles from the nearest house, the atmospheric QRM and QRN really does not drop below a level that would show any practical performance improvement.

Also, don't forget that in tubes, shot noise from the electrons hitting the plate also generate a lot of noise (why triodes are quieter than pentodes).

From: "Bill Feldmann" <n6py@qnet.com> Date: Thu, 30 Mar 2006 10:18:14 -0800
Subject: [R-390] Re: Bad Overseas EBay Experience

Hi All,

Wanted to reply to my original message. I went off half cocked, like I often do.

It was all a big mistake like many of you suggested. I got a copy of the endorsed check from my bank, scanned it and sent the scan to him. He immediately emailed me with an apology.

His company had received the cashiers check, and employee had cashed it for him, put the money into his companies account but not entered it into his books.

The employee had been told before to never cash international checks but only let him do it but had screwed up. He said this will never happen again so he is a great source of radio parts on eBay. He also is a source for a nice 12VDC GRC-9 power supply.

Fortunately we were able to mutually remove our bad feed back on eBay.

The moral is don't get mad like I did and go off half cocked, just makes things worse. Now have to contact PayPal and try to get the second payment back that he can't get out of PayPal since he doesn't use it. Surprised PayPal even took the payment. Bill N6PY

From: "paolo gramigna" <paolo.gramigna@controllo.it> Date: Thu, 30 Mar 2006 21:07:52 +0200
Subject: R: [R-390] Re: Bad Overseas EBay Experience

Hi,

I'm happy to learn that. Serlet 4446 is a good seller; only he does not take paypal, and it's not at his best in English...

So, my previous replay was right on the spot. Cheers, Paolo from Italy

From: Dan Arney <hankarn@pacbell.net> Date: Thu, 30 Mar 2006 11:13:03 -0800
Subject: Re: [R-390] Re: Bad Overseas EBay Experience

Great Bill,

Glad it worked OK. You may have gone off half cocked but you show your true side as a Gentleman.
73 Hank KN6DI/5

From: Barry Hauser <barry@hausernet.com> Date: Thu, 30 Mar 2006 14:36:25 -0500
Subject: Re: [R-390] Re: Bad Overseas EBay Experience

> The moral is don't get mad like I did and go off half cocked, just makes things worse. Now have to contact PayPal and try to get the second payment back that he can't get out of PayPal since he doesn't use it. Surprised PayPal even took the payment.

Yeah Bill, we told you so, nyaa nyaa ;-)

As I mentioned privately, copies of cancelled checks -- front and back -- go a long way to proving payment and getting around bookkeeping and ID glitches that can occur.

As far as paypal is concerned: If he _does not have a paypal account_, then you should still be able to cancel the payment and it will do a credit card credit. If he (or someone else) does have a paypal account under the ID you paid to, then the recipient has to either refuse the payment or, if it went through, issue a refund. He may not be aware that he can do this and if it's in that status, paypal may refuse to undo the

payment just like that. You may have to explain to the seller that it was credited to his account, and while he doesn't use paypal, he can still issue a refund -- there is a procedure for that. If he "doesn't use paypal" the funds are still credited to his account because -- not using it -- he, therefore, has not requested a check or transfer to his bank. In other words, you paid a viable paypal account and he still has access to it from his end.

Best to have him issue a refund as such -- which exists -- not a repayment, otherwise the fees are charged again as if he bought something from you. First step though is to go into your paypal account and scroll down to the transaction and read carefully -- it might say "pending" or similar and have a "cancel" button next to it. If it looks like all the others, then it credited to his account and you go with Plan B.

Hope this helps. Barry

From: "Tom M." <courir26@yahoo.com> Date: Thu, 30 Mar 2006 13:33:41 -0800 (PST)
Subject: [R-390] R-725 Schematic, TRD-15 notes, etc Here

Dear Group,

I recently scanned some R-725 notes for an enterprising chap who wanted to make his own. Like Archie Bunker would say, "I'd like to give this, what do ya call, your wide insemination." The original schematic and notes from the TRD-15 manual are zipped up in parts here:
http://www.geocities.com/courir26/R725doc.zip

The notes on how to make your own R-725 IF deck are here:
http://www.geocities.com/courir26/r725conv.htm

If the link appears broken, give it a rest and try later. 73 Tom N5OFF

From: ampop@comcast.net Date: Thu, 30 Mar 2006 21:36:16 +0000
Subject: Re: [R-390] Re: Bad Overseas EBay Experience

Another Moral of the Story is "All's Well That End's Well"

Just more proof of the value of the List. Bob Wagner, Odenton, Md

From: "TChirhart" <sparks@codepoets.com> Date: Thu, 30 Mar 2006 21:32:23 -0500
Subject: [R-390] 6AK6 tubes needed

Gang I need a pair of 6AK6's to finish out the tube replacement on a 390A. Picked this one up at the Vienna VA Winterfest and it had 19 bad tubes. This is the same 390A that had the fuses bypassed....Soooo does anyone have any spare 6AK6's and perhaps a spare or available? Thanks 73 Tom K4NCG

From: "Fred Stillwell" <roswell@apk.net> Date: Thu, 30 Mar 2006 22:14:55 -0500
Subject: [R-390] Noise Floor question

Good morning Roy,

I always enjoy reading your posts and wanted to say thank you for this one. Very good. 73,s Fred Stillwell AA8S

From: TVComlGuy@aol.com Date: Fri, 31 Mar 2006 01:03:44 EST
Subject: [R-390] RF tuning slug

I have an R-390 non A that has a missing tuning slug in T206. I have a "parts" rf assembly from an R-390A. Are the slugs in T206 the same in both receivers? Thanks, Ron, KB0WAR

From: John Kolb <jlkolb@jlkolb.cts.com> Date: Thu, 30 Mar 2006 22:29:11 -0800
Subject: Re: [R-390] Re: Bad Overseas EBay Experience

As I recall, when someone made a paypal payment to me using a non-existant paypal account name, the payment was refunded to them automatically after three days when nobody joined with that name to claim the payment. John

From: "Michael Talkington" <kc8fwd@verizon.net> Date: Fri, 31 Mar 2006 06:57:54 -0500
Subject: [R-390] RF tuning slug

Ron,

My R-390/URR Non A has a tunning slug missing also.If you look at the front of the Set the first slug closest to the front panel all the way on the left is missing but mine has no problem tunning anywhere I want it seems to be a mod of some sort can some one help us with this thanks,Mike KC8FWD

From: "Banks, Armond A" <armond.banks@navy.mil> Date: Fri, 31 Mar 2006 13:31:32 -0800
Subject: [R-390] FW: Wanted - R390

Good Day to All:

My name is CTRCM - Master Chief Allen Banks. I have been on a quest for many months to locate & purchase an R390 for my retiring Navy Admiral. He is retiring in May 2006. I would accept the receiver in any condition as it holds very sentimental value to us as Cryptologic Techs throughout our respective careers. Any assistance, leads, sites or possibilities you could provide would be greatly appreciated. I can have the R390 picked up if necessary depending on your location. It would mean so much to an Admiral who has spent his entire career defending our nation who got his start as a CTR operator using the R390.

Thank you all for any assistance you can provide CTRCM Allen Banks Operational Support Office Senior Enlisted Leader Norfolk/San Diego/Pensacola949-583-3111

From: "Les Locklear" <leslocklear@cableone.net> Date: Fri, 31 Mar 2006 15:56:28 -0600
Subject: Re: [R-390] FW: Wanted - R390

Chief,

I would suggest that you are "probably" looking for a R-390A/URR, not a R-390/URR. Both are commonly referred to as the R-390.

The admiral probably never saw a R-390/URR unless he has been allowed to stay beyond the normal 30 year enlistment.

Do an E-Bay search if this post comes up empty for an R-390A, prices vary wildly and ymmv.

From: ToddRoberts2001@aol.com Date: Fri, 31 Mar 2006 19:06:15 EST
Subject: [R-390] Unbelievably Sad News

writes: Unfortunately in my move from CA to TX while I was laid up with a broken shoulder and a foot infection my brother in law decided that most of the parts and a lot of my radios were pure junk after I pointed out to him that they were salable parts, which he promptly sold for .10 a pound to a local junk dealer. Three 2 1/2 ton stake bed loads plus what the helpers carted off as scrap metal. Which also included nearly complete R-390A and some frames plus lots of modules. He was judge, jury and executioner all in one. That is the end of Airborne Engineering sadly to say. Hank KN6DI/5

Hank, very sorry to hear about this tragedy. Several tons of R-390A parts, frames, modules were carted off as scrap? It is hard to believe that all this happened. Were you planning to bring all of the R-390A parts with you to Texas? Does this mean you no longer have any R-390A parts for sale? 73 Todd WD4NGG

From: "Ed Zeranski" <ezeran@ezeran.cnc.net> Date: Fri, 31 Mar 2006 16:15:07 -0800
Subject: RE: [R-390] Unbelievably Sad News

..... my brother in law decided that most of the parts and a lot of my radios were pure junk

So, I guess nobody will find the body... EdZ

From: Joe Foley <redmenaced@yahoo.com> Date: Fri, 31 Mar 2006 16:36:25 -0800 (PST)
Subject: Re: [R-390] FW: Wanted - R390

We need to know for sure if it is the R-390/URR or the R-390A/URR, the differences are important.

Let us know if you need help with that, too.

What kind of time frame are we working with here? Any contract date or manufacturer preference? Are you wanting the cabinet, too? Joe

From: shoppa_r390a@trailing-edge.com (Tim Shoppa) Date: Fri, 31 Mar 2006 20:12:54 -0500
Subject: [R-390] For trade/wanted 390A stuff

Available for trade: all the 390A tubes except rectifier tubes, most new, some used. RF deck parts/slugs and geartrain parts, springs, clamps, etc.

Wanted: Junker/basket case Cosmos PTO's, modules, harnesses, and front/side/rear panels. Will gladly consider (would even prefer because I'm gonna be Frankensteining) incomplete junk. Also looking for a set of substitute meters. Small quantities of cash available as well to facilitate transactions. Tim KA0BTD.

From: "antipode" <antipode@comcast.net> Date: Fri, 31 Mar 2006 22:13:46 -0500
Subject: [R-390] More Bad News

A couple of days ago I stopped by a seemingly uninteresting garage sale on my way home from work. I left work early on Wednesday afternoon to take care of some personal business when I happened across the sale on a back street shortcut I sometimes take when the traffic is heavy. As I drove by the place I remembered I had seen a tower with a beam behind this same house a few years earlier, but it had been taken down. I never really knew the ham who lived there as he primarily was an experimenter from what I had heard. As soon as I saw the garage sale sign, I decided to stop since I thought there may be some ham goodies if the guy still lived there. Sure enough when I walked into the garage there were several pieces of old gear lying around on some of the tables including an old beat up Hallicrafters SX-99 and an old Ham-M rotator and control box. There was an elderly woman running the sale who introduced herself and explained that all this had been her husband's, but he had died about a month earlier due to poor health and now she was disposing of all his old radio equipment. She said the sale was very slow that afternoon as it was a weekday and she expected this upcoming Saturday to be the day when all this stuff would be sold.

After chit-chatting with her for a few minutes I looked around a bit more carefully and noticed a couple of Collins manuals near some old newspapers. One of the manuals was for a KW-1 and the other for a 51J-4. Being a Collins collector myself, my interest was immediately piqued. I inquired about the equipment which these manuals were for, and she said that equipment was way too heavy for her to move out into the garage so she had just left it in the house in her husband's study. She took me into his "shack" and sure enough there it was. The KW-1 was apparently used on CW only as I didn't see a mic but only an old bug on his operating desk. Also on the desk was what looked like a pristine 51J-4 in its original cabinet. When I inquired about buying the KW-1 and 51J-4 she said it was probably worth a lot of money but had no idea of its value. Before I could come up with a reasonable offer, she volunteered that she would sell both pieces to me for $350.00 provided I would move it out by this Sunday. Needless to say I nearly had a heart attack on the spot! Without showing too much excitement, I casually accepted the offer and promised I'd be back today (Friday) as that would give me ample time to arrange a truck and a friend to help me load the gear. My heart was about ready to explode! I had just made the deal of the century!

I took off work today to pick up my spectacular find, rented a good sized truck, and arranged for my buddy, who works only until 12 noon on Fridays, to help me move the gear out of the house and into the truck. I picked him up and we zoomed over to the house. When we arrived there was another car parked in the driveway and I had to park the truck on the street. Going up to the front door to ask the woman if she could have the owner of the car move it so I could get the truck as close as possible for loading, a rather young man met me and asked what I wanted. When I told him about the deal he laughed and said that the old radios his mother had arranged to sell me weren't worth anything, and he had just had it hauled off by a scrap dealer who paid him on the spot enough money to pay for fixing his mother's washing machine ($125)! Needless to say when I heard all this I was angry and heartbroken.

To add insult to injury, the scrap dealer apparently had just "thrown" the 51J-4 into the back of his truck according to the lady's son, and then he and his helper hauled the KW-1 out into the front yard where they proceeded to cut it up with a cutting torch! Laying in the front yard was a remnant of the KW-1's plastic kilocycle dial, the only remaining evidence of the deal that never was. The young man was serious when he said he didn't want me to be "taken", as his mother was having severe mental problems and he would never have allowed her to make a deal like that had he been there. This is NOT going to be a good weekend!

How's that for "BAD NEWS"? W5IQJ

From: "Jon" <jonklinkhamer@comcast.net> Date: Fri, 31 Mar 2006 23:08:48 -0500
Subject: [R-390] Question on COSMOS PTO

Hello to the Group,

I'm continuing my saga of just zero beating against the calibrator mark and have notice the following observations which I think are cause to be concerned.

1. Zero beating against the calibration 100Khz signal at x.000 after using the zero adjust knob to be exactly at x.000, I noticed that if I either dial up or down from this calibration spot, coming back to this mark, I'm always either +/-100Hz off depending on the direction I'm turning. Is this what you call backlash or hysterisis?

2. Doing the same experiment as described above only this time using a counter and taking note of the frequency, I observed that starting again at 3.455000Mhz with the dial set to x.000 and dialing up or down the frequency can be off as much as 80Hz i.e. 3.45508 in returning again to x.000. I also noticed that by pressing on the KHz knob with just pressure from my hand I can cause the frequency to be off again as much as 80Hz. And since the 390a is on its back I can touch the PTO and cause 10s of Hz of be off.

This is my 1st 390a and I don't have any experience in the feel for calibration. Am I approaching the design limit being off +/- 100Hz on the calibration mark? It seems to me something is either up with the PTO or the mechanical linkage to the PTO. The oldham coupler is aligned as best I can with a new backlash spring and I'm also keeping to the .032 spacing as best I can. The ground strap is present and looks good against the shaft. I'm really kinda of frustrated at this point and any help would greatly be appreciated. Thanks in advance, Jon,KB1DC

From: "Kenneth G. Gordon" <kgordon2006@verizon.net> Date: Fri, 31 Mar 2006 20:27:36 -0800
Subject: Re: [R-390] Question on COSMOS PTO

I'm always either +/-100Hz off depending on the direction I'm> turning. Is this what you call backlash or hysterisis?

Yes, most probably. We call it back-lash.

> 2. Doing the same experiment as described above only this time using a > counter and taking note of the frequency, I observed that starting > again at 3.455000Mhz with the dial set to x.000 and dialing up or down > the frequency can be off as much as 80Hz i.e. 3.45508 in returning

Jon:

Are you joking, or are you serious? I can't believe you're serious...

+/- 100 Hz is, IMHO, infinitesimal and not worth worrying about. As far as I'm concerned, any practical receiver that holds its calibration within 100 Hz is an absolute marvel. These receivers were never meant to be laboratory grade frequency meters: they are radio receivers, designed to help a hummin' bean hear radio signals that are very seldom stable enough to be within 100 Hz. Ken Gordon W7EKB

Nolan's steamy lost story

GM List,

We were all saddened to learn about Nolan's stroke and memory loss. We thought we'd never have another tale.

Noland always talked about writing a story about, shall we say, 'lusty' Swedish twins. Thanks to a source who requested anonymity I have received a copy. Below is and except:

"Even the normally non-pulsed Swedes at the sans-suit beach noticed these blond, blue eyed Nordic beauties as they dropped their robes and headed for the water. It was their petite perfection that send a small murmur through the crowd. Sonja and Helga's demure smiled were an after-glow of the previous nites activities in which they had trysted wantonly……."

Umm, as you can see this story in "not for the kiddies". Reply off line for the complete version. Regards, Perrier

Suddenly, without warning, they turned and looked at each other and said almost in one voice "We forgot we have to send that email."

Quickly returning from the waters edge they dressed swiftly and headed to the parking lot much to the dismay of the many still at the beach.

Sonja's cobalt blue Saab convertible provided a stunning contrast to the blond hair as they headed back to Helga's summer cabin.

Fortunately the Swedish government has the country wired with fiber optic so one they booted up their Linex based computer they were on the web instantaneously. So they wrote the email which said "When something seems to good to be true, as in a Radio Mart ad, it is. Hope you had a happy April Fools day. Love, Sonja and Helga