

R-390 Reflector July '04 Edited

From roy.morgan at nist.gov Thu Jul 1 11:57:20 2004
Subject: [R-390] Help, Looking for Ballast Tube

Ballast Wanters, The below mod is fine, but if you put the jumpers on the 12BH7 (and mark it well) then the radio is not changed at all. Roy

wrote: >Here is the link and the text about the 3TF7 sub. >>http://www.r-390a.us/R-390A_Modifications.htm >>3TF7 Substitution Mod: (optional, recommended) Add >jumpers on RT510 between pin 7 and pin 5, and between >pin 2 and pin 4. This allows you to later substitute >a 12BH7A tube in place of your 3TF7 if (when) it ever >fails. (HSN issue 10, pages 1&2 or HSN reprints, page >1)

From drewmaster813 at hotmail.com Thu Jul 1 13:04:43 2004
Subject: [R-390] Ballastubes

wrote: >Does anybody know where I can find Ballast tubes for my R-390A/URR? Sure >would appreciate any >advice on this. Walter,

You've by now seen the high price quotations for the 3TF7 ballastube, making modifications to replace that tube attractive.

I suggest you go to r-390a.net. Click on references, Pearls of Wisdom. There you will find a wealth of information (and controversy!) regarding that R-390x topic and others, all gleaned from this forum over the years. Thanks go to Wei-i Li for his untiring compilation efforts!

I personally like and use the "Two 12BA6 and a paperclip" mod whereby the 6BA6's used in PTO and BFO are replaced with 12BA6's and then the ballastube socket is jumpered out (a piece of paperclip works well). The mod is extremely simple, inherently reversible, and dissipates less heat than the various modifications or even the stock configuration.

One mod mentioned is Dr. Jerry's simple AC current regulator. I can e-mail you the schematic and notes. Drew

From barry at hausernet.com Thu Jul 1 14:44:49 2004
Subject: [R-390] Ballastubes

A caution on the paperclip thing ...

I have recently found that some chrome paper clips are not exactly conductive out of the box. Apparently they're covered with some other kind of silvery finish or chromed then clear coated. I'm in the habit of using jumbo paper clips to make temporary test connections as they are of a convenient diameter. Came across this recently. Thought the radio was dead nope defective paper clip. Check first with an ohmmeter. I found some could be scraped and then made the connections. Just don't assume zero ohms or infinity either. Barry

From David_Wise at Phoenix.com Thu Jul 1 15:29:14 2004

> From: Barry Hauser [mailto:barry@hausernet.com] >> A caution on the paperclip thing ...

This was enough to drive me out of hiding. I'll email to anyone who asks, a PostScript printout file of the schematic for a reverse phase control analog prototype of the 3DW7 that I built a while ago before going digital*. If you've got good eyes, you can squeeze it into a "tubester" form factor, it dissipates only about half a watt. Just be sure to use conductive paper clips for the "pins", heh. 73, Dave Wise

* I had a digital version ready to solicit buyers, but when someone mentioned simulating the olde-tyme orange glow I decided to take up the challenge. I'm still working on it as time permits, but it's a ways down my priority list.

From norm at wa3key.com Thu Jul 1 20:05:34 2004
Subject: [R-390] T-195 meters/specs needed

I recently found a beautiful, working T-195B transmitter to complete my GRC-19 station. Only one problem ... it has no meters. Fair Radio Sales reports they are out of stock and have no source for replacements. There's also references on the Web to a Michael Baranowsky (a.k.a. Baran's) in Pennsylvania who has R-390A, R-392 and T-195 meters and parts, but the listed phone number is no longer valid. And there are a few mentions of "reproduction meters" at various Web sites but no listed sources.

If anyone on this list can help me find a set of original or replacement T-195 meters (or even just the specs) I'd be very appreciative. Surplus Sales of Nebraska has a few meters of similar style in their catalog that perhaps could be made to work in a pinch.

I subscribe to this list in digest form so if you can help, please respond via e-mail to norm@wa3key.com
Thanks for reading this note and for your assistance. 73 de Norm - WA3KEY norm@wa3key.com

From jbrannig at optonline.net Thu Jul 1 20:09:03 2004
Subject: [R-390] T-195 meters/specs needed

I have a junker T-195. Give me a day or so to find the meters. We are in the middle of some major house construction, so the Junke Box is in more disarray than usual.... Jim

From paul at pdq.com Thu Jul 1 21:23:47 2004
Subject: [R-390] T-195 meters/specs needed

I have a former NG T-195 that is pretty beat up, and really, really wants to work (my power supply isn't big enough at 45A, so I need a couple of car batteries, too). I want to learn morse code and use it once I get my ticket.

One of the meters is, I believe, an AU meter like the audio level meter on the R-390s. The other is a dual scale meter that I don't recall. I need the dual scale one - I have one AU meter to put in.

I'd love to know the specs of the RF and voltage meter - I have generic 1ma meters, and could probably adapt one of those. Paul

On Thu, 1 Jul 2004, Norm - WA3KEY wrote:

From w5or at comcast.net Thu Jul 1 23:57:28 2004
Subject: [R-390] T-195 meters/specs needed

I sent Norm a separate message, but remembered a note on one of the other lists. So I'm sending him a second note with this clipping. Might be useful to others here.

---RE: T-195 meters Not easy to find. The "Audio Level" meter is a 600 ohm VU instrument in a 1.25" military case. I used to run into these with reasonable frequency at East Coast flea markets. This meter is nice to have but not necessary for operating the rig. The "Test" meter has custom scales for battery (input) voltage, and PA grid and cathode current printed on with the radioactive paint used back then. This one is hard to find. A 1.25", 25ma instrument can be substituted here and in normal operation all readings come up nominally at mid-scale. Dennis D. W7QHO Glendale, CA --- I have not tested the suitability of these replacements, so YMMV. Don W5OR

From courir26 at yahoo.com Fri Jul 2 16:02:48 2004
Subject: [R-390] Good Company to Make Panels

I visited a company today on a work related visit that would be perfect for front panel manufacturing. The company is **Begnaud Manufacturing in Lafayette, LA (www.begno.com)**. They specialize in laser cutting and etching. The computerized machines I saw today could make a 390A panel in about 60 secs. They laser cut the overall dimensions from a large sheet, then laser cut the holes, and finally they laser etch the markings. They have a CAD department. All you have to do is provide them with a drawing and get out of the way. They have breaking equipment also, and do lots of work in stainless. My company uses them to manufacture stainless panels for industrial use. They could make tube radio or stereo frames in a snap from stainless, copper or Al. As it turns out the owner was my neighbor. Never knew he had all this. They also have free lunch on Fridays. Dan, you should look them up! 73
Tom N5OFF

From femyers01 at bellsouth.net Fri Jul 2 16:17:07 2004
Subject: [R-390] Ballast Tubes

Hello All, Came into the shack and found my r-390a dead. A quick check found the ballast tube was shot. I've seen a lot going by on ballast tubes these past few days but am interested in getting a real ballast tube, if I can afford it, back into the radio. Anyone have a source for a 3TF7? If I must, I'll put in a mod to get around the 3TF7 but would rather not. Thanks, Forrest Myers AG4ND

From ham at cq.nu Fri Jul 2 19:24:22 2004
Subject: [R-390] Ballast Tubes

Hi, From what's been said here they are still available for something in the \$30 to \$60 range. Not quite a price that would encourage me to grab a couple dozen.

One modification that has not been mentioned as part of this thread on ballast tubes is probably the oldest of the batch. Grab a plug that looks like a tube base and wire a resistor to it. The value needs to be right to get the filaments to run right but that's about all there is to it. It pulls no more power than the ballast tube and it's a totally reversible mod. When the bottom drops out of the ballast tube market you can plug one of those two dollar ballast tubes in there and nobody will ever know what you did.

Somehow I doubt that ballast tubes will get cheap again unless there is a Chinese factory we know

nothing about making them by the ton. They are not terribly high tech so it is a possibility. There may be a long forgotten warehouse in South East Asia with a few hundred thousand of them sitting on the shelves - stranger things have happened.

If it was my radio I think I would do one of the re-wire mods to eliminate the beast. The filaments would be un-regulated but there would be less heat and no additional stuff inside the cabinet.

The function of the ballast tube in the radio is questionable. With modern wall voltages the original ballast is running at best on the edge and at worst over the edge of it's ratings. It's not doing a real good job of stabilizing the filament voltages on a radio plugged into 120 to 125 VAC. Fortunately for all of us the filament voltage has a pretty small impact on the tubes in the radio. It's my belief that the problem comes in on the low voltage end of the equation. If you try a radio on 100 VAC then the ballast is probably a good idea. Don't see much of that coming out of the wall outlets around here Take Care!
Bob Camp KB8TQ

From w7itc at hotmail.com Fri Jul 2 20:02:57 2004
Subject: [R-390] Help, Looking for Ballast Tube

12BH7A tube in place of your 3TF7 I did this mod' several years ago and My 1967 EAC R390A serial # 5911 and it has worked with out a hitch since that day. Ken Kenneth A. Crips W7ITC, AMI 873

From jbrannig at optonline.net Fri Jul 2 20:43:17 2004
Subject: [R-390] Ballast Tubes

My first radio was a Hallicrafters SX-77A AC/DC SW receiver. I was enthralled with short wave listening One day it died..... as a 12 year old kid I had no idea how to fix it and no test equipment.....I was devastated... The next family gathering I grabbed a non-ham EE uncle and pleaded with him to fix the radio.... He figured out that the portion of the ballast tube that controlled the filaments was blown. From the schematic he calculated the current requirements of the tube filaments and from there the value of the necessary dropping resistor. (This took several hours and it wasn't 'till years later that I figured out what he was doing) We went to the local "radio store" (remember them), and purchased the correct value resistor. Since I did not have a soldering iron, the pigtailed were simply twisted around the correct pins of the ballast tube. That was in 1962. The resistor is still there and it still works..... Jim

From jmerritt2 at capecod.net Fri Jul 2 21:49:16 2004
Subject: [R-390] Ballast Tubes

One must keep in mind that the R-390 was a "general purpose" receiver, which saw extensive shipboard use by the Navy during it's heyday. Power aboard ships tends to be anything but stable. I know. I was a shipboard electrician on an LST during that nasty little war back in the sixties. We had these radios on board, as did nearly every other ship in the Navy at that time. Using a ballast tube in the oscillator filament circuits was, at the time, a clever way to maintain stability during all those periods where the line voltage sagged from operating such heavy electrical loads as gun turrets. The regulation of ships generators of the period was very slow by today's standards. IMHO, there is little (probably NO) need for this regulation scheme given a radio running on modern "shore power". A few years ago, the ballast on my VERY early R-390 died, and I simply replaced it with a resistor. I did not notice any change in operation whatsoever. It has been running this way for several years now. Chuck N1LNH

From ham at cq.nu Fri Jul 2 22:06:01 2004
Subject: [R-390] Ballast Tubes

Hi, One thing you bring up that I should have mentioned. I have a couple of radios that are running resistors and they seem to all work every bit as well as the ones with ballast tubes in them. Enjoy! Bob Camp KB8TQ

From rbethman at comcast.net Fri Jul 2 22:32:12 2004
Subject: [R-390] Ballast Tubes

Hello all! I bought my '67 EAC (R-390A) from an SK (WC3K) some three to four years ago. In lieu of a ballast tube, it had the resistor in its place. I brought it home, plugged it in, turned it on. It still is running, and running just fine. Bob - N0DGN

From wb5hak at sirinet.net Sat Jul 3 01:27:34 2004
Subject: [R-390] Ballast Tubes

Would you guys share the value and size of the resistor you used for this "replacement ballast"?? Save the rest of us calculating it, since yours obviously works well. Tks, Don, WB5HAK -

From pwokoun at hotmail.com Sat Jul 3 03:35:24 2004
Subject: [R-390] IERC type tube shields

I can provide this info in a .pdf file if anyone wants it that way. I'll soon stick it in my website for future reference: www.qsl.net/kh6grt

More than you ever wanted to know about heat-dissipating tube shield mil specs...but just the item for those *HOT* 6BF5s in Collins equipment. (You may need to change your font type to a constant-spacing one like Courier for the tables to line up properly.)

MIL SPEC HEAT-DISSIPATING TUBE SHIELDS by Pete Wokoun Sr., KH6GRT (6/2004)

We all have heard the benefits of using International Electronic Research Corp (IERC) type heat-dissipating shields in the R390A and other equipments to reduce tube operating temperatures. However, I haven't seen any information on just how much they actually reduce the temperatures. Collins did some temperature studies but I haven't been able to find a copy of their study, possibly called service bulletin 303. I don't know if that study included heat dissipating shields. Searching thru the mil specs that these shields were made to I finally found some definitive temperature reduction figures. The specs are all in degrees C; they have been converted to degrees F in this presentation.

The mil spec heat-dissipating shields designated for retrofitting to existing equipment come from three mil specs: MIL-S-9372(USAF), MIL-S-19786(NAVY), and MIL-S-24251. These shields are designed to replace the shiny, nickel plated JAN types. Mil-S-9372 was an Air Force spec and MS24233, its mil standard for retrofit shields, was implemented January, 1958. MIL-S-19786 was a Navy spec and its amendment for retrofit shields was implemented May, 1964. Both these specs were cancelled in 1968 and replaced by mil spec MIL-S-24251 which covered all branches of the service and was implemented March, 1967. Shields made to any of these specs will have the mil spec part number on them. Here are those mil spec part numbers cross referenced to the well-known IERC numbers:

SIZE	IERC #	MIL-S-9372	MIL-S-19786	MIL-S-24251
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Short 7 pin 5015B MS24233-1 S0761*V00 M24251/6-1
 Med 7 pin 5020B MS24233-2 S0762*V00 M24251/6-2
 Tall 7 pin 5025B MS24233-3 S0765*V00 M24251/6-3
 Short 9 pin 6015B MS24233-4 S0966*V00 M24251/6-4
 Med 9 pin 6020B MS24233-5 S0967*V00 M24251/6-5
 Tall 9 pin 6025B MS24233-6 S0968*V00 M24251/6-6
 Ex-Tall 9 pin 6027B MS24233-7 - M24251/6-7
 *(X or C)

All the above sizes except the short and ex-tall 9 pin ones are used in the R390A. You can get information on how many of which ones on many web sites. The IERC numbers are normally used when searching for these shields. If someone other than IERC made them, they may only have the mil spec number and some other model number. I have some made by Waterbury Pressed Metal Company (WPM in the table below) that are this way. One I have made by Cinch Connector Company does carry the IERC number. I found documentation that the Atlee Corp also may have produced some of these shields. Their different model numbers are noted in the table below and cross referenced to the IERC numbers:

SIZE	IERC #	WPM #	ATLEE #
Short 7 pin	5015B	RS-215-1	A10041-1
Med 7 pin	5020B	RS-215-2	A10041-2
Tall 7 pin	5025B	RS-215-3	A10041-3
Short 9 pin	6015B	RS-216-1	A10042-1
Med 9 pin	6020B	RS-216-2	A10042-2
Tall 9 pin	6025B	RS-216-3	A10042-3
Ex-Tall 9 pin	6027B	---	---

BTW, I noticed the last two digits in the IERC number correspond to their height in decimal inches. For example, the 5015 is 1.5 inches high, 5025 is 2.5 inches high, etc. Anyone know if the 50 and 60 designate anything?

Physically, from ones I have seen, the shield inserts (the part that contacts the tube) are of two types: a multi-sided cylinder (5-sided for 7 pin tubes and 6-sided for 9 pin tubes) or a round insert with a multitude of 1/16 inch fingers. I found both types on shields from both the -9372 and -24251 mil specs. The multi-sided inserts have an open top between the insert and outer shell whereas the mini-fingered insert has a top closed. I personally have not seen or heard about any shields that have the MIL-S-19786 markings.

Shields made to MIL-S-9372(USAF) (MS24233) were qualified to reduce the surface temperature of a test 'slug' by 36 degrees F, minimum (a 10-11% reduction). The test 'slug' was an aluminum piece shaped like a tube with an internal heater and 3 imbedded thermocouples. This 'slug' was heated up to 338 to 356 degrees F when the shield was applied. The average reading for all thermocouples had to be at least 36 degrees F less than the starting temperature. How well this test 'slug' with its greater thermal mass related to actual tubes I don't know.

Shields made to MIL-S-19786(NAVY) were qualified using an instrumented glass tube called a Thermion. Apparently these were tube-sized things containing a heater and thermocouples. It was heated to its test temperature when the shield was applied. The shields designated for retrofit service were only required to reduce the temperature of the thermion between 10 and 25% (symbol 'X' in the tables). However, the shields worked so well they were qualified to the next higher reduction of 25-38% (symbol 'C' in the tables). Specific temperatures for this spec are as follows:

Bare Bulb Shield Temp Reduction (Minimum)
MIL-S-19786 # Test Temp (X) 10-25% (C) 25-38%

S0761 (short 7) 293 degrees F 27- 65 deg F 65- 99 deg F
S0762 (med 7) 437 degrees F 41-101 deg F 101-154 deg F
S0765 (tall 7) 455 degrees F 43-106 deg F 106-161 deg F
S0966 (short 9) 266 degrees F 23- 59 deg F 59- 89 deg F
S0967 (med 9) 446 degrees F 41-104 deg F 104-157 deg F
S0968 (tall 9) 347 degrees F 32- 79 deg F 79-120 deg F

Note: The V00 in the -19786 mil part number refers to a vertically mounted shield with no separate base provided.

Shields made to Mil-S-24251 were qualified using actual electron tubes. The temperatures were measured from a thermocouple imbedded into the test tube's glass at its hottest spot. The hot spot location was determined by temperature sensitive paints. Like in the previous specs, the test tube was heated to its test temperature when the shield was applied. The shield had to reduce the bulb temperature by at least the amount indicated in the following table:

Bare Tube Shield Temperature
MIL-S-24251 # Test Temperature Reduction (minimum)

M24251/6-1 (short 7) 239 degrees F 45 degrees F (19%)
M24251/6-2 (med 7) 419 degrees F 72 degrees F (17%)
M24251/6-3 (tall 7) 464 degrees F 81 degrees F (17%)
M24251/6-4 (short 9) 266 degrees F 45 degrees F (17%)
M24251/6-5 (med 9) 437 degrees F 99 degrees F (23%)
M24251/6-6 (tall 9) 446 degrees F 81 degrees F (18%)
M24251/6-7 (ex-tall 9) 455 degrees F 81 degrees F (18%)

Typical tube operating temperatures I expect are somewhat less than these test temperatures which maximized tube dissipation. This would lead to somewhat less than the above temperature reductions in actual situations. However, I think these tests were closer to actual conditions than the 'slugs' and Thermions used in previous testing.

The mil spec Mil-S-24251 remains in effect today. However, there are no products on its qualified products list. What that means is no one currently makes any of these shields because the military doesn't have a need for any. Personally, I think shields made to any of these mil spec are going to perform similiarly because they're not all that different from each other.

There are other types of mil spec heat-dissipating shields even of improved design but they are not designated for general backfitting into existing equipments. These shields and their sockets were designed from the start as an integral part of their equipment. As such, significant quantities to use in other equipments are probably not available.

So, what does all this mean? Here are my thoughts: These temperature reductions listed that the shields had to meet are all minimums so actual reductions cannot be determined. Physically these shields seem to remain pretty much unchanged throughout the years; it was the mil specs that were changing. And mil specs are sometimes written just to document what is normally used and available! From the mil spec 19786 qualified products list the manufacturers had test data that supported their products qualification

of 25-38% reductions in bulb temperatures. This range also allowed them to meet the newer mil spec 24251 minimum reductions. So I would venture to say a typical bulb temperature reduction of 20-25% is realizable with the heat-dissipating shields. Having a temperature reduction figure only leads to a further question: By decreasing the operating temperature of a tube by some amount, how much improvement in tube life does this lead to? This becomes harder to answer than determining how much cooler the tube operates. But one can generalize by saying any increase in tube life by lowering bulb temperature is beneficial.

The most informative article I was able to find on-line which related tube bulb temperatures to tube life was [pearl_tube_coolers.pdf](#) on the [www.pearl-hifi.com](#) website. Although much of the website borders on the more esoteric nuances of high-end audio, this paper presents some of the earlier works done by GE and IERC on tube temperatures and life spans that are difficult to find these days. An example from an IERC study in that article: a 6AQ5(6005) tube operating near maximum plate dissipation has a bare bulb temperature almost 460 degrees F. Enclosed in a bright JAN shield its bulb temperature rises to 600 degrees F. With an IERC type B cooler installed the bulb temperature drops to 365 degrees F. This is a 20% drop from its bare bulb temperature and an 39% drop from its JAN shield temperature. This related to a tube survival rate after 500 operating hours of 35% using no shield, to less than 5% using the JAN shield, to over 95% still working using the IERC type B cooler.

In another example from a GE study: From a batch of 200 6AQ5(6005) tubes running at 502 degrees F, 15% were still operational after 2500 hours. A second batch running at 428 degrees F, 74 degrees cooler or about a 15% reduction in bulb temperature, still had 90% operational after 5000 hours. It seems "small decreases in bulb temperatures often result in seemingly disproportionately large increases in tube life". The article is also interesting in that it touches on other factors like filament voltage, forced air cooling, and temperature gradients that also have an influence on tube life.

From r.tetrault at comcast.net Sat Jul 3 03:56:46 2004
Subject: [R-390] IERC type tube shields

Nolan would be proud...

-----Original Message-----

From: r-390-bounces@mailman.qth.net
Subject: [R-390] IERC type tube shields

I can provide this info in a .pdf file if anyone wants it that way. I'll soon stick it in my website for future reference: [www.qsl.net/kh6grt<Snip>](#)

From barry at hausernet.com Sat Jul 3 07:23:44 2004
Subject: [R-390] IERC type tube shields

Hi Pete & list

While compiling this body of knowledge, you might want to add yet another type of insert the pleated type of beryllium copper ones. I've seen these in IERC shields and also in black or shiny conventional shields. Some might be retrofits - depot, manufacturer or hobbyist.

There is some variation in the style of the shields themselves, even within IERC ones. Some have a substantial rim at the top, others much thinner and some have none at all made of a flat piece of metal rolled up and crimped maybe spot welded, rather than cut and formed from tubular stock.. They may

have different model numbers, dunno. The wider the top rim, the more convection is impeded.

I'd guess there are at least three main attributes that determine the heat reduction effectiveness of the various inserts themselves percent of surface contact area to the glass envelope and inner surface of the shield, composition and mass of the insert and vertical airflow. It would seem using "eyeball geometry" that the five or six sided cylinder type would be the worst, and the many-fingered and pleated type the best. The latter makes for more contact area and mass, but the finger type may allow for better airflow.

Another factor is how well the shield is heat-sunk to the chassis. Some of the heat convects/rises up out of the tube shield, some gets conducted away through the shield to the mounting base into the chassis. The best of the IERC's are all black except for the inside bottom which is bare metal, apparently machined or wirebrushed. Some black shields have the coating in place where they mount up, so might reduce heat transfer.

All this works "as advertised" on the top half of an R-390, but not exactly on the upside-down bottom half, I suppose.

One tip: If you have the conventional wide-rimmed shields with either the five/six-sided cylinder or pleated insert, (or you're rolling your own) make sure the insert is pushed a bit down from the top of the shield to let the heat escape. This type of shield is usually missing the crimps in the sides which keep the inserts in place vertically, so tend to ride up when the shield is installed and fall out when removed.

Barry

From barry at hausernet.com Sat Jul 3 08:52:52 2004

Subject: [R-390] Ballast Tubes

I've read most all the posts over the years, but still don't know. The general word consistent with Chuck's account is that the ballast tube was needed for military and naval installations where power sags were common and extreme.

I've monitored the power line voltages here. Basic voltage levels run on the high side about 126 lower on average during the summer, when brownouts can drive it down to as low as 95 something. Due to cycling AC, electric dryers, refrigerators, etc. I see a fluctuation of about 3-4 volts regularly on a fairly rapid basis on the order of seconds. The meter will read 125 for a few seconds, drop to 123 for a second or two, pop back up, etc and that will continue.

Is this the type of fluctuation/sag that the ballast tube would dampen out?

As the 6BA6 filaments are resistive heaters, don't they have some damping characteristics of their own? There may also be some latency and damping in the transformer, any capacitors, etc. Would there even be a fluctuation in the heat output in those two tubes without benefit of a ballast? Either way, under what circumstances does a ballast tube smoothen things out? With all the past threads, I don't recall ever reading anything on this. Barry

From w5kp at direcway.com Sat Jul 3 09:01:35 2004

Subject: [R-390] IERC type tube shields

Excellent post, Pete. A copy will go into my special "390 good stuff" file. Mahalo and Geev 'um, Brah.
Jerry W5KP ex-KH6GQC

From ham at cq.nu Sat Jul 3 10:14:48 2004

Subject: [R-390] Ballast Tubes

Hi

There is mention of the ballast tube in the Collins reports on the radio. They did not seem to feel it was a major part of the radio. The report more or less says it's unclear whether it was needed or not.

If your line voltage goes down to 95 volts then the tube will help. However the rest of the radio may not be doing very well at 95 volts.

The ballast was set up for about a 110 volt nominal line voltage and regulation over a +/- 5 to +/- 10% range. It seems to work fairly well from 105 to about 115 VAC. Past that it starts to fall off in regulation. I doubt it will do much for a 122 to 125 volt change.

Since it's a thermal part it will do its thing on the order of seconds. The tube works about the same way. Very fast changes will not affect things but sags that last for > 10 seconds are an issue.

The only significant effect on the tube from the filament voltage is a small variation in transductance when the tube cools off. I suppose the geometry may change when the tube cools and thus the capacitances but if they do it's not a documented effect. Since oscillators limit cycle based on gain the frequency of an oscillator will change a bit when the gain changes. A receiving tube with the filament up to temperature has such a small variation in transductance that the change even in a VFO should be nearly impossible to detect. The B+ change may on the rest of the stuff in the radio probably does more to move things around as long as the filaments are up to temperature.

Bottom line - ballast tubes are an optional part ... Take Care! Bob Camp KB8TQ

From eberbari at indy.rr.com Sat Jul 3 13:09:18 2004
Subject: [R-390] Ballast Tubes

What value of resistor and wattage? Ed, W9EJB

From dhallam at rapidsys.com Sat Jul 3 13:30:27 2004
Subject: [R-390] Ballast Tubes - Resistor

According to my RCA Tube Manual a 6BA6 is rated 6.3 V at 300 mA, so 2 tubes in series 12.6 V at 600 mA. Supply voltage is 25.2 V so you want to drop 12.6 V with 600 mA of current

$$12.6/0.6 = 21 \text{ ohms}$$

$$21 \times 0.36 = 7.6 \text{ watts}$$

A resistor (21 ohms at 10 watts would seem right David C. Hallam KC2JD

From rbethman at comcast.net Sat Jul 3 14:03:41 2004
Subject: [R-390] Ballast Tubes - Resistor

Group,

I've pulled the resistor in my R-390A. It is a Sprague "KOLOHM", 50 ohm 10W. It goes between pins 2 and 7

From dsmuples at comcast.net Sat Jul 3 14:05:38 2004
Subject: [R-390] Ballast Tubes - Resistor

All: Just a minute. Two 6BA6s in series will draw 12.6 V at 300 ma, not 600 ma. If the supply voltage is 25.2 volts, then: Resistor value = (voltage to drop) / current through resistor Resistor value = $12.6 / 0.3 = 42$ ohms Best fit: 47 ohms // 390 ohms (comes out to 41.945 ohms) Power through resistors = E^2 / R ($12.6 * 12.6$) / 47 = 3.37 watts ($12.6 * 12.6$) / 390 = 0.407 watts A 47-ohm, 5 watt resistor in parallel with a 390-ohm, 0.5 watt resistor should do the trick. Dave WB4FUR

From dhallam at rapidsys.com Sat Jul 3 14:09:25 2004
Subject: [R-390] Ballast Tubes - Resistor

It has been correctly pointed out that there is an error in my calculations. The total current if the 2 tubes in series is only 300 mA. So the value of the resistor should be doubled to 42 ohms and wattage rating cut in half to 5 watts. See what happens when the memory starts to go! David C. Hallam KC2JD

From ham at cq.nu Sat Jul 3 15:58:50 2004
From: ham at cq.nu (Bob Camp)
Date: Sat Jul 3 16:09:07 2004
Subject: [R-390] Ballast Tubes - Resistor

Hi, Looks like anything between 47 and about 56 ohms will work just fine. Ten watts or larger should last forever. I finally posted the whole mess to the correct mailing list a few minutes ago. I'm not sure what the Teletype guys made of a big long string of stuff about R-390 resistors. Gotta watch the keyboard a bit more closely in the future Take Care Bob Camp KB8TQ

>

From k3oqf at localnet.com Sat Jul 3 18:09:07 2004
Subject: [R-390] Reply to my Ballast Tube Question

Dear Gentleman, Thank you all for the help regarding finding Ballast Tubes and Mod's for my R-390A/URR.

I knew about the using a resistor in place of the Ballast. I brought my first R-390A/URR around 1968 about two years after my four years as a Navy Radioman. The fellow who sold me the R-390A (Stewart-Warner S/N 953) was a Material Officer/Electronics Billet. He told me then to use about 48 ohm resistance to replace the Ballast Tube, just as has been mentioned in the discussion. I just wanted to restore my three R-390A's to original status. For the last 36 years my original R-390A has worked with the 48 ohm resistor just fine. After re-aligning the I.F.'s the receiver sensitivity is approximately 0.2 microvolts. Better than most of the riceboxes sold today.

I was on the USS Hancock CVA-19 during 65 to 66. Supervisor Radio Central on Essex Class aircraft

carrier, WWII carrier. The R-390A was used for receiving 8 channel MUX either USB or LSB. Simply moving the BFO + or - 1 KC for SSB. Did not use any other unit for SSB. The receivers were fed from Wire Rope antennas thru antenna couplers. The receivers were used ship to ship (USB), ship to shore either MUX or USB, and for 500 KCS CW International Distress and 8364 KCS Emergency Lifeboat Frequency, 2182 AM Distress. Also the receiver was use to receiver FOX Fleet Bcst via cw and radioteletype (MUX) (Covered Ckts).

Coming back from Indochina via great circle route, just east of Japan we could receive Iowa and mid-west AM Bcst band stations solid on our mid-watches.....It's a great receiver. Once again thanks for the help, its very much appreciated. BRgds, Walter

From ka4prf at us-it.net Sat Jul 3 18:30:22 2004
Subject: [R-390] Where to get one?

Hi all, I have thinking about looking for an R390 to purchase. I am not much of a electronics technician, so it would need to be one in good working order. Where should I be looking? Is there a web site that I can check or is EBay the only place to look? Thanks Chuck B ka4prf@us-it.net

From ham at cq.nu Sat Jul 3 19:47:28 2004
Subject: [R-390] Reply to my Ballast Tube Question

Hi, Ahh ... and that brings up a question: What were the antenna couplers used on the CVA-19 at that time? It's been a while I know, but I just had to ask. There is an ongoing discussion about input impedance of the radios and how they attached to antennas in military service Take Care! Bob Camp KB8TQ

From ham at cq.nu Sat Jul 3 19:55:03 2004
Subject: [R-390] Where to get one?

Hi, Well you have a couple of options:

- 1) Go with eBay and more or less expect to become a better electronic technician by learning how to fix your R-390.
- 2) Check out the local hamfests and see if you can find one that can be checked out before you buy it. You may spend several weekends on the road
- 3) Radios come up from list members from time to time. The most common time is when the wife has just spent your R-390 money on a new washer
- 4) There are a couple of people who rebuild these radios for a living. Expect to wait a while and pay a multiple of the eBay or hamfest price.

My strong recommendation would be to dive in on a radio that may need work. The documentation on these radios was written very well, back in an era when that sort of thing mattered. Of course if spare time is an issue that's not a very good solution. No matter who you get it from a tube based radio will need some work now and then. That's not to say it will be major effort stuff, but tubes do burn out, lubrication is required, and an alignment from time to time never hurts. Take Care! Bob Camp KB8TQ

From Llgpt at aol.com Sat Jul 3 21:42:11 2004
Subject: [R-390] Ballast Tube Thread

Oh for the good old days when this thread would trigger an onslaught of e-mails that would jam any server.

It appears that the deadest horse that has ever been beat has once again been revived for all the new subscribers and those that have forgotten this dreaded thread.

But, gone are the posters of the past, the beehive kickers, the nay sayers and witches who use solid state devices in place of the beloved 3TF7 which is now approaching record prices.

Everyone who has replaced this ballast tube can still hear that heterodyne from Pitcairn Island or the flea farting in Fiji, but the legends live on.

Where has everyone gone to? Hopefully, not the great listening post in the sky..... Les Locklear

From jmiller1706 at cfl.rr.com Sat Jul 3 21:48:27 2004
Subject: [R-390] Ballast Tubes in Shipment

One or two 390a's I have bought in the past arrived with bad ballast tubes. But they were presumably working before shipment. The only reason I can think of is excessive vibration and breakage of the flimsy filament during shipment. Solution? Before shipping a 390, remove the ballast tube and wrap in soft foam and in a separate box inside the shipping carton.

From w5kp at direcway.com Sat Jul 3 22:00:25 2004
Subject: [R-390] Ballast Tube Thread

Dang, Les. Where in your tag list is your bank of SP-600's? Jerry W5KP

From r390a at bellsouth.net Sat Jul 3 23:41:06 2004
Subject: [R-390] Re: IERC type tube shields - Collins 66J's

I have a scan of the 66J tube shield data, unshied/shiney/dissipating shield. Sort of similar to the various IERC models http://www.fernblatt.net/Collins/Collins66Jgraph_1.gif

From barry at hausernet.com Sun Jul 4 05:30:52 2004
Subject: [R-390] Ballast Tubes in Shipment

Hi James

Yes ... there have been reports of that happening from time to time and when I've had '390's shipped to me, I've asked that the 3TF7 be removed, bubble wrapped and stuffed in somewhere. Way, way back, someone posted that their ballast tubes would seem to last forever, but a failure, when it occurred, tended to be after the receiver was moved around onto the bench or whatever. Others have sort of dismissed all that.

What's curious is that the last model series of the Zenith Transoceanic tube portables (600 series) and the military version of the 500 series (R-520) all have 50A1 ballast tubes. The construction of the tube is the same a 9-pin envelope with a long iron filament strung around almost "nonchalantly" over the mica

disks, like a poorly decorated Christmas tree. These are portable, luggage style radios with no shockmounting whatsoever. There were numerous clones and also mil portable gear with ballasts and some tube testers. So I dunno. If they were prone to vibration damage, would the mfr's go with them in portable gear? Not sure, but I doubt ballast tubes were ever cheap relatively. Nowadays, it's a horse race as to which would cost you more a 50A1 vs 3TF7. Of course, those T/O's also have the very pricey 1L6.

As for vibration/shock hot vs. cold the T/O's are battery portables, so might very well be in motion while running and included the famous removable "wavemagnet" with suction cups so you could attach it to the train or car window while traveling.

I suspect failure-proneness may have to do with aging through use filament becomes more brittle with more heating and cooling cycles? Barry

From doughhelen at moonlink.net Sat Jul 3 21:29:52 2004
Subject: [R-390] Info on SRR-13

Can I go a little afield and ask if anyone has a schematic of an SRR-13 available? I know it is off topic but the two receivers seem to be good friends and probably wouldn't mind if the majordomo doesn't.
Thanks, Doug K6JEY

From ham at cq.nu Sun Jul 4 10:44:43 2004

Hi

Battery powered gear is *very* different than line powered stuff. I used to run "portable" FM stuff that ran on batteries. It was amazing to me that the filament D cells would die as fast as they did. The voltage starts out at 1.5 volts but does not stay there for long. It gets down to about a volt fairly quickly. Without *something* to stabilize the oscillator tubes you would need the Energizer bunny and an 18 wheeler to keep your portable radio up and running.

Since you always were on the verge of nuking the filament batteries most of the little 1.25 volt tubes didn't have as much margin built into the emissions side of their design. It would be very interesting to see if we can come up with some real transductance versus filament voltage data on some of these tubes. I actually had do do a lab on it back in High School physics (tubes had just been invented) . For some odd reason I seem to have misplaced that log book

Since we're dragging everybody back into this Chuck Rippel had some stuff on the performance of an real ballast tube up on hid site for a while. If it's still there I can't find it with a quick look. The net result of what he found was that the ballast tube was not all that great a regulator in the first place. It was far better than nothing at all but it still wasn't great.

As best anybody can figure the ballast tubes are built by selecting a pretty darn small diameter wire and balancing it against a weird back fill gas mix at partial vacuum levels. Given how much fun it is to get a batch of number 51 wire done up I suspect that on occasion they might have used number 50 or 48 instead. When they did that the extra wire had to go somewhere. Net result was the odd wire running all over the place construction.

One very simple explanation for the parts getting fragile would be simple evaporation of the metal from hot spots. It's not a very elegant explanation but it has to happen to some extent. Flexing as the wire

heats up and cools down can't help much either. There may be some change in the wire with time but if there is it's not very obvious. A final possibility would be air getting into the poor little thing. With no getting the oxygen would head straight for the iron wire. Looking at about 90% of the stuff sitting out in the yard here suggests that Iron reacts with oxygen in a predictable way.

Bottom line - they used ballast tubes in the portables because they had to. The shock and vibration issues were secondary Take Care! Bob Camp KB8TQ

From Llgpt at aol.com Sun Jul 4 10:47:19 2004
Subject: [R-390] Ballast Tube Thread

<Belly Laughing>.....Now, that sounds like a club worth joining.....:-) any membership dues, drunken meetings??? I'm doing fine, made a job change to increase my retirement benefits package which is just around the corner. Still have this sickness thing with radio gathering.....soon to add 7-R-390A's, 1-R-390 and others to the pile. Les

From ToddRoberts2001 at aol.com Sun Jul 4 10:47:29 2004
Subject: [R-390] Ballast Tubes

I think this has been said in the past. It is a bit more work in the beginning but I have had very good results by re-wiring the filament line in the I.F. deck to run the BFO and PTO tubes in parallel with the 6.3VAC filament line. This does away with using a resistor and saves the heat being dissipated. If you want to keep the original look of the radio just plug in a dead 3TF7 in the socket and leave it there. No one will know the difference unless they touch the tube and find it is cold. All I know is one time I used a variac and varied the 115 VAC line voltage +/- 10 volts with and without the ballast tube - with the BFO turned on - I couldn't hear any change in the beat note with the receiver tuned to an AM BC station. 73 Todd Roberts WD4NGG.

From ham at cq.nu Sun Jul 4 11:07:45 2004
Subject: [R-390] Ballast Tubes

Hi, If you have a single radio, or can re-wire all your radios to match this works pretty darn well. The problem comes in when you have multiple radios with multiple mods on them. Getting one set of ballast tube mods mixed up with another set can result in unpredictable results .. Take Care! Bob Camp KB8TQ

From jmiller1706 at cfl.rr.com Sun Jul 4 11:11:55 2004
Subject: [R-390] Ballast Tube Thread

>From page 15 section 4.2.2.1 AC Power Units of Final Engineering Report on Radio Receivers R-389 and R-390 Sept. 15, 1953:

<http://www.r-390a.net/faq-eng-r3.pdf>

"The filament regulation circuit for the oscillator filaments should also be covered here although this ballast tube is mounted on the IF unit. Considerable work was done with Amperite Corp. in designing this special ballast tube which feeds a constant 300 mils to the two 6 volt 300 mil oscillator tubes used in the VFO and BFO. These three tubes are connected in series across the 26 volt filament supply. The

ballast tube (3TF7) operates on a current of 290 to 330 mils and holds this current within ?10 mils for input voltage variations of ?15%. This reduced the 15% variation to approximately 3%. There is some question if a filament regulator is necessary in these receivers since the oscillators are very good even without regulation. However, since the stability was a big factor in this design and since the factor of tube aging was not known, the regulator was included."

From rbethman at comcast.net Sun Jul 4 11:14:53 2004
Subject: [R-390] Ballast Tube Thread

Barry & Les, I'll play whatever role you wish pursuant in keeping this alive! I don't get "sucked" into anything! I JUMP in with my eyes open wide. To make sure it is "on-topic", My 50 ohm has after about 8 or so years of use in lieu of the INFAMOUS 3TF7, has drifted to 51 ohms in value. Happy Fourth! My spirit is with the new ones doing what us OLD ones used to! Bob - N0DGN - USA/USN retired

From rbethman at comcast.net Sun Jul 4 11:56:29 2004
Subject: [R-390] Ballast Tube Thread

How about we start the idea that the 3TF7 was actually used as BALLAST. Each individually selected to ensure the correct weight for the R-390/R-390As! Bob N0DGN

From jmiller1706 at cfl.rr.com Sun Jul 4 12:02:31 2004
Subject: [R-390] Manassas BPL

I see you're in Manassas VA, which now has Broadband over Power Line (BPL) service, as I understand it. How has BPL affected your R-390 HF listening? What's the interference level like? (this is a serious thread)...

From barry at hausernet.com Sun Jul 4 12:05:00 2004
Subject: [R-390] Ballast Tube Thread

Ah-hah! A classical mid-20th century example of CYA engineering philosophy. Hmm.. better stock up on some more ballast tubes so my A will be properly C'ed.

Uh-oh .. from the notes of the intrepid Three-Star General Torment: "Letsee now, the factor of tube aging of the 6BA6's was unknown, so you guys worked with Amperite to come up with a new custom ballast with even less aging history and threw that into the mix? I see." Which shows to go you even when you think you have your A's well C'ed

Not to mention that we need to keep this thread going 'til it goes bang it being the 4th and all. BTW anybody have some burnt out ballasts to blow up tonight assuming they're loaded with hydrogen, not helium. Barry

PS As I write this the History Channel is playing "The Crossing" with Jeff Daniels as G. Washington. Am I mistaken, or didn't he play opposite Jim Carey in "Dumb and Dumber"? Either (a) I don't know how I feel about that, being rather fond of the original George and/or (b) Jeff D. has quite a range and may qualify as the worlds most underrated actor tho' I wouldn't mind trading paychecks.

From rbethman at comcast.net Sun Jul 4 12:11:16 2004

Subject: [R-390] Re: Manassas BPL

James and the group, It indeed IS serious! I've made my comments to the FCC. I haven't had the opportunity to go to the City Council as of yet. I want to record the interference on my reel to reel first. Manassas has ONLY one thing going FOR this, most of the power system is underground. That being said, the bursts of data can be picked up ALL OVER the dial of the R-390As. For those NOT in the underground system area, it MUST be horrendous. It does, even in my area, cover some low level signals, and make others VERY hard to copy. My antennas are nowhere near the power feed. It is coming through the power line itself, and then into the R-390A.

I do NOT find it worse when I turn on the E.F. Johnson TR Switch, which is amplified. BUT to clarify once again - I live in the part that is underground! I wish it was portable. I could drive around and give a GOOD test and recordings! Bob - N0DGN

From barry at hausernet.com Sun Jul 4 12:33:28 2004
Subject: [R-390] Ballast Tube Thread

><Belly Laughing>.....Now, that sounds like a club worth joining.....:-) any membership dues, drunken meetings??? Be careful with that belly don't want to have more plumbing work done on it. The charter of the DHRS clearly states: "... any and all funds gathered from dues or other sources shall be immediately allocated for tube 'n beer acquisition, but not necessarily in that order of priority."

>I'm doing fine, made a job change to increase my retirement benefits package which is just around the corner.

Ahhhretirement then you are no longer protected by the labor laws and will be required to toil over radios on the traditional 75 hr. week, 6 1/2 day schedule. You'll have to sign the OSHA liability release form regarding exposure to MFP, solder smoke, selenium, beryllium-copper, PCB's and various unidentifiable icky-stuff.

>Still have this sickness thing with radio gathering.....soon to add 7-R-390A's, 1-R-390 and others to the pile.

Well, truth be known, there is no cure, however it sounds like you have the only known treatment well under way. Barry

From dcsfree at worldnet.att.net Sun Jul 4 12:48:14 2004
Subject: [R-390] Re: Manassas BPL

Do you have a portable SW radio? It should give you a good idea? Dan

From dsmaples at comcast.net Sun Jul 4 12:49:42 2004
Subject: [R-390] Re: Manassas BPL

Bob: Where in Manassas do you live? I'm just south of Manassas in the Mayfair development...

All: I have heard stuff as I was mobiling around Manassas, but I haven't heard anything that sounds like wideband noise. What I hear is more like switching power supplies (and those are becoming more and

more common, with less and less filtering...). Dave WB4FUR

From rbethman at comcast.net Sun Jul 4 12:51:09 2004
Subject: [R-390] Re: Manassas BPL

Dave, I live in Point of Woods - on Bayberry Ave. Bob

From rbethman at comcast.net Sun Jul 4 13:02:06 2004
Subject: [R-390] Re: Manassas BPL

No, all my receivers are "antique" tube type. Bob

From dcsfree at worldnet.att.net Sun Jul 4 13:05:29 2004
Subject: [R-390] Re: Manassas BPL

too bad even the cheapest one made would be a good tool for this! cb radio?

From Llgpt at aol.com Sun Jul 4 13:22:46 2004
Subject: [R-390] Ballast Tube Thread/Deadeat horse that's ever been beat

Hmmmmmmmmmm,

Everything was sailing merrily along until now. We need to get the Mars lander Project people in on this to tell us just how far out of spec that 50 ohm resistor can climb before you can no longer hear a signal. 51 ohms, in a few decades it might be 53-54 ohms. Egads!! I should have listened when I was called a witch for using sand state devices to replace a tube.....live and learn I guess. Les Locklear

Bob - NODGN - USA/USN retired
Subject: [R-390] Ballast Tube Thread

It is quite obvious each one was individually made.....some look as though a 6th grader built them as a science project, sagging plates crooked filaments etc.

Some of the uglier ones actually last many, many years. But with prices escalating like they are now, I'll never buy another one, beer is higher on my priority list, and along with some of that Kielbasa, that is a great combination anytime of the year! Happy 4th everyone! Les

From rbethman at comcast.net Sun Jul 4 13:36:42 2004
Subject: [R-390] Ballast Tube Thread

Perhaps we should run an experiment and see if Kielbasa would make a viable substitute for the 3TF7!?!
Bob

From w5kp at direcway.com Sun Jul 4 13:34:24 2004
Subject: [R-390] Ballast Tube Thread/Deadeat horse that's ever been beat

Has anybody ever investigated the possibility of switching the 3TF7 out with a triode-pentode that could do double duty as a ballast and a transmitter? Seems like an R-390A/URT Transceiver could be a possibility. Heck, you already have a T/R relay built in, all the power supplies you need, and crystal oscillators. Probably too much to ask for plate modulation, but for CW it might be a great rig, if a bit on the overdesigned side on the receiver part. Jerry W5KP

From Llgpt at aol.com Sun Jul 4 13:41:59 2004
Subject: [R-390] Ballast Tube Thread

Throw enough potatoes in for power to the filaments and it should work.....two potatoes can make a battery powered clock run..... Les

From rbethman at comcast.net Sun Jul 4 13:44:46 2004
Subject: [R-390] Ballast Tube Thread

Heck! That's easy. Add a couple of pierogi wired in! Bob

From rbethman at comcast.net Sun Jul 4 13:50:36 2004
Subject: [R-390] Re: Manassas BPL

Dan,

Just for sh*ts and grins, I put the D-201 on the bench and fired it up. I get the "blip...blip" from channel 2 on up through the 10.5 mtr section on the VFO. Interesting... It is about 1 to 2 "S-Units" on the meter. Bob - N0DGN

From r390a at bellsouth.net Sun Jul 4 15:48:33 2004
Subject: [R-390] Ballast Tube Thread - Dead Horse Walking

Nah. A wet sheep. The stinky wool/lanolin mixture has been researched by Scottish scientists for years. You'd have to use clipleads from the 390 to the sheep though. erm. Or something. Tom NU4G

From r390a at bellsouth.net Sun Jul 4 15:51:57 2004
Subject: [R-390] Re: Ballast Tubes/transmitting receivers/Dogs and Cats sleeping together...

I suppose the common 12BY7 ballast replacement could be used in a simple MOPA circuit, or maybe crystal controlled like a Tuna Tin transmitter... Hmm

From mjmurphy45 at comcast.net Sun Jul 4 17:45:10 2004
Subject: [R-390] Re: Ballast Tubes/Motor Start Capacitor

Method 4: Actually, a non-polarized capacitor would run cooler to drop a few Watts. I come up with 100 uF - 120 uF. Somebody check my math. This mod should confuse the ballastless b*^*\$%ds who have to inherit our R390A's.

Method 5: The resistance linecord idea. For extra credit calculate how many inches are required for 50 Ohms. Wrap this solenoid style around the existing tube to form a common mode choke to reduce interference from BPL which I figure, must be getting into the VFO fillaments. Happy 4th all! Mike WB2UID

From doorbar61 at tiscali.co.uk Sun Jul 4 18:36:05 2004
Subject: [R-390] front panel corrosion

have 390a and sp600 and i want to repaint the front panels, problem is they are both corroding, can anything be done to halt the corroding, like washing them in a particuler fluid or sealing the surface or anything else. many thanks brian

From barry at hausernet.com Sun Jul 4 19:06:46 2004
Subject: [R-390] Ballast Tube Thread

Yeah you're joking but truth is stranger than foolin' around. There were those hot dog cookers that were popular years ago latest technology. Consisted of two rows of metal buss bars, I guess, with tangs for six dogs, all inside a heat resistant plastic box with a clear lid. The two bars were each hooked to one side of the AC line through the line cord. No switch. (I think there was one built into the lid, so opened the circuit when it was rasied.) You set up the desired number of hot dogs across the skewer tang things, plugged it in and they were cooked in a few minutes. I suppose it would have worked on kielbasa. Of course you don't need all that, just hook up each end of the wurst in question to a line cord.

Only problem with the kielballast idea is that as the carefully cut length of the thing dries out, resistance will tend to drift upward. Probably not enough current to cook the thing. Barry

From Llgpt at aol.com Sun Jul 4 19:21:20 2004
Subject: [R-390] Ballast Tube Thread/Keilballast

"KEILBALLAST".....what a great idea for an invention, cooks while you listen to far off signals, replacements available everywhere.....:-) Still laughing!!!!!!!!!!!!!! Les

From barry at hausernet.com Sun Jul 4 19:37:21 2004
Subject: [R-390] front panel corrosion

Hi Brian

What you need to do exactly depends on how deep the corrosion has cut into them. In any event, it's under the paint, so the panels need to be stripped first with paint stripper and cleaned up with an abrasive pad, like Scotchbrite. If the pitting is deep, you'll have to excavate with a sharp tool or at least a wire brush in those spots and fill the pits with something like auto body putty or "liquid aluminum" or some epoxy based stuff. Then sand down the whole thing smooth. Apply alum-prep or used self-etching primer and your choice of finish coats - e.g. Rustoleum Smoke Grey.

If the pitting is close to the stampings, that will be difficult to fix completely.

Some of that corrosion may just be under the paint and not too deep, but I've seen it go nearly all the

way through the panel on some. (Started scraping and experienced the "China Syndrome") If they're that bad, you are better off getting used panels that are in better shape and refinishing those, if needed.

Attempting to neutralize and seal over the corrosion is not likely to work. If it's minor, and you're not up to doing the full refinishing routine, you might just try some WD-40 on a rag. I've done that seems to help, but I'm not sure how effective it is long term. Barry

From wa6knw at sbcglobal.net Sun Jul 4 20:07:34 2004
Subject: [R-390] Re: Ballast Tube Thread

Well, I can remember when we couldn't get any ballast tubes so we would go down to the beach and collect the finest sand we could find and mix it with ground up 50 ohm carbon composition resistors and some epoxy.

We would then pour this slurry mixture into these small glass tubes we'd get from the medics, stick a lead from the ground up resistors in to each end, and bake them in an oven for 6 hours.

When we got done with that we had 48 ohm resistors that we would use to replace the unavailable ballasts. I don't know why we didn't just use 48ohm resistors because we had them in stock.

But then I wouldn't have thought up this BS story to kick over some bees hives and start some crap..... HEH, HEH, HEH!!! I mean and tired after a long hot 4th of July Parade that's my story and I'm sticking to it..... RICH WA6KNW

From djmerz at 3-cities.com Sun Jul 4 20:09:53 2004
Subject: [R-390] Ballast Tube Thread

Hi, happy 4th, since TO was mentioned along with R-390 ballast tube, I feel remotely justified in remembering and mentioning that the RAL-7 and related receivers had a biggg ballast type 876 tube. But this one could be switched out easily from the front panel of the power supply when deemed unnecessary. This is in the room heater category so in the winter it's nice and I think even when switched "out" it continues to draw some current from the input line, maybe an amp or two. It's on the line side of the power transformer. So far the one I got with the set still works - don't know how easy it would be to find one but I don't think the demand is too high. Dan.

From wa6knw at sbcglobal.net Sun Jul 4 20:23:30 2004
Subject: [R-390] Re: R-390 Digest, Info on SRR-13

Try this page for size <<http://www.roveroresearch.com/srr13/srr13.html>> RICH WA6KNW

From r390a at bellsouth.net Sun Jul 4 20:25:20 2004
Subject: [R-390] Re: Ballast Tube Thread

Well, you were lucky to have sand! Back in my day we carved our ballast tubes out of wood. We used them and were proud of them, because that's all we had! Was it uphill both ways to get the sand? T

From odyslim at comcast.net Sun Jul 4 21:37:08 2004
Subject: [R-390] filters needed

I am looking for a working 2 and a 4 kc filter for my R390A. I would be willing to buy an entire IF strip if necessary. Any sellers? Thanks, Scott W3CV

From ham at cq.nu Sun Jul 4 23:53:02 2004
Subject: [R-390] Re: Ballast Tube Thread

Hi, I always wondered where the resistors inside Tektronix tube oscilloscopes came from and now I know Enjoy! Bob Camp KB8TQ

From eldim at att.net Sun Jul 4 19:21:40 2004
Subject: [R-390] Ballast Tube Thread

HAPPY INDEPENDENCE DAY to all you R-390 Owners. May the Declaration of Independence include protection of our treasured classics that are a part of our FREEDOM. May those fireworks displays be high above your rigs! Best regards, Glen Galati, KA7BOJ R-389, R-390, R-390A SRR-13 and other Boatanchors

From jonandvalerieoldenburg at att.net Mon Jul 5 00:36:45 2004
Subject: [R-390] Ballast Tubes in Shipment

I had 2 failures here on the 3TF7 ballast, one shortly after shipping & the second on a radio that had been in a rack for years. The original 1953 performance reports basically stated it was an overkill in using the ballast regulator but in designing the radio for worst possible condition senarios it was left in. The 1953 design report is great reading to give insite to the evolution of the R-390-URR into the R-390A. In my opinion use the tube if you have it, or insert the resistor. Any other mod should be well documented, but of course once your gone so is the documentation. I believe Noland's documentation of high hour 27/7/365 operation would suport the theroy of thermal shock failure. This is evident to most of us as the failure of a household light bulb, how many fail on power-up verses in use failure? Just rember that use of standby on modern line voltages increases filament voltage so unless you use regulated power to your rack (I used a 2-KW SOLA regulator for a number of years 115volts +- 2% untill my wife got sick of the noise) just shut it down completly or go the 24/7 method. J.W.Oldenburg AB9AH "If you can't be a good example, then you'll just have to be a horrible warning."

From ham at cq.nu Mon Jul 5 08:51:39 2004
Subject: [R-390] Re: Ballast Tubes/Motor Start Capacitor

Hi, I actually tried method 4 below. I think I was 15 at the time. As I recall the filament in the tube just sat there dark and the capacitor got real hot just before it took out the line fuse. Not a recommended way to run a 6L6GT directly off of line voltage using a non-polar electrolytic. Take Care! Bob Camp KB8TQ

From ham at cq.nu Mon Jul 5 09:45:25 2004
Subject: [R-390] filters needed

Hi

Assuming their web site is correct American Trans-Coil still has partial IF decks for sale. They are at <http://www.atc-us.com/ATCSHOP/> . Their web site is a bit tough to navigate but the R-390 parts are hidden in there somewhere. The decks they have are missing all the tubes, transformers and some of the under deck stuff like the BFO coil. They do have all four filters on them and at the price they have listed are probably your best bet if you need more than one filter. I have dealt with them in the past and their stuff has always been as advertised. Occasionally they have been a bit slow to take stuff down off the web site when they run out of it. Take Care! Bob Camp KB8TQ

From ham at cq.nu Mon Jul 5 09:48:08 2004
Subject: [R-390] Re: Ballast Tube Thread

Hi, The sand kept running down hill the whole time we did the ballast tubes. Now the wood was a lot easier to use once we figured out you had to cut down the tree *before* you carved the ballast tube from those top limbs. (The lower part of the tree dosen't regulate very well). Enjoy! Bob Camp KB8TQ

From ham at cq.nu Mon Jul 5 10:07:28 2004
Subject: [R-390] front panel corrosion

Hi

One thing that is a little expensive but it may help the process. A lot of hobby shops sell little air brush gizmos that will also do sand blasting. Obviously the chunks of sand they blow are pretty small. They should be just about perfect for cleaning out pits in a damaged front panel.

There are also chemical prep agents that might help with the cleaning process.

A final really weird approach would be do do a little reverse anodizing in the area. It should take out the rough stuff around the corrosion.

What ever you do it's a good idea to do a water wash and oven dry before you do the filling.

It can be a real pain to do all the filling, sanding, and painting only to see the stuff all pop out three months later. Take Care! Bob Camp KB8TQ

From ham at cq.nu Mon Jul 5 10:19:15 2004
Subject: [R-390] Ballast Tube Thread/Deadeat horse that's ever been beat

Hi, You have a perfectly good audio amplifier module in the radio complete with transformer coupled outputs. You also have direct access to the input of the amplifier at the diode load test point. AM modulation of the of the R-390A/URT should be a piece of cake. Now the for the fully automatic vacuum tube based antenna tuner and the muti band triple stack VFO's. Then we could strap a couple of diodes on the input so it would overload like crazy. We'll have a modern transceiver in no time at all. Take Care! Bob Camp KB8TQ

From ham at cq.nu Mon Jul 5 10:21:32 2004
Subject: [R-390] Ballast Tube Thread

Hi, Unfortunately Kielbasa is designed for 50 Hz operation. It is not easily adapted to 60 Hz line voltage. Take Care! Bob Camp KB8TQ

From paul at pdq.com Mon Jul 5 10:21:44 2004
Subject: [R-390] front panel corrosion

Clean the panel. Strip the paint the best you can with autobody or aircraft spray on paint stripper (this softens the paint in the engraved letters for blasting - if you're careful, you can do just the front with no damage to the back). Clean the panel again. Use glass or plastic beadblasting to clean the front panel of remaining paint. When clean, you may see pits. Refill pits with aluminum based autobody filler if deep. Paint. Bake. Silkscreen if not engraved. Install and enjoy.

If you have an engraved panel and the pits are bad or are in the lettering, I'd toss the panel - easier to get a spare than to redo that kind of stuff. Paul

From ham at cq.nu Mon Jul 5 10:24:53 2004
Subject: [R-390] Ballast Tube Thread/Deadeast horse that's ever been beat

Hi

Sand state resistors ... hmmm I just noticed that the resistors that I recommended are *silicon* coated. Quick run for the bomb shelter Enjoy! Bob Camp KB8TQ

From ham at cq.nu Mon Jul 5 10:45:40 2004
Subject: [R-390] Ballast Tube Thread

Hi, In defense of what they did it is pretty obvious that these radios got used on supply voltages that went well below 100 volts for significant periods of time. In that case the ballast tube would have done a lot of good.

It is very interesting that they pulled a number of other things out of the radio "based on cost considerations" but still had the very expensive ballast in there. The main things they talk about failing against the original specification are the ultimate selectivity and audio numbers. It seems that the audio specification was changed (or at least reinterpreted) late in the program. They seem to have just plain missed the selectivity though. Given the ballast tube's location swapping it out for another IF can should have been a possibility.

Sure would be nice to have the meeting notes from the monthly program reviews. I'll bet they had a *lot* of fun trying to work all this stuff out. Take Care! Bob Camp KB8TQ

From rbethman at comcast.net Mon Jul 5 12:06:55 2004
Subject: [R-390] Ballast Tube Thread

That's an easy thing to fix! I'll just put it in the smoker before I cut it to "proper" length! Bob - N0DGN

From barry at hausernet.com Mon Jul 5 12:34:41 2004
Subject: [R-390] Ballast Tube Thread

No problem when calculating the proper resistance, current, etc. you have to use one of those HP calculators that featured "reverse Polish notation". Courtesy of the "You Can't Get There from Here Dept." Do they still make those calculators? Barry

From rbethman at comcast.net Mon Jul 5 12:36:48 2004
Subject: [R-390] Ballast Tube Thread

Definitely! HP's calculators are ALL in RPN if they are like one I have here! Bob - N0DGN
Barry Hauser wrote:

From TPLANINAC1 at CHARTER.NET Mon Jul 5 12:46:09 2004
Subject: [R-390] Ballast Tube Thread

not true, they make both RPN and AOS now....and even dual mode..... Tony

From r390a at bellsouth.net Mon Jul 5 15:33:37 2004
Subject: [R-390] Ballast Tube Thread

How else would you be able to properly calculate the characteristics of a Kielbasa? I suppose if you were to use Kabanosi, you only use a Svetlana EKBM? Pepperoni figuring can only be done on an Olivetti? Lutefisk could be calculated on a Tiki. Lutefisk is right out though because it is too corrosive, that and it's not a sausage... LOL ahem... Tom (who actually *likes* lutefisk)

From rbethman at comcast.net Mon Jul 5 15:54:26 2004
Subject: [R-390] Ballast Tube Thread - REALLY beating the DEAD horse!

Hmmmm, Let's see - We have a Smoked, calibrated piece of Kielbasa, with filament circuits fed by Pirogi. Result: An Electro-Mechanical-Organic receiver. How do we give it CONSCIOUSNESS"?
Bob - N0DGN

From scr287 at sbcglobal.net Mon Jul 5 16:02:25 2004
Subject: [R-390] A few SP-600 questions

The universe decided I needed an SP-600-JX-17, so one is now gracing the workshop. An initial inspection showed disc ceramics instead of BBOD caps, and no obvious B+ shorts or any major DPO mods (DPO=dreaded previous owner) so I fired it up, and it seems to work pretty decently. The BFO center frequency was way off, but a quick tweak solved that, but I'm sure it needs a little work with the test equipment.

Playing with it raised a couple of questions.

Is the stock power plug a readily available item? Mine came with a line cord running through one of the vent holes on the chassis and the power receptacle well taped up.

How stable should the local oscillator be on 6 meters? I can tune SSB on 27 mcs with good stability, but

the local 6 meter beacon warbles all over the place. SSB would be impossible to tune, the short term stability is just too bad. Is this normal, or do I have a problem to solve?

Is the stock antenna connector supposed to be an SO-239? Mine looks like it has been replaced.

Tried to see if there is an SP-600 group on qth.net, but that page is loading super slowly today. Thanks Jack Antonio WA7DIA scr287@sbcglobal.net

From r390a at bellsouth.net Mon Jul 5 16:27:54 2004
Subject: [R-390] Ballast Tube Thread - REALLY beating the DEAD horse!

Ahhh, at that point you add a Haggis! Tom

From rbethman at comcast.net Mon Jul 5 16:38:27 2004
Subject: [R-390] Ballast Tube Thread - REALLY beating the DEAD horse!

I said CONSCIOUSNESS, not to give it DEATH! Sheesh! (To the list: Please forgive us. We are only having a "wee bit o' fun!) Bob - N0DGN

From hankarn at pacbell.net Mon Jul 5 16:56:48 2004
Subject: [R-390] Ballast Tube Thread

All of you have it totally wrong to do the correct calculations you must us an Abacus no batteries required just nimble fingers Hank KN6DI HeHe (:<))

From rbethman at comcast.net Mon Jul 5 17:01:48 2004
Subject: [R-390] Ballast Tube Thread

Dan, The last Abacus I saw in the orient was for sale in mass quantities. Ready for the punch line? They ALL had a calculator built into one end! Bob - N0DGN

From barry at hausernet.com Mon Jul 5 17:16:30 2004
Subject: [R-390] A few SP-600 questions

Jack wrote: > Is the stock power plug a readily available item? Mine came > with a line cord running through one of the vent holes on the chassis > and the power receptacle well taped up.

They vary. A lot of them have a regular strain relief on the left side of the rear panel. Some may have a round 3-pin Navy style connector. Not sure what power receptacle you mean (that's taped up). Some may have one of two early generic equipment connectors forerunners of the PC/office equipment type that's now standard. One is just a pair of flat blades that will fit a cut down single socket extension cord. Another type has the curved, twist-to-lock prongs. There were two prong and a grounded version of those with a center pin. Not sure where to get those anymore. But, I'm guessing as to what you have there. Take off the tape and take a peek.

>

> How stable should the local oscillator be on 6 meters? I can tune SSB > on 27 mcs with good stability, but the local 6 meter beacon > warbles all over the place. SSB would be impossible to tune, > the short

term stability is just too bad. Is this normal, or > do I have a problem to solve?

Someone else will have to answer. My take is that the high end freq. range on these was a bit of a reach, but may be possible to tweak up with component replacement and maybe some tube swapping.

When you checked for tubular caps, did you look inside the turret and under the RF strip? There are also caps hiding in the IF transformer cans. Chances are all are disk ceramics, but, if you don't look, don't assume. Also, previously considered "good forever" silver mica caps have been reported as troublesome here and there I guess the 50 year warranty ran out.

BTW How much warmup did you allow? Probably needs a good hour.

>

> Is the stock antenna connector supposed to be an > SO-239? Mine looks like it has been replaced.

In almost all cases, this is an SO-239 mounted at the rear of the RF strip facing up. Very often, there is (should be) an elbow connector on it so the connection faces rear instead of straight up. Originals tended to be silver plated, so may be tarnished black now. If it's bright and shiny, it may have been replaced by previous owner or depot with a non-tarnishing type.

>

> Tried to see if there is an SP-600 group on qth.net, but > that page is loading super slowly today.

There is no SP-600 group as such, but there is a Hammarlund list, which is not limited to SP-600's. However, most of the SP-600 people are here too, and it's one OT subject that's highly tolerated here. The SP-600 is the official antidote for R-390 Wrist-itis, for those who forget themselves and try to band cruise the '390. A few spins of the highly flywheeled SP-600 will unravel the kinks in the wrist and elbow. More effective as a preventative bandcruise on the SP-600, like it? Lock it in on the '390. Want to "channel surf"? Turn down the audio on the '390, go back to the SP-600. Barry

From Llgpt at aol.com Mon Jul 5 17:33:19 2004

Subject: [R-390] Ballast Tube Thread

Uh oh, that will surely get you put in the penalty box.....talking about 50hz ya know! Les

From Llgpt at aol.com Mon Jul 5 17:37:05 2004

Subject: [R-390] Ballast Tube Thread

writes: Lutefisk is right out though because it is too corrosive, that and it's not a sausage... LOL ahem... Tom (who actually *likes* lutefisk)

Ya sure you betcha! Olaf Johan Tonder Benjaminnsen Nilsen

From rbethman at comcast.net Mon Jul 5 17:37:56 2004

Subject: [R-390] Ballast Tube Thread

The heck with THAT! Most of us are getting OLD enough that WE run at 50Hz! We CAN'T run at 60Hz anymore. (Substitute cycles for Hz as needed [DISCLAIMER]) Bob - N0DGN

From rbethman at comcast.net Mon Jul 5 17:50:15 2004
Subject: [R-390]SP-600 trade for R-390A?

Hey Group!

Anyone with an extra SP-600 that may entertain a trade for an R-390A?

From ham at cq.nu Mon Jul 5 18:06:14 2004
Subject: [R-390] Ballast Tube Thread

Hi, Lutefisk is on the officially approved cleaning compound list. It's absolutely amazing just how well it works. The process is fairly simple as well

Simply threaten to brew up a batch (often simply knowing where to get some is adequate). People will come from all over the neighborhood trying to convince you not to (this is especially true of those down wind of your kitchen ...) Once they show up let them clean up your R-390 while you're talking Take Care! Bob Camp KB8TQ

From ham at cq.nu Mon Jul 5 18:11:02 2004
Subject: [R-390] Ballast Tube Thread

Hi, I was temporarily taken under the influence of the evil SI conspiracy. Napoleon Bonapart and Elvis both stopped by to induct me ... Bob

From jamminpower at earthlink.net Mon Jul 5 18:48:18 2004
Subject: [R-390] A few SP-600 questions

How stable should the local oscillator be on 6 meters? I can tune SSB > on 27 mcs with good stability, but the local 6 meter beacon > warbles all over the place. SSB would be impossible to tune, > the short term stability is just too bad. Is this normal, or > do I have a problem to solve?

>

I'll take a stab at this. You have a problem to solve if you really want to use it on 6 meters. After it warms up (30-60 minutes), it is pretty stable below 30 MHz. Above 30 MHz, it is real sensitive. If you just wave your hand over the VFO tube, it will affect the tuning noticeably, even through the tube shield. Aligning it in that range is an exercise in patience. If your VFO tube (the 6C4) is the least bit noisy, it will wander about in the way you describe, so the first thing to try is a new VFO tube. That will, of course, knock the alignment of the high bands out a bit, so you will want to check the VFO alignment. Other than that, any of the passive components around the VFO tube can make the circuit noisy, especially the resistors. I use metal-film resistors for the grid bias. I guess it helps a bit.

After the warmup period, a new VFO tube with new parts around it will drift slowly back and forth as the temperature changes, but not so badly that you can't receive SSB. The real problem up there is how twitchy the tuning is. It really needs a vernier or something on that high band. Hope this helps. Enjoy! James A. (Andy) Moorner www.jamminpower.com

From r390a at bellsouth.net Mon Jul 5 18:43:42 2004
Subject: [R-390] Ballast Tube Thread

What's that old southern saying?? Oofda, y'all???

From Llgpt at aol.com Mon Jul 5 19:09:20 2004
Subject: [R-390] Ballast Tube Thread

As my Norwegian grandfather told me, Lutefisk is made by putting a codfish in da back porch and ven all da neighbor dogs come by and pee on it, let it set for tree veeks and den it's done py golly! Les

From Llgpt at aol.com Mon Jul 5 19:11:24 2004
Subject: [R-390] Ballast Tube Thread

Get it right..... "UFFDA" Py Golly!!!!

From mahlonhaunschild at cox.net Mon Jul 5 19:34:39 2004
Subject: [R-390] Ballast Tube Thread

Someone PLEASE make it STOP... Can't GET the flying 3TF7s and 26Z5s out of my HEAD... ABOUT... TO... BLOW... 3A (slo blo) FUSE... ARRGGGHHHHHH!!!! <bzzt> <fssssssss...> <paradigm shift> Hello, Mr. Mish. How are you today? I'm ready for my next lesson.

Les Locklear taught me a song. Do you want to hear it? It's called "Ballast", and it goes something like this:

"Ballast, ballast, why did you have to die?
I'm off frequency, since you've relinquished life,
I guess I'll have to re-place you
I can't go on with-out you
But I've mis-placed,

My spare ballast,

So I'll have to... WE INTERRUPT THIS DOGGEREL TO ANNOUNCE THAT WE, THE KIND CARING GENTLE GOOD GUYS IN WHITE COATS, HAVE TAKEN K4OQ TO A PLACE OF RELATIVE SAFETY AND SECURITY WHERE HE WON'T BE A MENACE TO SOCIETY (or at least this e-mail reflector) AND HE WON'T SUFFER THE ILL EFFECTS OF STARING AT MILITARY METER DIALS OR BREATHING SOLDER OR UKUMPUCKY FUMES ANY MORE. WE WILL KEEP YOU APPRAISED OF HIS PROGRESS AS HIS TREATMENT CONTINUES.

HE KEEPS ASKING FOR A 3 AMP SLO-BLO FUSE. ANY OF YOU KNOW WHAT HE'S TALKING ABOUT???????

From barry at hausernet.com Mon Jul 5 19:58:02 2004
Subject: [R-390] Ballast Tube Thread

Hmmmm. letsee now, I think I'll pass on the Lutefisk special and go with the haggis. Uh-huh. I think we've taken this reprise of the dreaded ballast tube thread to new levels pushed the envelope, as it were <coff, coff> and done gone an' busted it. <hack, wheeze> Barry

From jmiller1706 at cfl.rr.com Mon Jul 5 20:07:11 2004
Subject: [R-390] Ballast Tube Thread

What's the standing record for the longest Ballast Tube Thread? Can we break it?

From barry at hausernet.com Mon Jul 5 20:11:22 2004
Subject: [R-390] Ballast Tube Thread

Hi Mahlon, Did I read correctly <sly>? did you mention ... THE 26Z5W !!!!! 3 amp slo-blo fuse? You can get those at Radium Shack. Me, I'm lookin' for 1/8th amp fast blow's, or is it 3/8ths, or 9/32nds? Do they come in metric? Sorry but the sanitarium is full up. (I got the last bunk.) You'll have to lurk and drool on your back porch. Should be safe there, but try not to sing until we can get a suitable practitioner over to you. Just don't eat any kielbasa, expecially not with that red cabbage or sauerkraut stuff and the double order of pierogies all washed down with a liter of pilsner. (Methane is highly flammable.) Barry ;-)

From brumac at junos.com Mon Jul 5 20:11:28 2004
Subject: [R-390] Fw: Re: Lutefisk and The Ballast Tube Thread

Ok Tom, as long as you insist, I will post this to the list.

Attention List: This is really a great way to recycle those failed ballast tubes and keep our great receivers going on forever! This is not a hot dog and sausage fix but has evolved after over several days of drun- - er - extensive testing, . Yes, that's it, extensive testing and evaluation!!

From hankarn at pacbell.net Mon Jul 5 20:16:54 2004
Subject: [R-390] Ballast Tube Thread

I have a 16# sledge that should do it. Hank KN6DI

From wa6knw at sbcglobal.net Mon Jul 5 20:17:42 2004
Subject: [R-390] Re: R-390 Ballast Tube Thread - REALLY beating the DEAD horse!

Hoot man!!! If wae were to use haggis would wae be gettin Robbie Burns instead uoh RF Burns? RICH WA6KNW

From Llgpt at aol.com Mon Jul 5 20:27:50 2004
Subject: [R-390] Ballast Tube Thread

Ijust ruined my keyboard with a mouthful of guinness!!!!!!!!!!!!!! Les

From Llgpt at aol.com Mon Jul 5 20:29:18 2004
Subject: [R-390] Ballast Tube Thread/Ballastfisk Conversions

Ya sure you betcha, but only if ve keep it going!! Olaf

From r390a at bellsouth.net Mon Jul 5 20:34:35 2004
Subject: [R-390] Re: Ballast Tube Thread

The only way this thread could get worse is if it degrades to Ole and Lena jokes..... (did I *really* say that...??) Tom

From ham at cq.nu Mon Jul 5 20:44:10 2004
Subject: [R-390] Ballast Tube Thread

Hi, I don't know about the record for the longest Ballast Tube Thread but I think we probably have set a new record for the most absurd Ballast tube thread not mentioning solid state replacement ballasts. We are also closing in on the record in the unlimited category. Enjoy! Bob Camp KB8TQ

From k4kwm at hotmail.com Mon Jul 5 20:44:41 2004
Subject: [R-390] Re: Ballast Tube Thread

Actually, it was Sven and Ole and they were on their way to theJohn

From: r390a at bellsouth.net (Tom Norris)
Subject: [R-390] Re: Ballast Tube Thread

I had thought the thread had simply taken the path of least resistance...

From r390a at bellsouth.net Mon Jul 5 20:47:12 2004
Subject: [R-390] Ballast Tube Thread

>..... did you mention ... THE 26Z5W !!!!! 26Z5W !?!?!? Sloooooooooowly I turned.... Step by step...
Inch by inch.... erm. Nevermind.... Tom NU4G

From Llgpt at aol.com Mon Jul 5 20:49:42 2004
Subject: [R-390] Re: Ballast Tube Thread

I have a book full of them, "Norveegan Joke Book" Les

From jmiller1706 at cfl.rr.com Mon Jul 5 20:53:43 2004
Subject: [R-390] Ballast Tube Thread

History of Amperite company began with Ballast Tubes

1922---Amperite Business Incorporated in New York City, NY by Samuel Ruttenberg-produced cartridge-type Automatic Adjusting Resistors(ballast current-regulators) for tube-operated AC/DC radio sets

1930(circa)---Amperite Began making hermetically-sealed ballast regulators in vacuum tube form with helium and hydrogen gas... <http://www.amperite.com/DesktopDefault.aspx?tabid=10>

From r390a at bellsouth.net Mon Jul 5 20:55:18 2004
Subject: [R-390] Re: Ballast Tube Thread

Ja, ya betcha --

Ole was working on his R390 one day and noticed the ballast tube no longer had continuity. So Ole turns to Sven and he says "Sven, ya know, dis ballast tube don't got no continuity an ve can't make the radio play. Vouldja go ta the kitchen and get a herring and ve vill see if it vill make it vork..." OK, I'll hush already.... T

From rbethman at comcast.net Mon Jul 5 20:58:12 2004
Subject: [R-390] Ballast Tube Thread

Oh YES! The 26Z5W. Let's see - what can we do with it. Mahlon - the "funny farm" won't do ANY good at all. My wife works there. She may make us room mates. Fuses? We don' need no stinkin' FUSES! Bob - N0DGN

From ham at cq.nu Mon Jul 5 21:09:48 2004
Subject: [R-390] Fw: Re: Lutefisk and The Ballast Tube Thread - on topic - Haa! - Take that

Hi, I'm not real sure we know what the process was that they used to manufacture the ballast tubes.

It's pretty obvious that precision wire placement and careful insulator assembly were not part of the process. We obviously have the skills to figure out the wire length, wire gauge, and wire composition they used. No way are you going to convince me that anything closer than a 10% accuracy is needed in ether wire length or diameter.

If we send out a tube or two for a residual gas analysis we'll know what the gas mix they used was. The only other variable would be pressure.

My guess is that they did a very normal bake out with a vacuum pump on the tubulation. Once the thing is clean on the vac ion gauge you fire up the wire with a constant current source. Then you back fill the tube to the point that the voltage on it drops to a specified value. More or less it's a thermistor vacuum gauge in reverse.

Once it's stable with a given gas level you can sweep it to check it's regulation. If it passes you seal it off.

If the process is really that simple - why the high cost for these darn things? They never have been cheap. The process can't have been as extensive as a normal vacuum tube. If we have the skills to figure out the details then anybody in the tube business could have. Again - why should these cost so darn much Take Care! Bob Camp KB8TQ

From ham at cq.nu Mon Jul 5 21:17:50 2004
Subject: [R-390] Re: Ballast Tube Thread - on topic - Haa Haa - take that again ...

Hi, So if a ballast tube is so important to making a stable radio that you can't even replace it with a herring then answer me this:

We have the R-390A's dwarf midget child the R-392. The 392 is designed to be a mobile version of the 390. It runs directly off a jeep alternator. Last time I checked an alternator output it wandered around quite a bit depending on the speed of the motor. Both radios were supposed to do the same FSK stuff at roughly the same stability. The R-390A did it at a line voltage of say +/- 10%. The 392 did it at a supply between 22 and 32 volts.

So why no ballast tube in the 392 ??? If one was needed that's the radio that should have gotten it. It didn't even get a herring Take Care! Bob Camp KB8TQ

From ham at cq.nu Mon Jul 5 21:20:32 2004
Subject: [R-390] Ballast Tube Thread

Hi, So unless I'm very confused (as if I wouldn't fit in here if I was ...) any patents that Amperite got on the ballast tubes had expired by the time the 390's went into production. Again - what makes these little gems so darn expensive to manufacture? Enjoy Bob Camp KB8TQ

From Llgpt at aol.com Mon Jul 5 21:22:04 2004
Subject: [R-390] Re: Ballast Tube Thread - on topic - Haa Haa - take that again ...

Dat's because dere weren't enuff Scandahoovian's in da Signal Corps. And, dey didn't try pickled herring!!!!!!!! Sven Ballastfiskesen

From ham at cq.nu Mon Jul 5 21:26:04 2004
Subject: [R-390] Re: Ballast Tube Thread - Correct Lubrication Division of the SI Conspiracy Division - First round match up

Hi, So what's the correct lubricant to use on the ballast tube? Will any old gear lube do or do we need something special to make sure the electrons flow easily through it ? Enjoy! Bob Camp KB8TQ

From rbethman at comcast.net Mon Jul 5 21:28:43 2004
Subject: [R-390] Re: Ballast Tube Thread - Correct Lubrication Division of he SI Conspiracy Division - First round match up

Bob, Bob, Bob, Don't you see? It MUST be Fish OIL! Bob - N0DGN

From jbrannig at optonline.net Mon Jul 5 21:29:39 2004
Subject: [R-390] Fw: Re: Lutefisk and The Ballast Tube Thread - on topic -Haa! - Take that

Holy crap guys, get a life..... It's 4th of July weekend, there are all kinds of "Family" things to do... If that doesn't please you the bands have been open...6M has been open to Europe.... The WX has been great and there is BBQ to do..... Stop being such A_hole nerds and enjoy the summer before it starts snowing..... Jim

From ham at cq.nu Mon Jul 5 21:30:30 2004

Subject: [R-390] Re: Ballast Tube Thread - on topic - Haa Haa - take that again ... - Viking angle introduced and going for a new record on absurdly long subject lines

Hi, Actually I thought it was because the E.F. Johnson "Viking" version of the R-390 lost out the intervention of the SI conspiracy "at the highest levels". Lutefisk jokes always went over pretty well in Waseca ... Enjoy Bob Camp KB8TQ

From Llgpt at aol.com Mon Jul 5 21:34:08 2004

Subject: [R-390] Fw: Re: Lutefisk and The Ballast Tube Thread - on topic -Haa! - T...

That would be a good trick down here on the Gulf of Mexico.....Les

From Dave_Faria at hotmail.com Mon Jul 5 23:45:13 2004

Subject: [R-390] R-390 History

This may be a futile exercise but, I would like to trace the history of my 390a, 390, 391, 392, and 388. If its possible back to the duty stations. Anyone know how to do this?? It would be an interesting exercise. Yep I'm retired - sorta Thanks for your thoughts before hand Dave Faria/WASTEZ

From ham at cq.nu Mon Jul 5 21:36:42 2004

Subject: [R-390] Fw: Re: Lutefisk and The Ballast Tube Thread - on topic -Haa! - Take that - Weather conspiracy division - is Elvis involved?

Hi, It's been raining most of the day here. Same thing over a lot of the country. I kinda thought the fact that a significant percentage of the population was caught inside could be deduced from the traffic here Enjoy! Bob Camp KB8TQ

From DAVEINBHAM at aol.com Mon Jul 5 21:38:16 2004

Subject: [R-390] Guinness consumption and R-390A's

Les, You are supposed to drink the Guinness, not spit it on the keyboard. See the instruction printed on the carton. Maybe you have spent too much time in front of those radioactive meters. Kindest regards, Dave

From Llgpt at aol.com Mon Jul 5 21:40:20 2004

Subject: [R-390] Fw: Re: Lutefisk and The Ballast Tube Thread - on topic -Haa! - T...

Most traffic on this list in months, maybe a year!! No snow yet.....keep 'em coming, 12.6 inches of rain in June, 5" so far in July. Les

From Llgpt at aol.com Mon Jul 5 21:41:29 2004

Subject: [R-390] Guinness consumption and R-390A's

That's ok, have plenty more in the refrigerator, and at the new Irish Coast Pub..on draft!!!! Les

From barry at hausernet.com Mon Jul 5 21:43:13 2004

Subject: [R-390] Fw: Re: Lutefisk and The Ballast Tube Thread - on topic -Haa! - Take that

> I'm not real sure we know what the process was that they used to > manufacture the ballast tubes.

Probably not too many possibilities.

> It's pretty obvious that precision wire placement and careful insulator > assembly were not part of the process.

Yea But Dept: There might be some plan to the apparent casual drape to the filament. Maybe some "knack" is involved.

We obviously have the skills to > figure out the wire length, wire gauge, and wire composition they used.

Supposed to be drawn iron. The trick is to get all those little curli-ques into it. Heck, keeps breaking when I just do one turn. I suspect a diamond edge potato peeler affair like a wood plane where the shavings come off curled.

> No way are you going to convince me that anything closer than a 10% > accuracy is needed in ether wire length or diameter.

I won't try ...

> > If we send out a tube or two for a residual gas analysis we'll know > what the gas mix they used was. The only other variable would be > pressure.

Supposed to be either hydrogen or helium one way to find out: Throw a bad tube on the barbeque and see if it goes pop-flash, as opposed to just pop .. uh nuthin.

>

> My guess is that they did a very normal bake out with a vacuum pump on > the tubulation. Once the thing is clean on the vac ion gauge you fire > up the wire with a constant current source. Then you back fill the tube > to the point that the voltage on it drops to a specified value. More or > less it's a thermistor vacuum gauge in reverse.

Sounds complicated. Since these were filled with gas, was it necessary to apply vacuum first. Blast the gas through which would displace the air. Question of whether it's cheaper to waste some gas. Might be problematical with hydrogen. Probably assembled in a vacuum cage, then H or He sucked into it.

> Once it's stable with a given gas level you can sweep it to check it's > regulation. If it passes you seal it off.

Maybe on the prototype, but production runs? Just assemble pins/rods, slip on the micas, drape the required length of iron wire (with curlyques), weld the ends to #2 and #7 pin, et.

>

> If the process is really that simple - why the high cost for these darn > things? They never have been cheap. The process can't have been as > extensive as a normal vacuum tube. If we have the skills to figure out > the details then anybody in the tube business could have. Again - why > should these cost so

darn much

Two reasons Virtual monopoly & the highly influential Ballast Tube Lobby. (Sen. Joe McCarthy was merely a diversion. "Y'mean you're gonna charge the govament \$50 bucks for a bulb that hardly lights up!" " Shuddup and go chase some comminists!" "What if they aren't there?" "Chase 'em anyway udderwise someday when you go to start your car, there might be a trunkload of free samples, with one wired to the starter switch!)

Hey, look - it could have happened that way. Just keep watching the History Channel for when it gets declassified. Barry

From ham at cq.nu Mon Jul 5 21:49:55 2004
Subject: [R-390] R-390 History

Hi, I suspect that at least with the 390 and 390A the question will come up "what's my radio?". With the ones I have here it's the odd one that actually has the numbers on the front and rear panels matching.

That said if you want to go for it the archives must have all the darn paperwork that transfered the radios from point to point. The same archives probably have the normal unit inventory documentation as well. In both cases the information you are after is going to be buried in with a whole bunch of other stuff. You should be able to get access to it but boy will it take time.

More or less:

Radio has serial number, so we know when it was made. There must be a record of it going from the factory to a depot.

Depot records should exist and show who it was sent out to.

Unit inventory should confirm that they had the radio.

Since the unit no longer has the radio there must be paper that moved it out of that unit.

If you can find 20% of those records you are doing **very** well.

The national archives have a web site so you can at least look into what's involved in researching those records. Take Care! Bob Camp KB8TQ

From ham at cq.nu Mon Jul 5 21:53:02 2004
Subject: [R-390] Guinness consumption and R-390A's

Hi, Checked the carton "Guinness is Good For You". Says nothing about not using it as a keyboard cleaner or for washing down radioactive R390 meters. Enjoy! Bob Camp KB8TQ

From rbethman at comcast.net Mon Jul 5 21:54:48 2004
Subject: [R-390] R-390 History

Hi Dave, I suspect that it will be totally futile. I was inn service from '60s until very late '80s. Some

records were NOT required to be kept beyond 24 months. After that period they were simply destroyed. Especially true for older equipment that went for turn in and disposal. Bob - N0DGN

From ham at cq.nu Mon Jul 5 22:04:03 2004
Subject: [R-390] R-390 History

Hi, We still have some of that "destroy in 24 months" paperwork around from the Revolution. If you spend enough time (read months) it's amazing what you can turn up. You are not going to find a full trail but you might get lucky and get a good idea of where your radio (or at least ones in the same serial number sequence) went. Take Care! Bob Camp KB8TQ

From kfield at comcast.net Mon Jul 5 22:10:22 2004
Subject: [R-390] Guinness consumption and R-390A's

Wow! A thread I can totally relate to. I can stop lurking...I've found that after enough Guinness I can hear any signal I'd like to hear on my R-390A! Kris

From ham at cq.nu Mon Jul 5 22:19:15 2004
Subject: [R-390] Guinness consumption and R-390A's

Hi, Oddly enough Bushmills 1608 also goes well with this thread

I'm sorry but you have not reached the minimum requirements for non-lurkerdom. You have to get to the point where you can hear any signal you would like to on your R-390A *without* the Guinness. After a few months of posting on the list we'll teach you how to do it with the radio plugged in..... When you can do it while in another country you will qualify for the status of R390 Guru ... Next we will demonstrate the proper technique for receiving Radio Nibi Nibi .. Back to the Bushmills ... got to find my straw ... Enjoy! Bob Camp KB8TQ

From barry at hausernet.com Mon Jul 5 22:19:20 2004
Subject: [R-390] Re: Ballast Tube Thread - on topic - Haa Haa - take that again ...

Bob wrote: > So if a ballast tube is so important to making a stable radio that you > can't even replace it with a herring then answer me this:

Yup, that's why it's a "nominal" 24 volt system, yet the radio is rated for 28 volts, which is just about the max charging level of a 24v system.

Both radios were > supposed to do the same FSK stuff at roughly the same stability. The > R-390A did it at a line voltage of say +/- 10%. The 392 did it at a > supply between 22 and 32 volts.

Well, for one thing, R-392's are green. By itself, that doesn't mean anything, but it may be a clue.

> So why no ballast tube in the 392 ??? If one was needed that's the > radio that should have gotten it. It didn't even get a herring

A herring yes a red herring - a clue! Ever open up an R-392 that's been sealed up a long time.

Peeeeeyouuuuu! I used to think that was the MFP. Stinks like dead fish. Here's the scoop just figured it out right now: You were there.

1. R-392's are watertight and practically airtight.
2. If you close 'em up cold, then they heat up (no vents) the air expands and is displaced by that stinky air stuff which may be some inert gas, only .. I dunno smelly.
3. After about 2 hrs the WHOLE RADIO turns into a ballast tube! Y'see, as the engine revs up and the voltage goes up to say 27 point something, the 26A7 heats up even more and .. well .. you see.

Notice, I didn't resort to Ohm's Law or any of that kind of trickery.

Actually, Bob, it's a good question, but the best I can offer is an idiotic stoopid answer. Here's another: The dastardly evil Ballast Tube Lobby overlooked the R-392 because it was smaller and green, and below their radar. Otherwise they would have made the gov'mint stick a ballast tube in them too.

Barry

From ham at cq.nu Mon Jul 5 22:23:14 2004

Subject: [R-390] Re: Ballast Tube Thread - on topic - Haa Haa - take that again - end of subject line lopped off

Hi, One obvious answer that I totally overlooked: Just because there is no ballast tube in the radio does not necessarily mean that one was not paid for as part of each radio. The conspiracy is everywhere Take Care! Bob Camp KB8TQ

From jmiller1706 at cfl.rr.com Mon Jul 5 22:23:41 2004

Subject: [R-390] R-390 History

I have heard that serial number tags were often replaced during depot maintenance, so the tag on your radio is probably not the original anyway. Likewise, the modular design meant that depot repairs could be done by replacing entire modules... over the life of service, I would wonder if a given radio even has its original modules.

From rbethman at comcast.net Mon Jul 5 22:46:23 2004

Subject: [R-390] Is there a PDF manual for the MIL SP-600?

Subject says it all. The boatanchor manual site seems to be down now for some period of time - perhaps permanently? Bob - N0DGN

From ham at cq.nu Mon Jul 5 22:48:44 2004

Subject: [R-390] Guinness consumption and R-390A's

Hi, I'm sorry to report a disturbance in The Force. We have a tribological conundrum at hand. Based on extensive research I can with some authority state that "St James Gate Dublin" is **not** in Scandinavia. I do not believe that extensive research is required to prove that Lutefisk is of scandinavian origin and is **not** native to Ireland. Therefore R390's equipped with Lutefisk based ballasts are incompatible with Guinness. I am however investigating the compatibility of Linnie Aquavit bottled in Lysholm Norway as a compatible material for use with Lutefisk ballasted R-390's. Is an interim report required before I

reach the bottom of the bottle ? Enjoy! Camp KB8TQ

From ham at cq.nu Mon Jul 5 22:49:57 2004
Subject: [R-390] Is there a PDF manual for the MIL SP-600?

Hi Which one? Bob

From rbethman at comcast.net Mon Jul 5 22:51:54 2004
Subject: [R-390] Guinness consumption and R-390A's

Yes! Interim reports are ALWAYS required. Vee must haf de papervork!

From Llgpt at aol.com Mon Jul 5 22:59:56 2004
Subject: [R-390] Guinness consumption and R-390A's

An excellent palate cleanser between courses of smoked herring, pickled herring etc... King Oscar of Brisling

From r390a at bellsouth.net Mon Jul 5 23:02:52 2004
Subject: [R-390] Re: R-390 History

Actually, the last 3 I have had did have matching modules. Order numbers and everything matched, one was a '62 Imperial*, one a '67 EAC, the other a 54 Collins. Some of my others through the years have been mutts though. Tom *My dad had one too, but it had 4 wheels.

From barry at hausernet.com Mon Jul 5 23:12:39 2004
Subject: [R-390] Is there a PDF manual for the MIL SP-600?

Try the mirror site on the first page of bama. I just got onto the home page didn't try to go further. It clocks out when there are already 10 logged in. The mirror site has a higher limit like 50. Mirror site is <http://bama.edebris.com>

Another good site is Andy Moorer's <http://www.jamminpower.com> more precisely <http://www.jamminpower.com/main/sp600.jsp>

So, you have the bama site, the mirror site and the Moorer site. I think some of Andy's are better. Go get 'em. Barry

From pulsarxp at earthlink.net Mon Jul 5 23:34:01 2004
Subject: Fw: [R-390] Ballast Tube Thread

What about a "lively" discussion on building "adapter" sockets for lesser used 29 cent Ballast Tubes? We could include blinking LEDs around the perimeter of the adapter socket for enhanced desirability.

What do you guys think? Should the LEDs be white, blue, red, yellow or orange? Super Brite or what?

Or, we could include a transducer to emit eerie R-390A sounds as the ballast did it's thing!

Or, we could include a micro memory keyer to constantly send the R-390A's serial number if it were ever stolen.

Or, it could give a beeping sound with greater intensity when line voltage was dropping or rising to an dangerous level!

What do you guys think? Lee, w0vt

PS: (Side note) What type of solder should we all be using? And, can I reuse black beauties if I epoxy the cracked cases shut?

From pulsarxp at earthlink.net Mon Jul 5 23:57:57 2004
Subject: [R-390] R-390A "I'm all right, You're all right" Ballast retreat

I'm thinking of holding a R-390A "I'm All Right, You're All Right" mental ballast retreat seminar somewhere in Minnesota during January 2005 for this group. (I'm thinking it would provide a great needed service). All Norwegian meals will be provided by the seminar.

Could you guys give me a feel for how many would attend? (Cost of the 8 Days Motel would run around \$14.95 per day at a group rate and the seminar and food would run another \$4.95 per day). I'm thinking everyone would be mentally well enough to return home in around 3 weeks of intense therapy Lee, w0vt Houston.

From pulsarxp at earthlink.net Tue Jul 6 00:02:53 2004
Subject: [R-390] Ballast Tubes and BOBBERS

You guys think talking about Ballast Tubes is HEAVY, well look what the GLOWBUG guys are talking about on their list now!

"Ok, i took some old tubes with the #'s wore off, went to the pond. they worked really well as floats. i used a minature, hualed in a stringer of bream. keith" Lee, w0vt Houston

From hankarn at pacbell.net Tue Jul 6 00:19:25 2004
Subject: [R-390] Fw: Re: Lutefisk and The Ballast Tube Thread - on topic -Haa! - Take that

Jim, I agree this has now become stupid and asinine. Lets get back on track. Hank KN6DI

From hankarn at pacbell.net Tue Jul 6 00:24:37 2004
Subject: [R-390] R-390 History

Why don't you guys go to a chat line?????????????My delete key is getting worn out. Hank

From r390a at bellsouth.net Tue Jul 6 01:48:01 2004

Subject: [R-390] LED lamp replacement and Fake Ballasts

Lee brings up a point, though I know it was tied to the humor thread rather than to the technical part of the thread that died horribly long ago...

A while back there was a company selling cheap cheap little fm radios with fake tubes in it. Each tube had a dim orange LED so it would "glow"

I suppose if we were bored, we could do the same thing with a "ballast replacement" resistor, just wire the LED in parallel with appropriate dropping resistor and rectifier diode since it is AC. Stick some sort of diffuser in the top of the tube shield (so the glow is *dim* from the top of the shield) and replace the tube shield as normal. This would actually be practical in that it would indicate an open filament in either the BFO or PTO tubes..... Hmmmm.

Now to the light replacement idea When I get the 390A back together that is strewn around the room, I'm going to replace the dial lamps with white LED's so I'll not have to ever replace them. Already did it on the "spare" 390A, and it works well - *very lightly* sand the tip and the front half of the LED to "frost" it a bit to diffuse the light.

Superbright red LEDs might look good too. UV leds make the meters glow *brightly* but I don't wanna take a radioactive meter apart to install one inside! 73 Tom

From r390a at bellsouth.net Tue Jul 6 01:49:57 2004

Subject: [R-390] Time to can the mackerel

Think we really have gone on enough on this. Gonna have to look back to see if it rivals any of the old silly threads where Nolan was involved.

Shame the list doesn't get as much traffic as it used to a few years ago. Seems it takes talk of lutefisk and yams* to get stuff stirred up and folks fussed at. It has been a rainy day though, you know what happens to idle minds. hehe 73 Tom

*I will not eat them in a jeep, I will not eat them with a sheep. I will not eat lutefisk and yams, I will not eat them, sam I am....

From mjmurphy45 at comcast.net Tue Jul 6 03:36:48 2004

Subject: [R-390] PWM could work

Ole was ready to start working on his R390 one day and noticed that Lena was sitting in the shack naked, on top of the R390A (with original covers). Ole says " golly what you doing naked on top of my R390A?Aye? Aye?"

Lena says, "Ole you never give me no real ballast tubes, just these solid state replacements!" Ole goes over to the tube closet and starts to pull out tubes, "here's the spare 25Z5Ws, heres the 5749s, here's the 5914s, here's Sven..." Mike WB2UID

From mjmurphy45 at comcast.net Tue Jul 6 03:40:06 2004

Subject: [R-390] Casual Ballast Fillament Draping Specifications

I believe that technique developed at Draper labs. Mike WB2UID

From ezeran at concentric.net Wed Jul 7 06:22:00 2004
Subject: [R-390] Ballast Tube Thread

No problemuse one of those HP calculators that featured "reverse Polish notation". Courtesy of the "You Can't Get There from Here Dept." Do they still make those calculators? Not sure but aren't they the ones that hold the last kielbasa in memory??? HP 315??? EdZ (Still Polish after all these years)

From alexx at techunix.technion.ac.il Tue Jul 6 07:45:46 2004
Subject: [R-390] HP 21

As far as I remember one of those RPN was HP 21, I think I still have it somewhere from the time I was student. Alex

From ezeran at concentric.net Wed Jul 7 07:52:17 2004
Subject: [R-390] R-390 History

>I have heard that serial number tags were often replaced during depot >maintenance.....over the life of service, I would wonder if a >given radio even has its original modules.

I worked in the Long Beach Naval Shipyard for a while then at North Island (San Diego). Equipment came in by the pallet load, was stripped down to the 'T' bone, rebuilt, then shipped back to the 'owners'. All they cared about was the serial number on the tag matching their 'custody' cards....didn't give a hoot about what was inside as long as it worked. EdZ

From sdaitch at ibb.gov Tue Jul 6 09:17:46 2004
Subject: [R-390] R-390 History

Just a thought. If a radio were to have been reported missing, stolen or lost, and paid for by the responsible party, the ownership of the property usually remains with the government, and I would suppose, in theory, if this were the case, you might find the radio is stolen property and never released by the USG.

Not likely, but it could be what you might find.

From ham at cq.nu Tue Jul 6 10:03:10 2004
Subject: [R-390] Ballast Tube Thread

Hi

Well we had been heading for the record in the "longest most inane ballast tube thread not mentioning solid state solutions". Now I think we will have to go for the longest most inane ballast tube thread - unlimited category.

I would suggest at least two PIC processors with some nice long high speed leads. We could put one part

in the ballast tube socket and run the wires through the IF chassis and in to the RF chassis. If we get enough stuff running back and forth an R-390 can work just like a rice box.

The standard solid state solution for years was to put in a full wave bridge rectifier and with a low voltage linear regulator set up as a constant current source on the inside. The normal problem is that the current moves through in pulses rather than as continuous AC. The pulses generate RFI. Since you are in the middle of the radio that's not a good idea.

A more interesting approach might be to use a couple of mosfet's and rig them so they do pass AC. It would be a lot more circuitry though.

The final problem you run into is that you have to get rid of 5 watts from a solid state device. You don't need a monster heat sink but you won't get away with out some kind of heat sink.

Now, with a fairly small tank of liquid nitrogen we could get around the cooling problem. There would be some minor plumbing issues but it should work. The Air Products truck could drop by from time to time to keep you topped up. Take Care Bob Camp KB8TQ

From ham at cq.nu Tue Jul 6 10:21:41 2004
Subject: [R-390] R-390A "I'm all right, You're all right" Ballast retreat

Hi, Well I see that like everything else in life the prices for room and board in Minnesota in January have gone right through the roof. You just can't get the deals you used to be able to. Back in the good old days they would pay you to eat the food ...

I would suggest the old Herters warehouses in Waseca as an optimum location for the group activities. They are unheated, poorly lighted, and full of all kinds of vermin. It'd be just like home. During the breaks we can all look for fishing hooks buried in the junk on the floor. If we find enough hoods we can go ice fishing Then back to the parking lot, if you have never chopped your rental car out of a block of ice you really have not experienced all that life has to offer. All this *and* the opportunity to fly Northwest Airlines into MSP, who could pass it up !!! Take Care! Bob Camp KB8TQ

From w9wis at charter.net Tue Jul 6 12:39:09 2004
Subject: [R-390] R-390A "I'm all right, You're all right" Ballast retreat

> All this *and* the opportunity to fly Northwest Airlines into MSP, who > could pass it up !!!

Ahhh..... yesssssssss. The "ruptured duck" airlines. The stories I could tell.... they used to fly contract charter passenger hauls for the military/gubment.

1978...I remember flying out of the old Orlando NAS once for home (headed to Wisconsin) on one of their "new" DC-9's ... too overloaded, too short a runway for a full fuel load so a divert to Nashville. This is where we "dropped in" (literally) during a big spring storm.... hit so hard all the O2 masks dropped..... later... on arriving in Mpls we slid off the runway on snow/ice. All in all an uneventful flight for a charter... Mike Michael Melland, W9WIS

From Dave_Faria at hotmail.com Tue Jul 6 12:58:15 2004
Subject: [R-390] R-390 History

I'm very fortunate in that all the 39* radios I mentioned do have tags and the modules have very close serial numbers to the panel tag. It probably means they did not see much service. The only radio I do know some of the history is the 391, it came from a listening station in Hawaii. The other radios are anyone's guess. I will query the fellow I got the 391 from and ask him how much more he knows.

From ham at cq.nu Tue Jul 6 10:49:28 2004
Subject: [R-390] LED lamp replacement

Hi, Well I guess I run the risk of getting thrown off for mentioning this but the issue with the LED lamps is more or less the same as some of the solid state ballast replacements. (duck and run for cover).

When you convert AC to DC to run the LED's the current is only going to flow in short little pulses when the AC waveform is higher in voltage than the DC turn on point of the LED. The pulsing of the current creates noise clear up into RF. The R-390 was not designed to be shielded against this sort of thing going on inside the radio.

If you decide to go the LED lamp route I would suggest that a separate wire routing power for the LED's would be a good idea. Then come up with as quiet an AC to DC conversion as possible and stuff it off in the power supply module. At least that way it's as far from the IF and RF as possible. Just for the record, yes I stole that idea

The nice thing about the LED's is you can get an awful lot of light out of them these days. I have an R-1051 with an LED conversion in it that works very well.

The illumination angle coming out of an LED is more narrow than the angle of light coming out of the bulbs we normally use. One solution to this is to do violence to the front end of the LED. The other is to run multiple LED's. If you get your DC off of the 25 volt AC line then you can put quite a few LED's in series

Since the bulbs for the 390 are still commonly available and fairly cheap I'm not sure I would do all this work on a 390. If and when the bulbs get into the \$40 a bulb category like the R1051 bulbs then we'll have a bulb replacement thread on here that goes on and on forever. Take Care! Bob Camp KB8TQ

From wb5hak at sirinet.net Tue Jul 6 11:10:42 2004
Subject: [R-390] LED lamp replacement

The truly nice thing about LED's is that you don't have to convert AC to DC to run them (or am I missing something, after all, they ARE diodes????). 73 all, Don, WB5HAK (lurker)

From paul at pdq.com Tue Jul 6 11:13:12 2004
Subject: [R-390] URM-25 RF output measurement

I need to align a nice 67 EAC. To set the receiver gain pot, I have to set my URM-25 to 150 microvolts output (then adjust the gain until the diode load voltage is -7 volts). How can I tell if my URM-25 is actually putting out 150 microvolts? Do I need a calibrated RF meter with a known input impedance and make sure that is matched to the output of the URM-25? Thanks for any suggestions... Paul

From ham at cq.nu Tue Jul 6 11:36:19 2004
Subject: [R-390] LED lamp replacement

Hi, If you do that then you have two items to worry about. The LED's have a reverse breakdown voltage and you now have a half wave rectifier. That gets you right back into the chopped current = RFI problem.

If you run them in reverse parallel pairs then the breakdown voltage is not an issue but you still only run current through them when the voltage is above about 1.6 volts on the diode. Off of a 6.3 volt AC supply having no current for 1.6 volts is a fairly large amount of chopping. You are right back to the RFI issue.

I know all this sounds a bit like witchcraft but the R-390 is particularly vulnerable to the problem. The designers simply never considered there would be a source of broad band RFI *inside* the radio. The other gotcha is that it is such a sensitive radio that you can hear crud with it that other radios would simply miss in the noise. Take Care! Bob Camp KB8TQ

From w7ce at curtiss.net Tue Jul 6 12:07:04 2004
Subject: [R-390] Ballast Tube Thread

More than enough. This thread is now worse than my daily spam. I'm unsubscribing from the list as soon as I hit send.

From barry at hausernet.com Tue Jul 6 12:08:24 2004
Subject: [R-390] LED lamp replacement

Instead of LED's, best bet is probably the long-life version of the standard replacement bulb. I think there's a reference on it and some list members may know offhand what the number is. As I recall, there is quite a bit of difference in the hours spec. and not that much difference in price. Brightness may be a bit lower, though. Anyone know? Barry

From ham at cq.nu Tue Jul 6 12:24:30 2004
Subject: [R-390] URM-25 RF output measurement

Hi, This is actually two questions in one. The first one deals with how to set up the IF gain adjustment. There has been quite a bit of work done showing that the procedure in the manual does not result in the most sensitive radio. It does result in a radio that can be rigged up in a diversity system. Since most of us are not running diversity setups there are better ways to set the gain. Chuck Rippel certainly has made the most posts about this so I think you might want to check his web site for the details.

The second question is how do I make sure I know what my URM-25 is actually doing? Needless to say this has been another of those things that long threads have gone on about. Here's one way to do it, there are *many* others some of which may be better:

- 1) Always run the generator into an attenuator. This way you are always sure of what the output impedance of the generator is. Different people use anything from 6 db up to 20 db for the purpose.
- 2) Take a radio you reasonably trust (an R-390 is always a good candidate here ...) and run the attenuator in the generator from one end of it's range to the other while watching the radio's AGC voltage. The if the AGC jumps abruptly you may have an attenuator with a problem. Often simple cleaning is all that's

required to fix it.

3) Grab a 20 db pad you trust and switch it in and out of the line from the generator to the radio. Since the external and internal attenuators add to each other a simple "get back to the same AGC voltage" approach will let you check the calibration on the generator's attenuator. Just like in the step above what you are really looking for are dead spots.

4) If you have a low level power meter you trust you may be able to get the URM-25 to drive it, if not then try step 5:

5) The output of a CMOS gate running with a light load goes almost from ground to the supply voltage. Feed it with a simple crystal oscillator and that's close enough to make a pretty good RF voltage standard provided you keep the frequency down to a few MHz. A couple of one percent resistors from the junk box should let you go from a K ohm or so down to around 50 ohms. Just for fun let's say it's 1K down to 50 and that gives you 250 mv peak to peak. Anything much less than this and the ground bounce on the CMOS gate may become a problem. 250 peak to peak has a 88 mv rms component in it at the fundamental frequency if I remember correctly. A pair of 20 db pads should get this down to the range that the radio and the URM-25 can reasonably deal with it.

Once you have one frequency on one band checked out then you can be pretty sure the attenuator is running fine. All that remains is to be sure you have level on all the bands. I do not see any need to try to check the attenuators range at any more than one point.

It takes almost as long to describe all that as it does to do the tests. Once you are done, except for leakage out of the generator cabinet and the accuracy of the attenuators you used your URM-25 pretty much right on for level calibration.

You can get pretty exotic with the CMOS gate voltage standard.

The Boonton calibrators have something like a 12th order low pass filter between the gate and the output. That's overkill for what you are doing with the standard and it adds the tolerance of all the filter parts into the mix.

Padding the output part way, then putting it into a transformer to break up the grounds followed by another attenuator followed by another transformer also is said to help the ground bounce problems.

Shielded box inside a shielded box construction probably is a good idea. That way you do not have a leakage path around everything that messes it all up. Copper foil flashing material from Home Depot cuts easily and can be quickly soldered into all kinds of cute little shield boxes. Some people like brass stock from the hobby store.

If you have a good oscillator the output will be a 50/50 duty cycle square wave. The odd harmonics will fall off in a predictable fashion p through at least the first few. Since the radio will tune the harmonic just as well as the fundamental this gives you a way to check the setup.

From rbethman at comcast.net Tue Jul 6 13:38:53 2004
Subject: [R-390]SP-600 trade for R-390A?

All, I surrender on the ballast tube thread. I am working with a LOCAL on the R-390A / SP-600 trade. It is a Navy model. It DOES NOT have the crystal selector in the upper right corner. That's fine with me,

as I don't have ANY desire to sit on one freq anyway. Please - No further offers! Bob - N0DGN

From rbethman at comcast.net Tue Jul 6 13:58:26 2004
Subject: [R-390] R-390A for SP-600 update

The specific SP-600 model I'm looking at is a Navy R-450/FRR-28 (J-11) variant, updated by Northern Radio Co.

From lurch at theramp.net Tue Jul 6 15:06:57 2004
Subject: [R-390] Ballast Tube Thread

personally, i look forward to a little humor scattered amongst the several thousand other pieces of email i chew through every day. 73 de ka9egw

From r390a at bellsouth.net Tue Jul 6 15:52:47 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

I apologize in advance for being disrespectful to several of those on the list. This is a very sincere apology, and I hope it will be taken in the manner it is meant.

I subscribe to over a dozen mailing lists. When I see a subject line that I know I don't want to read, I simply hit the delete key and don't read it. No one is holding a gun to my head and forcing me to read any message message on any list. Even if the list comes to me in digest form, I just skip over things I have no interest in reading. There are those on nearly every list that instead of simply deleting the message before reading will yell loud and long about how bad that message is. Some will say "By Jove, look what this group has turned into, I'm un-subscribing post-haste!" even on groups that have not seen posts in months. (I'm not talking about this group!) If I got upset over message threads I didn't want to read, I wouldn't be subscribed to any lists now. I simply use the delete key.

It's akin to going to a library. Lets say you hate books about sewing. Do you simply *not check out the book*, or do you go to the library board and demand they remove all books with any reference to sewing from all branches else you will never let your shadow cross the threshold of any library ever again? Me, I'd simply not check out the book. *shrug*

I know this silliness about ballast tubes and kielbasa and wet sheep has been going on for about a day now. (just a day, maybe two now) There will most likely me more posts come along that don't mention wet sheep as tube substutes. In fact today there was at least on post about the use of the URM-25 and yesterday several about SP-600's.

If any of you have defective keyboards with a non-functioning Delete key, I have quite a few spare keyboards around and will be glad to send you one gratis. I've got several types of PC keyboards, Mac keyboards, maybe one or two for DEC or Sun machines so I may very well have one that will work for you. Delete Key, just say yes. Tom

From r390a at bellsouth.net Tue Jul 6 15:59:50 2004
Subject: [R-390] Re: LED lamp replacement

I have not noticed any noise since replacing the bulbs with LEDs. I think I even put the scope to the line feeding them as this was mentioned before on another list a while back. My dial light replacements are fed with a series resistor followed by a diode, followed by two LEDs in series. There is a 1 mf cap in parallel with the pair of LEDs. There are now three junctions in the mix and the possibility of noise either by radiation or by propagation along the filament line. I may simply have overlooked any noise, I may not have actually been looking for it. I honestly don't remember, I've slept since then.

Maybe a study is called for here, when I do the LED's on the current room-strewn receiver, I will make and record actual noise/ripple measurements.

But before the RX gets done, I have to reassemble the Johnson Valiant, and before it gets done, I have to put a Transworld back together, so it may take a while. 73 Tom

From roy.morgan at nist.gov Tue Jul 6 16:10:26 2004
Subject: [R-390] URM-25 RF output measurement

wrote: > ... How can I tell if my URM-25 is actually >putting out 150 microvolts?

Actually, you can't. You can be more or less confident after some testing. Bob Camp's advice on building a new rf generator or level setting device sounds like a find but challenging project.

> Do I need a calibrated RF meter with a known >input impedance and make sure that is matched to the output of the URM-25?

I see two ways to do this, both depending on the assumption that your URM-25 attenuator is working as it should.

1) Follow the calibration procedure in the URM-25 manual. Basically, you set the oscillator output to two volts and then depend on the attenuator to do the rest. the URM-25 front panel meter measures that two-volt level during normal operation.

2) Get or borrow a millivoltmeter of some sort. A good oscilloscope may do in a pinch. Measure the URM-25 output level at some reasonable level like 100 millivolts (being sure to terminate the thing correctly) and then assume the attenuator is working on other (lower) settings.

If you then think clearly about what the signal generator is doing, what the termination or external attenuator "pad" is doing, and what the load of the receiver is on that setup, you will come to some conclusions about what the actual rf voltage is at the receiver terminals. (note that the input impedance of the balanced antenna input can vary from 50 to 700 ohms.) Roy

From w5kp at direcway.com Tue Jul 6 16:22:06 2004
Subject: [R-390] Big (BIG) Knob wanted

Alright, alright, wipe the grin off and read this. I need a large (LARGE) knob for the volume control on the homebrew AM transmitter I'm working on. It's for a brute force 240V variac with a 3/4" shaft. I've seen them around surplus houses (usually attached to a giant rheostat or some such) but never figured to need one so never picked one up, now I'm sorry I didn't. One of the ones that resembles a small fat steering wheel, sorta like a giant SX-28 knob, would be ideal, maybe something in the 4"-5" diameter range. Any of you packrats got one you'll turn loose? I could put something more modern on it, but this

thing just cries out for the real thing, and I'm asking here first because God knows us 390 guys never throw anything away. 73 Jerry W5KP

From richardlo at admin.athabasca.ca Tue Jul 6 17:26:42 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

wrote: > posts in months. (I'm not talking about this group!) If I got > upset over message threads I didn't want to read, I wouldn't > be subscribed to any lists now. I simply use the delete key.

Absolutely! I have read maybe 1 message in 10 on the ballast lutefisk Guinness thread and the rest went down the tube in a flash. Kwitcherbitchen.

Last week somebody at work here sent a political message to the entire staff mailing list which I regarded as irrelevant and deleted but for three days I had messages from disgruntled staffers bitching about being spammed. Three days of bitches spamming me because they thought one message was spam... you do the math.

Tom, do you have any memory for a DEC 3000 Model 400 in your junk pile? This little box is running 160M and I would like to have 512M if I could find any of those &%@&* proprietary DEC memory strips.

From scr287 at sbcglobal.net Tue Jul 6 16:46:17 2004
Subject: [R-390] URM-25 RF output measurement

I'd like to add a couple of things to the URM-25 thread. I've used a scope to check output levels, but, remember the scope input is high impedance, so make sure the sig gen output sees a 50 ohm load, and also the scope reads peak to peak, not RMS. I wouldn't use this method for absolute accuracy, but at least it will let you know you are in the ballpark.

I've also used the Tektronix 2710 spectrum analyzer at work to look at the sig gen output levels. Playing with looking at really weak signals with an analyzer is an education in itself.

Also, I've owned two URM-25s, a D model and F model. The output attenuator in each is basically a bunch of resistors in a super fancy rotary switch arrangement, the last resistor being a precision resistor in the neighborhood of 50 ohms.(49.9? 50.1? can't remember exactly). In both of my URM-25s, this resistor was burned open. Then, to add insult to injury, back when Fair was selling the URM-25 output attenuators, I ordered one, and this resistor was open in that one as well! Hope this helps someone. Jack

From barry at hausernet.com Tue Jul 6 17:01:32 2004
Subject: [R-390] Big (BIG) Knob wanted

Hi Jerry, Have you checked with Fair Radio? Also try Glen Galati of Electronic Dimensions Another possible source is Leeds in Brooklyn. Here's the URL: <http://www.leedselect.com/parts.html#knobs> Has one knob that matches your specs (a little bigger) a General Radio Variac knob 6" in diameter for a 3/4" shaft. A bit pricey at \$16. Might have others worth a call. Barry

From w7ce at curtiss.net Tue Jul 6 17:10:16 2004

Subject: [R-390] RANT: The Delete Key and Unwanted Threads

I delayed deleting myself from the list hoping things would settle down.

I enjoy a LITTLE humor and OT conversation as much as the next guy, but I received EXACTLY ONE HUNDRED (yes, that is 100) R-390 list emails from 12:40PM yesterday to 12:40PM today and most of them were OT. With the subject line changing every few hours, its not always simple figuring out what is junk and what is interesting. Maybe most of you are retired and have nothing better to do with you life than sort through the email that makes your life somehow more interesting. Personally, I'd hoped that a moderated group would save me some of that headache. Even at 5 seconds per email, deleting this list accounts for over 8 minutes of my life in the last 24 hours that I can't get back (that annualizes to over 50 hours per year of delete time).

The library analogy was really quite poorly thought out. When I go to the library, I don't wander aimlessly up and down every aisle looking at every book for the topic I'm interested in, and then cursing those that don't apply. I learned the Dewey Decimal system and card catalogs in elementary school and find they save me a lot of time (kind of an early spam filter). Using the same principles, I subscribed to an rather than a complete collection of OT mailing lists hoping that most of the material would somehow apply to the R-390 and related topics.

Now that I've increased the the bandwidth requirements of this group way too much, I'll go back into reading mode and wait for something interesting to show up. Although I suspect that I have helped to make some of your lives just a little fuller and certainly more interesting because you received one more email.

Sigh, now I assume the ranting and flaming will begin. Oh moderator, moderator, wherefore art thou moderator?

From ham at cq.nu Tue Jul 6 17:29:32 2004

Subject: [R-390] URM-25 RF output measurement

Hi, So now I'm both in hot water for Lutefisk threads and in trouble for being to technical. I just can't win this week

Every time I have gotten the "can I trust my signal generator" bug the attenuator has been the part that I trusted the least. Admittedly the waveguide beyond cutoff style used in the URM-25 and it's cousins is less prone to trouble than the switch based gizmos used in more modern equipment. The attenuator check is pretty simple and generally it gets me back to worrying about other things.

The CMOS signal generator is fairly easy to build, but to your point if you don't get it quite right then it's more trouble than it's worth.

There is one other way to do the whole thing. It's nice because it takes out all the errors at the low signal end of things. That's normally where you really care about it being accurate anyway. The stuff I came up with last time was all aimed at the high level end of the range.

There are a number of ways to generate a fixed level of RF noise at R-390 type frequencies. One easy way is to pick up a used GR tube based noise source. You might also go looking for a tube for it as well.

Since you have a R390 handy you have a radio with known IF bandwidths. Once you know the

bandwidth *and* the noise level into the radio you can calibrate the radio in terms of micro volts. Poof! you have an accurate RF micro volt meter. Just the thing to check out your URM-25 with. Since you have the full attenuator in on the URM all the tolerance build up from the accuracy of your substitution attenuator in the other procedure goes away. Note that no animals were harmed in any of the above proceedings Enjoy! Bob Camp KB8TQ

From schluensen at freenet.de Tue Jul 6 17:05:05 2004
Subject: [R-390] R-390 History

I have a 67EAC with all modules from EAC. The Receiver came from the German Navy (1. Z-Geschwader "Rommel", "L?tjens" and "M?lders"). These 3 Ships (US "Charles F. Adams" - Class) where build in the 1960's in USA. 73, Frank, DK1LX

From mjmurphy45 at comcast.net Tue Jul 6 19:40:18 2004
Subject: [R-390] URM-25 RF output measurement

Bob and Roy, I agree, this is tough. Here are a few ideas. Calibrating the generator all the way down to the "knat level" that an R390A can handle may well be impossible in the shack. The leaking around problem (RF leaking around the attenuator) makes you think that the receiver is more sensitive than it actually is. (BELIEVING that the R390A really is that sensitive seems easier....)

However, finding, rolling and calibrating some decent attenuator pads may not be so difficult, at least at HF frequencies. If you can establish a reference that you can trust like 0 dBm or 1mW RMS into 50 Ohms or 0.224V into 50 Ohms or God forbid 0.775 V into 600 Ohms (something that you can easily measure with an AC meter), this makes a good starting point. You can also see how the generators attenuator works at a high level using the meter. This proves that the generators attenuator works fine and establishes that you can vary the generator by some trustworthy amount like 20 dB.

Sometimes you see a pile of attenuators at hamfests. Usually these are microwave grade and are well shielded - grab them! They may be the best pieces of radio gear you will ever own.

Measure (verify that they are not smoked) each attenuators loss with your generator and meter. Finally you put the attenuators in series until you get down to the signal level your need. If you can find a pair of those HP microwave attenuator banks, you havce hit gold! The attenuators will have to be a completely shielded type. Since the generator is always being used at high level, this will give you say 20 dB of range at the lower level set by the "calibrated" attenuators. If you put 100 dB of attenuators in line, you would end up with a range of -100 to -120 dBm, for example. Don't forget cable loss. This should be low at HF unless the cable or connectors are not correctly terminated. Double shielded cable like RG-223 is a must for accurate measurements.

I have found that the problem (even with a lab calibrated generator) is that the signal easily sneaks around- over and through the generator chassis, cables, connector interfaces and thus around the attenuator or attenuators. I was having problems getting decent readings at work below -120 dBm at least at VHF. Having a 100 dB screen room at work, I used a feedthru connector with 20 dB attenuators on each side of the wall and got the extra isolation I needed. Fortunately HF should be easier to deal with. Mike WB2UID

From barry at hausernet.com Tue Jul 6 20:19:45 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

Hi there, Clay I get 100's of emails a day. Can't rely on the spam filter software.

With this list, it seems to be feast or famine. Even with all those on- and off-topic posts, I noticed that some previously frequent contributors were absent. Maybe on vacation. I suspect the extra activity was due to the vacation day. Rest assured, the list will return to its previous state very soon.

The simple and wonderful fact is: You don't have to suffer the inconvenience of high volumes of mail OT or otherwise. You have the option of changing to digest or no-email mode. It's easy to go to the qth site and read the posts right there, at your full convenience.

You needn't even be subscribed to read the posts on the site only if you want to post something. However, a quick check of the archives shows that your two posts the last day or two complaining about the OT's were the only posts you made at least since January. (I didn't check before that.) If you change to no-mail mode, or unsubscribe altogether, you'd be liberated of the burden of all that deleting and, it would seem, have no apparent remaining reason to post anything here anyway.

True, nowadays, a crowded inbox is highly problematical. There is a lot of spam filter software out there, but I've tried three and had problems with all of them. In my case, it's too time consuming to use the delete key. Periodically, I archive my entire inbox and create an empty one. But, the thing is, as far as the lists are concerned, you can control what comes in and save that 8 minutes of your life that this list wasted projected to an onerous 50 hrs per year.

(Incidentally, this is not a moderated list in the sense that each post has to be approved by the moderator. Some lists are run that way.)

So, very sympathetic to your plight, and particularly sorry if some of those burdensome deletables were from me. However, all the foregoing considered, if your plan is as stated: "I'll go back into reading mode and wait for something interesting to show up." (i.e., you're unlikely to contribute anything), then your original impulse to unsubscribe was probably an excellent idea. And, by unsubscribing, you will reduce the bandwidth burden on the QTH reflector at the head end.

Just trying to do my bit to spare you the needless tedium. I do agree with you wholeheartedly this is not a library not a good analogy. The idea of a list is something more interactive, otherwise it doesn't really make much sense. However, the archives, various websites, pearls of wisdom and so on DO make for a convenient online library. So, there's really no need to wait for something interesting to show up here. Most of the interesting stuff has been done, written up, categorized, compiled. Sometimes all that's left is kielbasa. Hope this helps, best and sincerest regards, Barry

From bill at iaxs.net Tue Jul 6 20:27:49 2004

Subject: [R-390] RANT: The Delete Key and Unwanted Threads

From: "Sigh, now I assume the ranting and flaming will begin. Oh moderator, moderator, wherefore art thou moderator?"

Well, now, lets be precise. When Shakespeare used "wherefore" he meant "why are you" not "where are you". Juliet was asking why he was a member of the wrong family. What you have asked is why Don is a moderator. He probably is taking a vacation from this creative group, so that he can slow down on asking himself the same thing.

I just archived 10,000 messages from 6 months of Glowbugs. I'm sure there is a pony in there somewhere. (Old joke about a kid digging out a barn.) Regards, Bill Hawkins

Tom Sturgeon, when told that 95% of Science Fiction was crap, replied "95% of everything is crap." That is known as Sturgeon's Law.

From jbrannig at optonline.net Tue Jul 6 20:44:21 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

Hi there Barry, Your response to Clay might be considered snotty or obnoxious by some. This is a technical reflector and many people (including myself) have learned a great deal about our R-390 radios.

I really appreciate the wealth of knowledge and helpful character of the members.

A person who was merely browsing the digests or achieves might be turned off by the adolescent (juvenile?) humor (sic) that seems to permeate this reflector.

While the delete key is useful, each posting needs to be perused to determine if it contains useful information. After a 100 or so "Humorous" postings, one tends to delete ALL....and much useful information could be lost.... best and sincerest regards Jim

From ham at cq.nu Tue Jul 6 20:45:29 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

Hi, I will admit to being a bit new here. I've only been on the list for around five years now. Since I have been at the list game since the early 1980's, before I signed up for the list I did take the time to go and read the archives of the list. I'll freely admit that was easier back then than it is now. You used to be able to go back quite a few more years than you can now. A couple of things became fairly clear in reading what had been going on here before I joined:

- 1) Many of the people posting on the list knew a *lot* about R-390's
- 2) On occasion the list moved off into some pretty silly threads.
- 3) People who participated in the technical threads also seemed to dominate the silly threads as well.
- 4) Rarely did those who were active posters object to the occasional departures into humor, they expected it.

Based on that it was pretty hard to tell what kind of list this actually was. Was it a humor list that masquerades as a technical discussion or just the opposite. Certainly both aspects of the list have a long history here. To say that humor threads have no place here is to deny a long tradition here on this list. It has *never* been an either / or situation on this list. Both technical discussion *and* humor have been here from the very start.

I'd make another set of observations about the list today:

- 1) Some of the faces are familiar from the archives and thank you all for hanging in here
- 2) A *large* number of the people who once were here to provide their extensive knowledge about the radio to the rest of us are no longer here on the list
- 3) I can't remember *any* of them departing because of too much humor on the list

4) I can remember several departing based on messages a lot like the one below

So it boils down to - just how useful is a dead list that no longer has anybody on it who really knows the radio? That has to be weighed against the bandwidth used

If the reappearance of one of the founding fathers of the list kicks off a bit of fun, so be it. From my perspective the list is a lot more interesting when informed people hang around here. I never even notice it when a one post in the last six months lurker drops off the list unless he loudly announces it.

If the trade off was three more humor threads and three departed lurkers in exchange for a few of the good old boys showing back up then I know which I would pick. Anybody who really wants to keep an R-390 running would make the same choice in a heartbeat.

Face it - a lot of the questions from new users about the radio come up again and again and again. The answers in these cases are pretty predictable. Without some humor thrown into the mix this list could get pretty deadly pretty fast.

We could of course go another route and refer every single question that is asked to the archives rather than answering it. We could all pile on new members who asked obvious questions and make them feel like fools simply for asking. Points would go to the one who got in the first hit. It's pretty much standard procedure on a *number* of other lists. They say "on topic" but at a significant cost in terms of friendly behavior.

Another observation was made a while back by Nolan. He did a search for the people who were the main objectors to this kind of thing. His observation was that they had never participated on the list in any significant manner. Often their objection was also their first post.

Based on a quick scan against the names on both the public and private comments some things never change.

I am not making a case that anything goes. In fact far from it. If you take a look at the actual posts in our most recent exercise you will find real technical data buried in a number of the posts. I do not believe that any thread that runs for a day or two has gone so far beyond it's natural life that it needs to be killed. Some of these threads have gone on for months in the past.

If you believe that this is simply a purely technical list and that any post that does not have ohms law in it is off topic then you are mistaken. If you object to a list that is not tightly focused on pure technology then you object to this list. If you subscribed to this list under the impression that it was a pure technical list then you subscribed in error. If you subscribed in error then the solution is obvious. Enjoy! Bob Camp KB8TQ

From rbethman at comcast.net Tue Jul 6 20:54:45 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

I find that those whom are doing the protesting "our" little foray into humor ad nauseum to be of the not so informative or participatory members. Every so often some of us let our hair down a little. It is NO big deal! Let's all just go back to NORMAL and relax along with it. To Bob Camp, the Barry(s), Hank, and the rest of those providing GREAT amounts of information: I have enjoyed the VAST amount of info, answers, and expertise. I have ALSO enjoyed this past weekend VERY much. R-390As forever! <Even though I'm adding an SP-600!> Bob - N0DGN

From brookbank at triad.rr.com Tue Jul 6 21:06:42 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

PLEASE ENOUGH RANTING, IF YOU HAVE A RANTING COMMENT, SEND IT TO THE INDIVIDUAL, NOT TO THE NET. EACH ONE OF THESE RANTINGS MEANS THAT I HAVE ~~USE~~ THE DELETE KEY AND THEN GO AND DELETE THE SILLY RANT FROM THE DELETE FILE. ENOUGH IS ENOUGH

From chacuff at cableone.net Tue Jul 6 21:23:14 2004
Subject: [R-390] LED lamp replacement

Hi Group, Strange thing about my R-1051 LED conversion...no two seemed to come out the same....even though the same LED's were used and installed the same way....never did figure that one out....worked well though and was much cheaper than trying to put the original lamps in.

I agree with Bob though...I have seen the R-390A lamps available at the local electronics supply house...readily available...and cheap....relative! Cecil....

From ham at cq.nu Tue Jul 6 21:28:48 2004
Subject: [R-390] R-390 History

Hi, How many R-390's were in German Navy service? Did they have enough of them to do their own depot level maintenance on the radios? Take Care! Bob Camp KB8TQ

From chacuff at cableone.net Tue Jul 6 21:30:45 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

I agree with Tom... Shoulda made note though...I saw some names I don't remember ever seeing before....might need to do a regular roll call! Maybe I just haven't been paying attention until the ballast tube thread swelled up.... Cecil.....

From w7ce at curtiss.net Tue Jul 6 21:43:52 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

I yield!

I joined the group precisely because I have nothing to offer it, but hoped to learn a lot. When you have nothing to say, it is best to listen and learn rather than to waste everyone's time with stupid questions. I have a Collins R-391 (S/N 145) that I plan to eventually restore. I have been in listening mode so that I can learn from the experience of those that regularly contribute to the list. Since the R-391 is relatively rare, I want to learn as much as possible before undertaking the task with the hope of avoiding any stupid and/or irreversible errors.

As I stated, I enjoy the humor and the OT conversation as much as anyone. But it has increased to the point where the technical content is too hard to extract and just not worth my time anymore. It was not

my intent to offend or enrage anyone. I apologize. It won't happen again. 73 de W7CE SK

From w5kp at direcway.com Tue Jul 6 21:48:45 2004
Subject: [R-390] Big (BIG) Knob wanted

Thanks to the generosity of WC4G, a big honking knob has been found. Thanks to all for the tips and info. Jerry W5KP

From ham at cq.nu Tue Jul 6 21:57:55 2004
Subject: [R-390] Gag Rule

Hi, I understand that you are frustrated with the thread on ballast tubes. By my understanding of the limits that have applied to the list in the past the thread was in bounds.

What I do not understand is the request to stop discussing what is and what is not in bounds. It seems that you are suggesting we stop all discussion of this topic as well. Is this your intention? Bob

From ba.williams at charter.net Tue Jul 6 22:17:16 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

Here we go again...just when the list picks up from being almost totally brain dead, another complaint about OUR list. Some of the members may remember when this happened last time. We lost everybody and all humor. Hell, everybody left in disgust. I stubbornly remained on the dead list, mostly out of sadness to see the end of it. We sure had a great list going for a few years too. I admit to being somewhat surprised that the traffic has picked up again. Nothing like a dead horse riding into town to stir up a good, old ruckus.

Listen folks, I don't care if our traditional kind of humor rubs people the wrong way. This has been our list for a long time and a couple of people are going to have to rough it out like men or find somewhere else to lurk for pouncing on everybody's fun. Go find another list and criticize them. Don't take the time to learn the way of the list or give a bit of respect to those who have made this list work all these years. Just prance right in and bitch about things.

For those who joined since the near castration of this list, one complainer started moaning about off topic humor. He got a couple of new buddies to jump in too. Guess what...the old timers and vast knowledge base got the hell out of town fast. The list collapsed. What happened to the complainers? They didn't post a damned thing and they left too, right after they pissed on the fun. The rest of us were left with bitter feelings about our list disappearing overnight.

Yep, this list gets off topic, way off topic. But, it gets on topic too. Way on topic at times. You just have to take it with everything else if you plan to stick around for what is offered.

So, just to revive more dead horses in hopes of resuscitation,

Cat piss

R-390A belt buckles

R-390A Zippo lighters Ballast tubes Cat piss Tube shields Gassy tubes and Zippo lighters Simple Green Cat piss Gutting deer in the parking lot Bristo or Bristol wrenches Non A or just R-390 Cat piss Homos (persons of the gay persuasion) okay, queers dammit Hillary Clinton The other other Barry (non-Hauser)

From ham at cq.nu Tue Jul 6 22:18:16 2004
Subject: [R-390] R-391

Hi, Don't have a 391 so I can't comment on it directly. What kind of shape is yours in?

What I'm getting at is that spare parts for these beasts can be a pain to find. The stuff that is common between the 390 and the 391 should be hard enough to come by (but not impossible). However if some of the 391 specific stuff is broken then you will have a real tough time. I have a 390 not an A that has been waiting on a parts source before I start the restore process.

One exception: the locking inserts for the knobs are a common problem item on the 391. There was a run made to replicate them a while back. Hank may still have some running around. If I remember correctly he did them at the same time he did a run of knobs that many of us got in on.

Another possible parts source would be David Medley. He seems to be the resident fount of R390 not an A supplies. He has a web site and has always been a good source of both information and parts.

A 391 restore is certainly a worthy project. There aren't many of them out there. It may take a while, but hang in there on it. Enjoy! Bob Camp KB8TQ

From saglek at videotron.ca Tue Jul 6 22:18:44 2004
Subject: [R-390] LED lamp replacement

> Instead of LED's, best bet is probably the long-life version of the standard > replacement bulb. I think there's a reference on it and some list members > may know offhand what the number is. > Barry>

Lamp # 328, 6.3 Volts, 0.2 Amp, MTBF 1000 Hrs. For the R-390A. Mouser 606-CM328 \$.93
Lamp # 381, 6.3 Volts, 0.2 Amp, MTBF 20,000 Hrs. For the R-390A. Mouser 606-CM381 \$1.27
Lamp # 387, 28 Volts, 0.040 Amp, MTBF 7000 Hrs. For the R-390. Mouser 606-CM387 \$.47

Hope this helps. Use the #328 my R-390A. Must be close to 4000 Hrs on them. About 900 Hrs on the R-390 with the #387. Al

From chacuff at cableone.net Tue Jul 6 22:34:40 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

Barry.....as usual you crack me up!!! What a Hoot! I think anyone that spends any time at all in the archives will also discover Barry's sense of humor archived there as well and not get the wrong idea about this list....

I have discovered over the last several years that this list seems to have 3 modes:

- 1) Informative mode....where technical and/or historical questions are answered in a very professional and authoritative fashion!
- 2) Idle mode.....where humor and general chit-chat is enjoyed by most...silly? Probably...but no different than what we would do if we were all to show up in a room together for a day to fellowship

with one another over a few beers! (sounds like fun...we should plan that!)

3) DEAD mode....where the heck did everybody go?

Modes 1 & 2 are what have formed the "Personality" of this list over the years and made it one of the best lists on the reflector.

Mode 3 is what the list resorted to after the last spanking everybody got because of the complaints of a few who felt there was no place for Mode 2.

Personally I would much rather cruise along with Mode 2 and keep the Mode 1 flowing as demand presents itself than have it resort to Mode 3 which is of no use to anyone! We have been there!

Frankly with today's technology the "Bandwidth" argument is moot! If you are still getting this list through a 9.6K dial-up it's time to invest in something other than radio parts.....namely some computer technology upgrades. Cable or DSL is well worth the cost (around \$30-\$35 per month for T-1 rates..1.544MB).....but if that is still out of reach...unlimited 56K dialup is only around \$11 now a days....as advertised on TV.

And yea I know you checked the archives for the last decade and didn't find much contribution from me either (check the R1051 list)....but what you should also note was no complaining either....I don't consider myself an R390X guru due to my limited experience. (fixin to change somewhat)

I wade through all the posts too and what it does do for me is gives me a feel for the personality of the individuals who frequent the list. A new piece is plugged in each time an individual posts while in mode 2. Personally the people side of this business is as important as the technical side....

This list stuff is not all about "Cherry Pickin".....it does have an important social side as well!

Try walking into a mechanics shop and asking a technical question about a problem you are having with your 1957 Chevy and want to fix yourself and see what you get...but hang out a while and develop a social relationship with the shop and maybe drop by with some doughnuts one Saturday morning and next thing you know you'll probably have all the information you need....

Maybe a bad analogy but same principal.....nobody owes us anything on here but you are likely to get anything you need if you rate high marks on "Works and Plays well with others" Just some thoughts.... Cecil Acuff WBSVCE Too many radio's to list!

From jmiller1706 at cfl.rr.com Tue Jul 6 22:35:24 2004
Subject: [R-390] LED lamp replacement

Tom Bridges Tarheel6@msn.com was selling lamps some time back. Packages of 10. Reasonable price.

From ham at cq.nu Tue Jul 6 22:36:12 2004
Subject: [R-390] LED lamp replacement

Hi, There are also a couple of other alternatives. The ones you list are by far the most common. I have always gotten mine from Bulbs Direct on the net. Never thought to check Mouser for them. If anybody is looking for the even longer life but far more dim (= not a lot of use ...) alternatives I can probably dig

out my notes. Thanks! Bob Camp KB8TQ

From chacuff at cableone.net Tue Jul 6 22:39:05 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

You forgot the dreaded black ukumpuky. (I am sure I spealed it wrong) Cecil...

From ham at cq.nu Tue Jul 6 22:51:32 2004
Subject: [R-390] Bandwidth

Hi, Hey, that R1051 you put the LED's in is still running nice and bright. It came up here earlier today as a matter of fact !

I totally agree that either modes one or two are far to be preferred to mode three which is what we often get here and on a lot of other lists as well.

In defense of those who objected I don't think the good old I don't have enough bandwidth argument came up this time. It's certainly has come up in the past though and probably will come up again next time we go through all this.

I think what happened this time was that the volume of mail this list is capable of actually became apparent. We used to get these kind of daily volumes from time to time but not very often. The thing that made the difference this time is that we pretty much all have a lot of bandwidth at our disposal. I sit here with a lap top doing other stuff but watching what's going on. With broadband 10 megabit connections, being on all the time is pretty darn easy. More or less "bandwidth made me do it ...". Take Care! Bob Camp KB8TQ

From minmar at 2z.net Tue Jul 6 22:56:12 2004
Subject: [R-390] Re: NO POSTS WANTED

Hello, Does anyone know if there is a way to stay subscribed to this list but not get any digests or posts. I need to stay subscribed only to use the archives. Maybe I will have to trap them all and automatically delete them all. Disgusting Thank You Orrin Bentz

From rbethman at comcast.net Tue Jul 6 22:59:31 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

Cecil - You are dead on the money. I didn't want to blow off steam - BUT maybe I should have! This is the "groups" list. What went on this weekend WAS enjoined by GROUP Members. The delete key works for me, If there is an issue - LIVE WITH IT! I'm going to go brown up some Kielbasa! I may go admire MY ballast tubes. Cheers to ALL. Bob - N0DGN

From redmenaced at yahoo.com Tue Jul 6 23:00:16 2004
Subject: [R-390] Time to can the mackerel

wrote: > Think we really have gone on enough on this. > Gonna have to look back to see if it rivals any

> of the old silly threads where Nolan was involved.

You have't mentioned cat piss in the tube stash, or how much torque it should take to turn the KC CHANGE knob yet. Joe

http://promotions.yahoo.com/new_mail
Subject: [R-390] Re: NO POSTS WANTED

If you use Outlook you can build a "rule" or script to automatically move messages to a folder on your PC, or delete certain messages automatically based on sender or subject or content. Explained fully in the Outlook documentation. It's under "Tools" menu.

From wa6knw at sbcglobal.net Tue Jul 6 23:09:00 2004
Subject: [R-390] PMCS of the R-390/URR and R-390A/URR Receiver, Radio,

Having operated, maintained, repaired, and rebuilt these fine american manufactured products for close to 40 years I have found that certain feminine hygiene products work wonders while performing PMCS on the subject receivers.

Especially if I spill any POL materials while lubing the swiss clock movement. So now when I plan to oil down those gears and rollers I place several panty liners, the ones with wings really work the best as you can affix them to parts of the chassis so they don't shift or get lost. Anyway, I just line several of them up under the swiss clock movement to collect the drippings from the lubing.

I have also found that a sanitary napkin is really great when you want to wash down the front panel to get rid of all those years of tobacco smoke, tar, and nicotine.

They are also good when you used a little rubbing compound to rub out the panel and put that new blush of luster to your resurrected warrior.

Another use of the sanitary napkin is to use them under the receiver to protect to dinning room table from any scratches or blemishes.

I have found that tampons, especially the ones with the plastic stick applicators, can be used to clean between and behind the gears, clamp, and rollers in the swiss clock movement and the RF deck. The one with the strings are usefull for cleaning out those dingy tube shields that have been sitting out in the disposal yard for years.

**There are more uses and products that I can describe but I will save them for a later installment.
RICH WA6KNW**

From chacuff at cableone.net Tue Jul 6 23:09:25 2004
Subject: [R-390] Re: NO POSTS WANTED

Hi Orrin, Don't run off mad (kidding)....I agree with the others....things will settle down to our normal mail volume here soon. Runs in cycles.

To answer your question you don't have to be subscribed at all to check the archives. I have browsed the

archives of several lists on the qth.net system that I have never been subscribed to just to check out what type of stuff was discussed.

I am certainly not suggesting you unsubscribe.....

But I understand if it's not meeting your needs.....I dropped several lists a few months back....The only National I own is an NC-183D and 95% of the posts on the National list were about other models I had no interest in so I ejected. I figure I can search the archives for the 193D stuff as I need it. Same goes for the Hammarlund SP-600...not much on the Hammarlund list but I stayed with that one.....more info on the SP-600 here on the R-390 list than anywhere else..... Cecil....

From w9ran at oneradio.net Tue Jul 6 23:22:50 2004
Subject: [R-390] Re: NO POSTS WANTED

I'd personally much rather read (and delete!) this kind of fun stuff than the continuous cross-postings of unrelated OT posts by the same people who seem to think that subscribers to six different ham lists are interested in their rotor problems, weekly gabfest schedules, etc. A well-oiled delete key is as handy as a set of Bristol wrenches hereabouts! 73, Bob W9RAN

From gregorymengell at comcast.net Tue Jul 6 23:22:45 2004
Subject: [R-390] Time to can the mackerel

wrote: wrote: > >>>Think we really have gone on enough on this. >Gonna have to look back to see if it rivals any >>>of the old silly threads where Nolan was involved.

I have been on this list since at least 97. I have been the recipient of much good advice and kindness in my pursuit of questions only this list can answer in a authoritative good natured manner.This is Our second home . The List has a family quality of its own.I sincerely hope there is not another mass migration.Actually we need those people back. I hope Nolan , Chuck and Tom L are at least monitoring this site.I realize this has been said before but I could not help coming out of Lurk mode to say a word or two. 73 Gregory

From r390a at bellsouth.net Tue Jul 6 23:26:47 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

Then there was some discussion of BBOD's or the gray version thereof...

From barry at hausernet.com Tue Jul 6 23:32:22 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

Hi Jim: Snotty? Obnoxious? That was just me trying to be helpful and diplomatic. (BTW - Jim, it could be taken as sarcastic repeating my stylistic greeting and closing. Somehow, you seemed to take it personally, though not directed to you.)

Yes, the ballast tube thing went far too far, but it's part of the process. Serves to goose up the list grease the skids, clear the pipes, etc. Highly traditional. If you look over the last few days of posts, there were a number of substantive threads some of which were no doubt stimulated by the atmosphere of banter.

Otherwise reluctant subscribers were encouraged to post. Happens all the time. Lurkers emerge often with on-topic questions, etc. Revitalizes things.

Part of that process, or tradition, is the inevitable complaint or two which serve as punctuation marks to end the romp. It's really not necessary, because these things die down fairly quickly, but it's nonetheless traditional. Whether or not you agree with all that (tradition, etc.), it's one thing if the inevitable complaint comes from someone like you who contributes from time to time. It's quite another if it comes from someone who seems to take the position that others are the hired actors and he's the only paid ticketholder in the opera house. That's a tad snooty, if not rife with nasal effluence. Don't ya' think?

So, my point had to do with the source and tone of that particular rant or screed, not to mention the critique of a Tom's library analogy. Yes, you can go to the card catalog and do the Dewey Decimals and choose your aisles, etc., but by the same token, you can choose your subscriber mode as well, right?

Sorry if it came off a bit sharp around the edges, but I was trying to be diplomatic while suppressing .. extreme annoyance, to say the least. I rarely ever reply to things like that let 'em go. But this time, a reply seemed to be in order.

Actually, Bob Camp expressed the whole thing a lot better than I have seen his post. As he says in his closing paragraph (in essence) it ain't just about the radios.

And you never know what will be truly useful information. Let's say the boss comes over for dinner. Thinks you're a regular guy. Then spots a rack of '390's and asks what are those? What do you do? Well, if you're like most of this, you may involuntarily lapse into a technical and historical description hopelessly typecasting yourself as some kind of oddball with a weird hobby. (It's a highly rarified interest, practically impossible to explain to "THEM".) But, fortunately, as you spot the 3TF7 or remember it, you adroitly change the subject by offering him some kielbasa and a bottle of stout. He may decline the offer, but at least you've bailed out. You see you never know what will be useful.

So technical note to Clay before they get automatically purged go back to your "Deleted" folder in Outlook or whatever, sort by subject line, highlight all the R-390 posts, and move them to a new, dedicated R-390 folder. Then you can go in and prune, moving the silly posts to a "silly" subfolder but don't delete them. You never know. ;-) Barry

From barry at hausernet.com Tue Jul 6 23:49:29 2004
Subject: [R-390] Re: NO POSTS WANTED

Orrin, As I explained earlier, you don't have to be a subscriber to use the archives. You can unsubscribe, or remain subscribed but change your mailing option to "no mail". Go onto the QTH site and click on the 3rd choiced on the navigation sidebar "Mailman How-To".

Trouble is, when you go into the archives and click on what appears to be a reasonable subject line, something horribly disgusting may pop up.

Sorry you're disgusted so am I. Remember there is no escape from .. The Spanish Inquisition! Barry

From pulsarxp at earthlink.net Tue Jul 6 23:47:46 2004
Subject: Fw: [R-390] RANT: The Delete Key and Unwanted Threads

Remember, "All work and no play makes Jack a dull boy". I have not been on this list all that long and I now have 3 R-390As and 3 SP-600JXs to restore. I've been a ham for over 50 some years and love boat anchors. I think I've been around here for just a few months now and am a real novice when it comes to R-390As compared to many members on here. So far I've learned a lot, and almost everyone has acted as a gentleman. I don't mind the humor and am guilty of putting some of it out on the reflector myself. (At least it was humorous to me). I feel I have even made some new friends on here too. The list has not been too busy to not be able to support a little fun once in awhile. In fact I have enjoyed the humor from some of those that have helped me greatly lately with my restoration projects. I thought most of the humor was very clever. I can tell you I have received master pieces of private e-mail from members of this list giving me great sound advice and concern for my restoration efforts. They took a lot of their time writing me and helping me. You don't realize how much I appreciate those notes. None of those folks were any of the complainers.

Aside from all this, life is too short to complain when things don't always go the way we wish them to go. We all need to look more at the bright side of things for our own good mental health. There is no perfect reflector and people make mistakes and are human. (As perfect as I am, my wife tells me I screw up all the time)! Who am I to complain about others? Who made me any kind of expert to give others grief? Things also look a lot stronger in print then if said in person anyway. We just need not to take things too seriously especially ourselves! I think if we all held back nasty e-mail for a day before sending it a lot less would be sent. We have more in common then differences. I'll take this list anyway it is delt to me! Count me in. The price is right. Lee, w0vt Houston

From barry at hausernet.com Wed Jul 7 00:25:49 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

Well Clay, my apologies. It's now apparent the problem is you haven't been properly indoctrinated. Yes, you will resist, you may even try to escape read on.

> I yield!

Never yield. This is the training.

> I joined the group precisely because I have nothing to offer it, but hoped > to learn a lot.

There has always been a mysterious silent majority on this list about 600 or so subscribers, but only hear from maybe 25-50 at most.

"nothing to offer"? that may explain the phenomenon. Remains to be seen. I'm certain, I can safely disagree - -not even knowing you.

When you have nothing to say, it is best to listen and > learn rather than to waste everyone's time with stupid questions.

Maybe some places. Not here. There are no stupid questions. Repeat after me There are no stupid questions. Even if they've been asked and answered before. Information is subject to change without notice. Just watch the History Channel.

> I have a Collins R-391 (S/N 145) that I plan to eventually restore. I have been in > listening mode so that I can learn from the experience of those that > regularly contribute to the list. Since the R-391 is relatively rare, I > want to learn as much as possible before undertaking the task with the hope > of

avoiding any stupid and/or irreversible errors.

Well, you came to the right place. And my point is already proven beyond a shadow of a doubt. The above paragraph is of (a) great interest and (b) not stupid.

I have two '391's, both with autotuners that need work. Many of the autotuners haven't been run in years. While I don't like to remind people, I'm the editor of the Hollow State Newsletter, which has been in hibernation. There is a long standing article in the works nearly done for about a year now about rebuilding/restoring the autotune mechanism. For now, suffice to say, do not attempt to power it up until you've overhauled it. The KC and MC heads have stacks of pawls in them that are probably all stuck together with old lube. Switch contacts in the controller module (behind the little window with #'s 1-8) may have dirty contacts. The sealed relay may be stuck. The oilite bronze bearings on the worm drive shaft have to be checked for play. If you power it up just like that, it may do some damage - may try to run the RF deck beyond the 10-turn stops.

> As I stated, I enjoy the humor and the OT conversation as much as anyone.

That's good.

> But it has increased to the point where the technical content is too hard to > extract and just not worth my time anymore.

Belay that. It's not too hard to extract, there are other sources and other ways to go about it. First of all ask questions and get fresh answers and leads to online info no stupid questions. Don't "wait for something interesting" provoke it. Look where this has gone so far. Repeat after me: It is worth my time.

> It was not my intent to offend or enrage anyone. I apologize. It won't happen again.

That proves another point. The silly romp worked again! Flushed you out of the fog, didn't it? Before now, you probably didn't even realize you didn't exist. And heck, it may well happen again. Not to worry.

Assignment: #1 Stay subscribed #2 reclaim any deleted posts and move to dedicated email folder #3 remove covers from '391, contemplate and observe. Ask questions any questions. I guarantee, you will not be able to construct a "stupid question." Final proof: After all that silliness, how could any question you construct possibly be stupid. See?

Again don't yield it's part of the training. It would be more humane to fire live rounds over your head, but not exactly practical given the logistics and all.. BTW Welcome aboard. Barry PS somebody throw a net over Orrin before he escapes.

From buzz at softcom.net Wed Jul 7 00:29:16 2004

Subject: [R-390] LED lamp replacement

Listers, I have 328 bulbs for sale at 12 for \$2.00, postage included. Email me if you're interested.

Buzz

From jlkolb at cts.com Wed Jul 7 01:26:47 2004

Subject: [R-390] Re: LED lamp replacement

While there may be a possibility of RFI generated by the LED's or (blasphemy) solid state diodes, I'm more curious about the light output. The light out of LED's is rather directional - how well do they work in the R-390? John

From jmiller1706 at cfl.rr.com Wed Jul 7 04:17:26 2004
Subject: [R-390] Re: LED lamp replacement

I prefer the "soft" on and off times of filament lamps over the instantaneous on-off of LEDs. My filament dial lamps sort of "ramp up" when they come on, which is the true behavior that should be observed in this genre of radi? . Ever drive behind a car with those obnoxious LED brake lights, especially the Cadillacs?, They flash on instantly... no soft warm up time. It's grating on the nerves.

From lester.veenstra at lmco.com Wed Jul 7 07:36:18 2004
Subject: [R-390] URM-25 RF output measurement

Assuming the response is modest, I offer my service to measure URM-25(x) at a number of significant freqs and levels (but please do not ask for every MHz at every 5 dB).

So, since my days of actually working on 25's is lost in memory: what would be an appropriate set of frequencies and levels that should be verified, according to the real experts here on the "net"?

The selective level meter in its relative mode should make checking out the attenuator for discontinuities a simple process.

I use a pair of HP-436 power meters with standard and high sensitivity heads and an HP-3586 selective level meters. Les Veenstra (K1YCM/3) (CTM1) Frederick MD 301-571-1212

From N4BUQ at aol.com Wed Jul 7 09:27:25 2004
Subject: [R-390] Re: LED lamp replacement

Somewhat like the newer traffic lights. They kinda smack you in the face, don't they? Barry(III) - N4BUQ

From chacuff at cableone.net Wed Jul 7 10:44:56 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

I second all that...all in favor say aye! Get the Net....wait a minute Barry...your in New York....it's usually Get A Rope..... But this ain't no Salsa commercial..... Cecil....

From BRingwo at csir.co.za Wed Jul 7 11:02:34 2004
Subject: [R-390] Re: LED lamp replacement

Hi all, The LEDs I have cast an eerie bright whiter than white light - very unpleasant. I guess you could use a ballast tube to soften the start up time*. Have any of you had RFI from a filament light ? Some sort of weird RF can be generated between the filament and metallic deposits on the glass envelope in old lamps. So I'm told. Regards - Bryce *Hope this doesn't get me into trouble

From brookbank at triad.rr.com Wed Jul 7 11:10:58 2004

Subject: [R-390] RANT: The Delete Key and Unwanted Threads

I am sure that everyone enjoys humor, specially when is mixed with the list topic. But beating a dead horse with a ballast tube? I hope that there are no Fransiscan friars listening, Torquemada may come and burn me.

From roy.morgan at nist.gov Wed Jul 7 11:24:09 2004
Subject: [R-390] Re: LED lamp replacement

wrote: > ... Some sort of >weird RF can be generated between the filament and metallic deposits on >the glass envelope in old lamps. So I'm told. That's the little known process of a monode turning into a diode. It does it all by itself. No physicists needed. Roy

From chacuff at cableone.net Wed Jul 7 11:40:06 2004
Subject: [R-390] Re: LED lamp replacement

Put a big electrolytic in parallel with them...that should do it! Cecil...

From paul at pdq.com Wed Jul 7 11:49:07 2004
Subject: [R-390] R-391

The R-391 is a pretty straightforward beast to get running if nothing serious is broken. Like Barry says, dried grease is the biggest problem.

The locking keys are available from Hank Arney. You can also make them, but it requires a little bit of care to make sure the business end is right.

The R-391, like other autotune or motor tune Collins radios, have slip clutches in them that are intended to let the motor drive keep turning while the tuning mechanism stops against a pawl. What happens is the grease in these seize up, so instead of slipping the clutch, the gears grind and the bearings next to the motor get mashed to a pulp. Actually, if your receiver is like the one I worked on, it can tolerate a _little bit_ of that, but not much.

Unless you know the autotune has been used in the last few years, it is probably better to remove the tuning unit and soak it in solvent for awhile. I soaked mine in kerosene for a week, which also helped the other problem, which is grit in the mechanism.

The third problem I ran into is that the motor brushes readily wear out, so it will not work, or frequently stop.

Others have reported problems in the control relays, although mostly I suspect this would be dirty contacts.

I haven't found a good source of parts, although the basic autotune and drive motor is used in multiple radios, like possibly the T-195. I believe the CU-286 uses the same tuning mechanism exactly as the R-391. The spare motors I have I got from Fair Radio, and are almost certainly from T-195's, but may be strong enough to run the R-391 autotune mechanism.

BTW, as always, I'm looking for a restorable C-974, a CU-286, and a PP-629. Paul

From DAVEINBHAM at aol.com Wed Jul 7 13:03:04 2004
Subject: [R-390] The Rant & the dreaded black ukkumpucky, too

First, the ukkumpucky.

" > You forgot the dreaded black ukumpuky. (I am sure I spealed it wrong) > Cecil..."

Yes, Cecil, you did. It is spelled " UKKUMPUCKY " I am kinda persnickety about the word because I think I may have inadvertently invented it several years ago here on this list. For the benefit of newcomers, ukkumpucky, or more correctly, " the dreaded black ukkumpucky " ,is the black goo inside the plug in electrlytic can capacitors in your R-390A.

Now, the rant.

Personally, I enjoyed the recent humor. I even tried to make a modest contribution to it. I am not, however, enjoying the rant about the humor. Kibitzers please rest assured the list moderator will come out of the woodwork and electronically bite your butt if you go too far with off topic humor. I know. Been there, done that. I have the teeth marks to prove it.

So, let's all just cool it and go back to " normal", if anyone with a thing about 40+ year old radios can be called " normal."

Toward that end, a question. We all assume the purpose of the ballast tube was to regulate the filament of the oscillator tube, not just to increase the price the government paid for the radios. We all know that due to the god awfull prices we have to pay nowadays, we can stick a wire in the tube socket where the ballast used to live, and replace the oscillator tube with a 12 volt tube and the radio works. Now, after much preamble, my actual question. Has anyone who has done this noticed any real discernable difference in the operation of the radio ? Is the ballast tube superfluous ? Comments, humorous or otherwise. Kindest regards, Dave

Biological Instruments, Inc.
Home of the R-390A ReCap Kit.
SP-600 ReCap kit coming soon.

From mikea at mikea.ath.cx Wed Jul 7 13:16:52 2004
Subject: [R-390] It _WORKS_!

Last night I finally had the time, inclination, clear workspace, and tools to try to get my R-390 (Collins, great restoration by Mish) up again. It had Just Stopped Working a few months back, and things were not conducive to my getting into it until now.

Symptoms: No audio out, no carrier level meter deflection on any band, even with a signal generator as input.

So I got the -20 and -35 manuals out, heated up the scope and 8640B, opened the critter up, and ran through the problem determination checklist:

- o no response to any signal on the antenna connector;
- o good response to 455 KHz modulated with 1 KHz on the IF strip input jacks;
- o OK response to RF on the test point at the output end of the RF module, but not at the other end.

Conclusion: Probably something in the RF module.

Found the tube extenders (a battle all in itself, after I cleaned up the garage), pulled the middle tube, put it on the extender, and ... the radio worked! Left EVERYTHING else just as it had been, replaced the tube, and it still worked.

I spent the rest of the evening cruising around, listening to hams, refining my SSB tuning technique, and having a good time.

It probably was oxidation on one or more of the socket contacts and/ or the tube pins. That's my story, anyway, until it quits again. It's easier to shoot a solid bug than an intermittent one. Mike Andrews

From schluensen at freenet.de Wed Jul 7 11:23:52 2004
Subject: [R-390] R-390 History

Hi Bob and the List, I don't know how many 390A's did work in the German Navy. But - Full Service was made by the "Marinearsenal Kiel". My Receiver came directly from the Marinearsenal Kiel in 1982. Today all SW Receivers in the Navy are from HAGENUK (RX 1001M) and from TELEFUNKEN/DASA (E1800). 73, Frank, DK1LX

From kgordon at moscow.com Wed Jul 7 13:37:07 2004
Subject: [R-390] Re: LED lamp replacement

wrote: > I prefer the "soft" on and off times of filament lamps over the > instantaneous on-off of LEDs.

Or new "large cars" (18 wheelers). EXTREMELY annoying....!!! We just returned from a 3967 mile trip out east to visit relatives. Traffic around Minneapolis was chaotic. Ken W7EKB

From rbethman at comcast.net Wed Jul 7 14:58:51 2004
Subject: [R-390] The Rant, Bellyache & THE dreaded black ukkumpucky

First, the ukkumpucky.

If you haven't been THERE - you DON'T understand. Man is THIS stuff a ROYAL pain.

- 1) Initially heat the cap after you cut it open, and the innards WILL come out fairly easily.
- 2) The CHILL the can and it will easily be picked out in chunks.

>Yes, Cecil, you did. It is spelled " UKKUMPUCKY "

>

>Now, the rant.

>

Been there, done that. I have the teeth marks to prove it.

Got my feather plucked a bit too! Was warned I was about to be banned. Chilled and stuck with the group.

I've recapped two, aligned one, AND and finishing restoration on a Blue Striper!

I've learned a LOT from this group - WITHIN the OT posts and humor! Now I try to help when and where I can - AND - I cut up TOO!

>So, let's all just cool it and go back to " normal", if anyone with a thing >about 40+ year old radios can be called " normal."

Second THIS motion, although I've said the same.

Clay - Welcome to the group!

Now you've got the tech answers coming. You CAN'T get them without FIRST asking. DON'T wait for YOUR topic to pop. That goes for ALL newcomers and us Oldsters! Bob - N0DGN

From r390a at bellsouth.net Wed Jul 7 15:22:49 2004
Subject: [R-390] OT: LED tail lights, white LED physics

According to USDOT and such, they are supposed to be annoying. Apparently the instant on feature cuts as much as a quarter second off the response time that would otherwise be spent getting an incandescent filament lit to full brightness. A quarter second is a long time as accident response goes, and can mean the difference in avoiding an rear-end or sliding under the vehicle in front of you.

That being said, as far as LEDs for running lights, the red is too "spectrally pure" and is way hard on my eyes too.

I tend to agree on the white LEDs being somewhat "harsh" since they tend to have a blue shift to them. Indeed all should, the white led is manufactured from a blue or uv led die, which is then doped with a mixed spectrum phosphor-like material. The effect is not unlike that of a florescent lamp. The harshness comes from the blue or uv/blue that is emitted as the phosphor doesn't do much to block it. Tom

From rbethman at comcast.net Wed Jul 7 15:50:16 2004
Subject: [R-390] Re: LED lamp replacement

First - When you get a new car or truck with those LED taillights, remember how WELL they get the attention of those behind you. You'll live LONGER.

Second - I'd like to get circuit info on LEDs in lieu of the dial lamps. Whom can send it by mail? Does someone have this on a web site? I may even tackle the UV for the meters! Bob N0DGN

From Llqpt at aol.com Wed Jul 7 17:38:10 2004
Subject: [R-390] Time to can the mackerel

At last we hear from our resident beehive kicker and master-at-arms. Well, since I upset the apple cart with the ballast tube thread, perhaps I'll be lurking for awhile. Les Locklear Gulfport, Ms. "My luck is so bad that if I bought a cemetery, people would stop dying." Ed Furgol

From Llgpt at aol.com Wed Jul 7 17:44:36 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

Well, I fully accept the shame or honor (depends on who you talk with) for getting the pot stirred. After months of nothing, I wanted to see just who the heck is still subscribed to the list.

It turned out to be a reunion of sorts.....bunch of Barry's, Joe Foley, Bob's etc. , etc. Names out of the past. Lot's of knowledge on this list, we have all contributed over the years, some more on the technical side, some on the historical end, some with military stories, whispers from NSA types etc.

The main thing is that most of the long time subscribers seem to enjoy sick humor at times. Yes, the weather had a bearing on my post. It had rained over 10" in June and July is attempting to surpass that mark.

Just write it off that 'ol Les is a trouble maker and had time on his hands and you know the old saying about idle hands and the devil's workshop.....it's true!! Les Locklear Gulfport, Ms.

From Llgpt at aol.com Wed Jul 7 17:46:46 2004
Subject: [R-390] The Rant, Bellyache & THE dreaded black ukkumpucky

I was in the "penalty box" for so long, I felt like I was playing for the Montreal Canadiens! Les Locklear Gulfport, Ms.

From mjmurphy45 at comcast.net Wed Jul 7 18:15:42 2004
Subject: [R-390] Re: Soft Ramping LED Circuit

One resistor, One capacitor. OH OH I'm doing it again..Mike WB2UID

From mjmurphy45 at comcast.net Wed Jul 7 18:21:08 2004
Subject: [R-390] Re: LED Yellowing Agent

Hmm, Perhaps dunking the LED in yellow 5-minute epoxy would work. Mike WB2UID

From brumac at junos.com Wed Jul 7 18:34:06 2004
Subject: [R-390] The Rant, Bellyache & THE dreaded black ukkumpucky

Les, If you were in the sin bin that long, you are with true friends - er, all with R-390 variants! Bruce MacLellan Ontario, NY

From Llgpt at aol.com Wed Jul 7 18:55:37 2004
Subject: [R-390] The Rant, Bellyache & THE dreaded black ukkumpucky

I really was, my posts had to be "reviewed and cleared" before they were posted, sometimes a day later....:-) ya gotta love it! Les Locklear "'Twas a woman who drove me to drink, and I never had the courtesy to thank her for it." W. C. Fields (1880 - 1946)

From richardlo at admin.athabascau.ca Wed Jul 7 19:59:30 2004
Subject: [R-390] The Rant, Bellyache & THE dreaded black ukkumpucky

wrote: I was in the "penalty box" for so long, I felt like I was playing for the Montreal Canadiens!"Les Canadiens sont la!" Well at least they were. Now they are just another hockey team. Sigh. Richard Loken

From Llgpt at aol.com Wed Jul 7 19:04:14 2004
Subject: [R-390] The Rant, Bellyache & THE dreaded black ukkumpucky

That's OK Richard, we are both old enough to remember when they dominated hockey. I was raised in Northern Minnesota and played hockey during my formative years. Les

Richard Loken VE6BSV, Systems Programmer - VMS
Subject: [R-390] The Rant, Bellyache & THE dreaded black ukkumpucky

There really is a material out there called Akempucky. It is sold as a lubricant for wood screws - looks like some kind of grease. Could this be where the original word came from? 73 Todd Roberts
WD4NGG.

From rbethman at comcast.net Wed Jul 7 19:07:27 2004
Subject: [R-390] The Rant, Bellyache & THE dreaded black ukkumpucky

Uh-oh, I think I'm feeling an u-r-g-e! Something to do with speculation on THE dreaded black ukkumpucky being made from HOCKEY PUCKS!Bob - N0DGN

From pulsarxp at earthlink.net Wed Jul 7 19:10:42 2004
Subject: Fw: [R-390] Re: LED Yellowing Agent & Ludafisk

Maybe the LEDs could be put out on the back porch with the Ludafisk for the dogs to find if you want them yellowed! Lee, w0vt

From pstaupe at qwest.net Wed Jul 7 19:48:06 2004
Subject: [R-390] Non_A

Folks, I have to agree with Les.... I'm glad the pot's been stirred.

As a member of this list from the beginning, it's fun to look back at the good 'ol days... Dr. Jerry, Noel, etc... I can't imagine such a wealth of knowledge being given to the unwashed masses for free!

However, I've got a problem. I have a non-A that has been sitting in pieces in my living room for several months (I'm embarrassed to tell you how many), supposedly ready to be cleaned up, but in reality due to fear that I would screw something up. The green gear was inserted at the appropriate time, so that's not a problem, but it occurred to me a few days ago that the symptoms... nothing on any band... might be attributed to a failure of the ballast tube...

Should I go through the standard cleaning procedure and risk damage to the modules, (and by the way,

should I pull the coils out of the RF module when I clean it?) or just put it back together with a new ballast tube and see if it works? Wimpily yours, Paul Kansas City

From stevehobensack at hotmail.com Wed Jul 7 20:05:21 2004

Subject: [R-390] A few SP-600 questions

Since you are playing with an SP-600, read issues 20 21 22 of "Electric Radio" magazine. There are a number of improvement mods, and the mc1496 balanced mixer product detector is a winner. 73...Steve..KJ8L

From ham at cq.nu Wed Jul 7 20:10:30 2004

Subject: [R-390] URM-25 RF output measurement

Hi, Well if you wanted to set up specifically for R-390's there is a magic table in the manual that spells out the frequencies to use for alignment. Roughly it works out to three frequencies per octave. It's not quite every MHz but it's close to that on the low end.

It's probably more reasonable to do the top bottom and middle of each range of the URM-25. Maybe use something like 10% in from the ends and the middle.

The levels you care about are generally the ones down around a microvolt. If you know you are on say at 0.1, 1, and 10 uv then you have a pretty good idea of what your generator is feeding the radio. If the generator has to crank more than 10 uv in a sensitivity test then your R-390 is pretty sick

If there's any interest I can probably make up some of the CMOS level standards. Somehow I seem to have most of the parts lying around here they should be pretty cheap. Depends a lot on how nice a box we want to put them in. Enjoy! Bob Camp KB8TQ

From redmenaced at yahoo.com Wed Jul 7 20:12:10 2004

Subject: [R-390] The Rant, Bellyache & THE dreaded black ukkumpucky

> Second THIS motion, although I've said the same. >> Clay - Welcome to the group!

>

> Now you've got the tech answers coming. You CAN'T > get them without FIRST asking. DON'T wait for YOUR > topic to pop.

+++++++ I said it YEARS ago! If you don't like the thread; POST SOMETHING!!! Joe

From Llgpt at aol.com Wed Jul 7 20:17:21 2004

Subject: [R-390] Re: Non_A

Look down inside the fr coils, if they look clean, leave well enough alone. Some would say clean 'em all.....ya pays yer money and ya takes yer pick.....

I'd go with a bad ballast tube first. Then I would replace it with whatever method you choose, they all work good. Then buy some good beer with the money saved and maybe some keilbasa.....:-) Les

From pulsarxp at earthlink.net Wed Jul 7 20:14:22 2004
Subject: [R-390] Gear Trains & Helicopter Drives

A friend of mine was in the North Dakota National Guard. (They used to use R-390As). They were flying in a helicopter one day and it was close to noon. So they decided to land near a small town near Fargo and go get some lunch at Helga's diner. As they landed the helicopter a farmer in bib overalls came up to them, looked at the helicopter, looked at them, looked at the helicopter, and then again looked at them and said, "How dat ting turn, V-Belts"? Lee, w0vt

From ham at cq.nu Wed Jul 7 20:21:40 2004
Subject: [R-390] R-390 History

Hi, In US service the really crazy module swapping seems to have happened as part of major depot level work on the radios. I was wondering if there were enough for the Kiel Depot to do the same sort of thing. Of course the guys at the Marinearsenal Kiel may simply have had different work habits or different objectives when they did the work.

If the matching numbers is a normal thing for radios in German Naval service I bet we get the R-390 vs EK-07 thread going again in no time at all Take Care! Bob Camp KB8TQ

From ham at cq.nu Wed Jul 7 20:25:28 2004
Subject: [R-390] VFO / BFO with no ballast.

Hi, I have radios with both setups (ballast and no ballast). I can see absolutely no difference between the two as far as stability. Enjoy! Bob Camp KB8TQ

From ham at cq.nu Wed Jul 7 20:36:36 2004
Subject: [R-390] It _WORKS_!

Hi, The magic of tubes strikes again. I have chased this sort of thing on a "goes out every month" basis on a couple of radios. Here's what I finally started doing:

Find a piece of wire or a tool that's roughly the size of a tube pin. A quick pop in and out on each of the tube socket contacts will give you a fast idea if any of the contacts are loose. One neat thing to use is an old soldering tool that looks sort of like a straight dental pick. They threw me out of Weapons Spec. soldering school before they got to that part of the course so I never did find out what you really use that thing for or what it's called. I ground down the end of the gizmo so the body is about tube pin diameter.

Sometimes the darn sockets just seem to give up. Depending on the construction you may be able to bend them back to life, you may be able to pop them out of the socket (rare) and replace them, or you may have to replace the socket. Take Care! Bob Camp KB8TQ

From ba.williams at charter.net Wed Jul 7 20:43:09 2004
Subject: [R-390] The Rant, Bellyache & THE dreaded black ukkumpucky

Sick humor is tolerated, but whining isn't. (g)

From dsmaples at comcast.net Wed Jul 7 21:01:56 2004
Subject: [R-390] OT: LED tail lights, white LED physics

All: Not to mention that the replacement cycle for the LED lamps is measured in years and years as opposed to standard incandescent bulbs.

In the commercial radio business (Nextel) we are seeing more and more tower lights move harder and harder toward LED technology. It's way more reliable than xenon strobes.

I don't think I'd want to be in the incandescent business much longer. Methinks that before I die in 20-30 years it's going to be well on its way out. Dave Maples

From ham at cq.nu Wed Jul 7 21:04:25 2004
Subject: [R-390] Re: LED lamp replacement

Hi, Assuming you really want to go this way here's the basic data: Page 1333 in the online Digikey catalog (www.digikey.com) has a number of high intensity LED's. They come in several colors and in white.

The voltage drop on the colored ones is a little under or a little over 2 volts depending on the color. The white ones have a voltage drop of 3.6 volts.

If you run them off of the 25 volt AC supply you will have about 33 volts DC to work with. If you drop about 1/3 of the supply across the series resistor then you get 22 volts on your string of LED's.

The resistor is sized to give you 20 to 30 ma through the LED's. Eleven volts and 25 ma would get you a 440 ohm resistor. 390 and 470 are the closest standard values. A one watt size should work ok. The value will take a little fiddling to get the voltage right. I would start at about 390 and work down to about 180 ohms.

From there on it's a matter of picking a color and figuring out how many of them add up to 22 volts. If say 11 orange LED's does not make sense then the resistor size can change to match the new load.

A full wave bridge of 1N4148's to convert the AC to DC and maybe a 10 uf 35 volt cap across the stack of LED's completes the project.

The resulting circuit looks like: Four diodes in a bridge, AC ends to the 25 VAC filament line and to ground. DC ends to the resistor and diode / 10 uf cap combination. LED's all go in series with each other. That may not be clear enough to follow along sorry about that. Enjoy! Bob Camp KB8TQ

From rbethman at comcast.net Wed Jul 7 21:07:13 2004
Subject: [R-390] Re: LED lamp replacement

Bob - Thanks! Makes perfect sense to me - Even though I'm a Pollack that makes Kielbasa! <g> Bob - N0DGN

From r390a at bellsouth.net Wed Jul 7 21:02:27 2004

Subject: [R-390] Re: THE dreaded black ukkumpucky

Man, I've still got ukkumpucky stains on the patio that just will not come off even with gasoline and scrubbing from a couple cap rebuilds. Is there a magical ukkumpucky solvent? Bleh...

From rbethman at comcast.net Wed Jul 7 21:16:42 2004
Subject: [R-390] Gear Trains & Helicopter Drives

Dat all depen - We talkin bout BIG rotor or de little 'un? Bob - N0DGN

From ham at cq.nu Wed Jul 7 21:19:27 2004
Subject: [R-390] Non_A

Hi, Well as one wimp to another (my 390 not an A has not made it to the disassembly stage after several years ...) here's what I would do: If you have an ohm meter handy the ballast tube is something you can ohm out. Either you have something less than 50 ohms between pins 2 and 7 or the ballast tube is dead.

At this point you at least **know** weather it's the ballast tube or not. As long as you have the ohm meter out check the filaments of the VFO and BFO tubes. If either of them go out you have the exact same symptoms.

I'm working off of a 390A schematic so you might have to adapt that a little.

Now for the hard part you still have to make the decision weather it's the ballast tube or not

I would go ahead and pull and clean the rf deck plug in coils. The risk of damage is small and cleaning the contacts can eliminate some really flaky problems that are a **true** pain to figure out. Cleaning the gears while the deck is easy to get at also makes sense at this point.

Past that it all depends on how brave you feel

David Medley is still around so there is a safety net if you run into something weird I'd say go for it but I'm : Still A 390 not an A Wimp Bob Camp KB8TQ

From JGolden365 at aol.com Wed Jul 7 21:22:57 2004
Subject: [R-390] Racal RA17L repairs

Among all you experts in repairing R390A's is there anyone near Rochester, NY who feels adventurous enough to take on a Racal RA17L?

From ba.williams at charter.net Wed Jul 7 21:49:43 2004
Subject: [R-390] RANT: The Delete Key and Unwanted Threads

Clay, Welcome and it looks like your heart is in the right place....so save my last comments for someone else....obviously. Did you say that you have a SP-600 too? Non-Hauser

From paul at pdq.com Wed Jul 7 21:50:05 2004
Subject: [R-390] Non_A

Paul - since it sounds like you have only one R-390, it might be a slight bit harder to get it going (not having other modules to swap to see what works and what doesn't).

However, it will help to figure out what you want to accomplish.

You mention it being apart ready to clean - that's one thing, the other thing is that it didn't work before you took it apart - no signals on any band.

If you're not so confident about your ability to repair, it might make sense to get it back together and try and see what is working and what doesn't. There are a bunch of things to check to get the basic things going, for example the B+ voltage measurement point should be around 180V when operating (and if it is 180V, then I think three tubes are working - the ballast, the VFO tube and the VR tube(s)). If not, then you find out why B+ is wrong, so you check resistance to ground, see if there is a short there, and also check the VR and ballast tubes.

The ballast really isn't a big deal - I like having them, but they aren't of any great practical use to the hobby users, because we don't usually use them on battleships.

Anyway, after making sure you've got B+, then you listen to what you can - see if you can hear any audio at all (even clicking when turning the limiter switch on), or if you get a hiss with the RF cranked to the max. That helps tell you if the audio deck is working.

On the R-390/R-391, I found the voltage regulator circuit for B+ to be the biggest pain in the backside. The 6082 tubes just fry the unholy crap out of the bottom of the audio deck. Check the 47 ohm resistors under there and under the power supply to make sure they're close (if well used, they're probably toast).

I've got one audio deck that just frustrates me to no end - I've replaced all components in the VR circuits, and still don't get 180 volts. Other decks I've repaired responded well to the new 47 ohm resistors

Dive into it - ask questions - we'll help!!! Paul

From ba.williams at charter.net Wed Jul 7 21:52:30 2004
Subject: [R-390] Gear Trains & Helicopter Drives

The mil trainer version of the Hughes 300 used 6 belts. We called them washing machine belts. Les Locklear

From ba.williams at charter.net Wed Jul 7 21:53:39 2004
Subject: [R-390] The Rant, Bellyache & THE dreaded black ukkumpucky

> I said it YEARS ago! >> If you don't like the thread; POST SOMETHING!!! >> Joe

So follow your own advice and POST SOMETHING!!! Les Locklear

From jamminpower at earthlink.net Wed Jul 7 21:56:26 2004

Subject: [R-390] A few SP-600 questions

I generally agree, but there is one mod suggested by Kleronomos that should be avoided. He suggests putting in a current regulator in the filament supply for the RF desk. The idea is to stabilize the power to the VFO tube filament to improve frequency stability. That is a laudable goal, but doing it with a current regulator to a bunch of tubes that are wired in parallel is asking for trouble. If one of the tubes filaments goes open, the current regulator will pump 4 tubes worth of filament current into the remaining 3 tubes. The voltage across the filaments will go up accordingly. Bad idea. Kiss off four tubes just because one died.

If you want to regulate the filament of the VFO, you should put in a voltage regulator - not a current regulator. Unless, of course, you also plan to rewire the filaments so they are no longer in parallel.

The reason the ballast tube in the R-390A works is because the tubes it regulates are in series - not in parallel.

James A. (Andy) Moorer www.jamminpower.com

From paul at pdq.com Wed Jul 7 21:59:36 2004
Subject: [R-390] FR SRI R-390?

Item #5708037733 on eBay is an R-390 (non-A) with a data plate that says "Modified R390 FR SRI auto system", and it has a couple of plates under the front of the chassis - what does that mean? Anyone recognize the application? I'm not bidding, just interested in the history of it. Paul

From ba.williams at charter.net Wed Jul 7 22:00:29 2004
Subject: [R-390] It _WORKS_!

Rub those pins with a soft eraser and then DeOxit them all. Do all connector pins and the crystal pins. It will sound like a new radio. Barry non-Hauser

From Llgpt at aol.com Wed Jul 7 22:13:05 2004
Subject: [R-390] Re: THE dreaded black ukkumpucky

The devil made me do it..... Is this the same stuff in the original R-390/URR (note: no A) or is that spelled differently? Les Locklear

From ham at cq.nu Wed Jul 7 22:18:45 2004
Subject: [R-390] OT: LED tail lights, white LED physics

Hi, It is absolutely amazing just how many incandescent bulbs are made per year all over the world. For a 125 year old technology they certainly are going strong. Not very many other electrical / electronic gizmos have those sort of legs ... (except tube based receivers of course ...)

I don't think the low wattage incandescent bulb business has much life in it for new applications. It will probably be kept alive by things like the R-390 and it's cousins that will keep burning out bulbs as long as people are willing to stuff them into it.

in addition to reliability the incredibly low efficiency of a Xenon strobe it's pretty easy to understand why the tower light replacement makes sense. Fluorescents have been fighting incandescents on that basis in home lighting for years. Homes are still full of incandescent bulbs.

Strange but true - it's been say 60+ years since 28 volt generator based home lighting systems were an "in" thing. There are at least a dozen homes down south of here running 28 volt lighting. They don't understand R-390's and I don't understand their wiring. We have agreed to disagree ...

I'm betting on incandescent bulbs being with us for a while ... even the 28 volt versions. Take Care!
Bob Camp KB8TQ

From ham at cq.nu Wed Jul 7 22:23:44 2004
Subject: [R-390] Re: THE dreaded black ukkumpucky

Hi, Have you tried napalm? Start with 500 pounders and work up from there. If that doesn't work try a little lutefisk Ahhhh... off to the penalty box with Les screened messages forever ... (this is the ukkumpucky thread right) ahhhhhh..... Depending on the color of the patio you may just want to leave them where they are.

You can get oxalic acid based solutions that will bleach out just about anything. A decent hardware store should stock a couple brands. They may also turn the patio white at the same time. Take Care! Bob Camp

From r390a at bellsouth.net Wed Jul 7 21:58:58 2004
Subject: [R-390] VFO / BFO with no ballast.

Now to get a decent freq counter that I can synch to my GPS standard and check the drift with and without. Not sure it is worth the trouble though, I doubt if I can find any difference. Be neat the lock the crystal oscillators in the thing to the 10 mhz standard though.. hmmm.

But, Bob and group, I've notice no discernable differences with jumpers and 12BA6's or with a resistor. I think the main thing is that the ballast was indeed designed to compensate for the variety of mains voltages the radio was likely to encounter in the field and with reasonably stable home AC power, it is not likely to be of much use. T

From ham at cq.nu Wed Jul 7 22:36:44 2004
Subject: [R-390] Racal RA17L repairs

Hi, There is a Racal list you might want to try as well. It's only had four posts in the last month so that may not be real solution They don't have much humor over there either

What seems to be the matter with the radio? Maybe between the bunch of us here we can figure it out. Since the RA17 was a direct competitor to the 390 it's close enough to being on topic. It's certainly closer than the keilbasa thread ... Enjoy! Bob Camp KB8TQ

From redmenaced at yahoo.com Wed Jul 7 23:05:34 2004
Subject: [R-390] A few SP-600 questions

Hi Jim, Have you mentioned your concern to Bill? Seems to me he would have considered that and taken steps, of some kind, to remedy same. Joe

From ham at cq.nu Wed Jul 7 23:06:34 2004
Subject: [R-390] post or perish

Hi, But that would involve learning how to type. Do you realize just how many hours it takes to learn how to type?

In addition I would have to figure out just how to switch over to the correct sending address, and on OS-X no less.

It would take enormous amounts of time away from my other far more important work like watching TV and yelling at the dog. But I design high performance solid state RF circuits for a living and all the vacuum tubes scare me. You guys might call me a witch. Besides Les and I are both in the messages to be reviewed and posted three days later jail

I really do wish we got at least a few posts from a few more of the guys from the good old days. I do think it's a shame we have driven so many people off the list over the years. It's a fine balance between keeping people and having the list die. We seem to go from one to the other every few months.

Post now and post often is the only solution. Even if it's only to add to the excuse list. I have yet to see any post on the list that did not add to the process (positive *or* negative) in some way. The only thing that takes away from the list is a lack of participation. Even solid state threads seem to get a reasonable amount of respect these days. Like it or not this is a chat room, so let's chat !!! Enjoy! Bob Camp

From ezeran at concentric.net Wed Jul 7 23:55:08 2004
Subject: [R-390] The Rant & the dreaded black ukkumpucky, too

black ukumpuky!!!! It was a thread 10 years ago! Perhaps now it should be ukumpuky "of color" to fit the polly tickel stuff???

From hdalexander at att.net Thu Jul 8 00:22:35 2004
Subject: [R-390] Calibrator tone every 90 Khz

Hi All, I have a Motorola R-390(non-A). The calibrator makes a tone approximately every 90 Khz., not every 100 Khz.. For example: 14000, 14090, 14180,14270, 14360. Do any of you have any words of wisdom for me? Thank you in advance for any help. Harold Alexander Modesto, CA

From r390a at bellsouth.net Thu Jul 8 00:59:08 2004
Subject: [R-390] SRI R-390 and Estate Sales

Why do all the really nifty radio listing usually have a description like "I purchased this Radio at a estate Auction and do not know much about it "

Makes you wonder how much of the "good" stuff these estate buyers are tossing out as junk!

An example - antenna rotors. I've seen several rotor boxes, almost on a daily basis offered up by estate buyers. I have asked several, most insist that is the whole thing. I had a couple that actually discussed the issue with me when I told them there was another part other than the box. Most that understood what I was talking about gave an answer similar to "that old gray rusty thing, we threw that out because we didn't know what it was" sigh Tom

From wa6knw at sbcglobal.net Thu Jul 8 01:44:16 2004
Subject: [R-390] Re: SRI R-390?

SRI modified some R-390's to be used in a Special Teletype Intercept System used especially for cyrillic encoded traffic. It was the AN/FRA-86. RICH WA6KNW

From r390a at bellsouth.net Thu Jul 8 01:50:14 2004
Subject: [R-390] How To Adjust the Calibrator on a non-A

Harold and the group, What is happening is that the crystal in your crystal calibrator is off freq. Find the calibrator chassis - It's on the bottom next to the PTO - it will have a crystal oven and 2 12AU7's on it (V901 and V902). Between the crystal oven and V901 there is a trimmer cap with a metal shaft. This is trimmer C901 (don't touch the small ceramic trimmer cap between the tubes.) With an antenna connected, tune to WWV and adjust the BFO to zero with WWV. Then put receiver in CAL mode, (make sure you have not touched the BFO knob in the mean time) zero beat the cal signal by adjusting C-901. Double check afterwards by making sure the cal marker is now every 100 kc. If not, skip a paragraph and read what to do in the unlikely event that it's still screwy.

Alternately can adjust the crystal for exactly 1.0000 MC using a frequency counter. Best way to couple your counter is to take the shield off V901 and wrap a few turns of wire around the tube for a pickoff. (Usually works for me) With the second method it is easier to see if the other non-touchable cap needs adjusting. If don't have a counter, the WWV method is what is outlined in the manual, and should be considered good enough.

If the crystal will zero beat with no problem, and the points are still off, you will need to go to the cap I said earlier not to touch. Best way is to use a freq counter then adjust the ceramic trimmer C912 for exactly 100 kHz out. (several turns of wire around V902 will maybe give you enough to see the signal.) Most likely you won't need to adjust this trimmer if all else is normal. The 1 MC cal crystal does age over time and it is normal that it will need to be adjusted now and again as part of your regular PM.*

It's really not as hard as it sounds, I just tend to ramble when I try to explain procedures. Tom NU4G
*You do do regular Preventive Maintenance on your radio, check and lube the gears and racks, burnt wiring, mouse nests and rogue ukkumpucky? Shame on you if you don't. ;-)

From r390a at bellsouth.net Thu Jul 8 01:53:35 2004
Subject: [R-390] Re: SRI R-390?

What were the mods? IF mods, maybe? Perhaps the US made IF's didn't like those Soviet Communist electrons travelling through them! Tom

From Llgpt at aol.com Thu Jul 8 07:43:04 2004
Subject: [R-390] Gear Trains & Helicopter Drives

I knew he wasn't a "Real" Barry, now he is me!!!!!!!!!!!! Les

From lester.veenstra at lmco.com Thu Jul 8 08:29:13 2004
Subject: [R-390] Re: SRI R-390?

The FRA-86 is not an R-390. It is a DFSK demod used with FLEXCOP, a TDM demod system. It was used R-390a's modified with a ten turn counter on the BFO knob. The system is on exhibit at the NSG Museum in front of Ft. Meade. Les (K1YCM/3) (CTM1)

From ai2q at adelphia.net Thu Jul 8 09:44:41 2004
Subject: [R-390] Non_A

Hey Paul, the R-390 is a very straightforward receiver to repair. If you have the manual, go for it. Pull the RF deck, remove the slug racks, and pull those beautiful RF coil sets (each can uses sub-mini silver-plated banana plugs that fit into mating banana jacks on the RF deck). Then squeaky clean and lube to your heart's content.

My R-390 went through a burn-to-the-ground house fire and then a 25 year stint in an outdoor shed before I did a restoration.

BTW, I opened up each and every RF coil on my set, inspecting the innards and cleaning out carbon residue from the fire. The Q-doped coils inside were impervious to fire, heat, moisture, spider nests, etc. and all were in FB shape internally.

Also, I had no green gear on my set (and still don't), but I was able to mechanically align the RF deck as per the manual info. No problem. It's not as difficult as some folks contend.

Don't be intimidated by the R-390. It was meant to be serviceable. Do be methodical. Good luck. Alex in Kennebunk, Maine Radio AI2Q <http://users.adelphia.net/~alexmm/ai2q.htm>

From wa6knw at sbcglobal.net Thu Jul 8 09:52:23 2004
Subject: [R-390] Re: AN/FRA-86

First you will notice a series of holes on the front panel around the MHz and KHz controls and under the chassis there are two added plates between the front panel and the front frame. These were to support two motors used to select the MHz range and to sweep thru the KHz range. Besides the receiver there was a Panoramic Indicator, a Teletype Converter, a Signal Classifier, and a Computer. This system was used to intercept Soviet RATT Traffic. RICH WA6KNW

From rbethman at comcast.net Thu Jul 8 12:35:37 2004
Subject: [R-390] Gear Trains & Helicopter Drives

I've watched them TINY things in use at Ft Rucker for training. I am NOT going to get into one! Those students were a LAUGH a minute!

<Ballast tube for content! 3TF7> Don't want trip into penalty box! <G>

From roy.morgan at nist.gov Thu Jul 8 13:29:08 2004
Subject: [R-390] Calibrator tone every 90 Khz

wrote: >Hi All > >I have a Motorola R-390(non-A). The calibrator makes a tone approximately >every 90 Khz., not every 100 Khz.. For example: 14000, 14090, 14180,14270, >14360. Do any of you have any words of wisdom for me? Thank you in advance >for any help.

Harold, The crystal can't be off enough to create this situation. The 1 mc crystal drives a 100 kc multivibrator oscillator to synchronize it to the crystal. The multivibrator circuit is not being synchronized and needs to be adjusted, or have some components replaced. Roy

From barry at hausernet.com Thu Jul 8 14:23:25 2004
Subject: [R-390] OT: LED tail lights, white LED physics

wrote: > It is absolutely amazing just how many incandescent bulbs are made per > year all over the world. For a 125 year old technology they certainly > are going strong. Not very many other electrical / electronic gizmos > have those sort of legs ... (except tube based receivers of course ...)
<snipped>

Well .. it's been 125 years, but they still sell a whole lot of candles and kerosene lamps. Wouldn't be amazed if the dollar volume of candles in 2004 exceeds that of 125 years ago (not necessarily adjusted for inflation). Reasons? Aside from power outages, the charm, the flicker, the aroma (as in aroma therapy) and, that yellow-orange glow. Hmmmmm..... Hey! Some of the same reasons for holding onto tube-based gear, eh?

From roy.morgan at nist.gov Thu Jul 8 15:37:09 2004
Subject: [R-390] The Rant, Bellyache & THE dreaded black ukkumpucky

wrote: >There really is a material out there called Akempucky. It is sold as a >lubricant for wood screws. Indeed there is. See: <<http://akempucky.com/>> Who'd a thunk? Roy

From rbethman at comcast.net Thu Jul 8 15:45:49 2004
Subject: [R-390] The Rant, Bellyache & THE dreaded black ukkumpucky

Yep! But I have personal speculation that THE dreaded black ukkumpucky is derived from melted down hockey pucks! (6C4s are used in the RF decks for on topic declaration) <G>

From roy.morgan at nist.gov Thu Jul 8 16:00:17 2004
Subject: [R-390] Racal RA17L repairs

wrote: >Hi > >There is a Racal list you might want to try as well. ...four posts in the >last month ... don't have much humor over there either

Ugh. Is it the British heritage? ANY way, I would be happy to engage in a thread on the RA.17 (notice that is R ... A ... dot ... one seven.) I have one here, a model RA.17 UC. This is an Uh-murrikan-ized version with US tubes and some modifications. Any info on this variant welcome. Roy

From barry at hausernet.com Thu Jul 8 17:41:59 2004
Subject: [R-390] Racal RA17L repairs

RA.17 UC? I have several of the RA. 17 C12 which were Uh-Canadianized units actually I think they were made in Canada in the first place - -with some Canadian tubes which are the same as US tubes, only ... well nevermind.

Unfortunately, all but one was truly Canadianized by the military which had yet another idea about demil-ing. They clipped out all the tubular caps (and a few others) in the process, apparently on the assumption they contained PCB's. I doubt if any of the missing caps had any PCB's. Some of the oil-filled components left on the units might have some.

I'm sure they meant well. Look at it this way, the first half of the recapping job is complete. Maybe that "UC" means US/Can, or maybe it means Un-Canadian?

Seriously, though, there were apparently quite a few variants of the RA. 17. Barry

From odyslim at comcast.net Thu Jul 8 17:51:39 2004
Subject: [R-390] high dollar r-390a

Has anybody seen the black R390-A selling on ebay? Buy it now for \$3750.00 or financing available at \$157.00 per month. Mercy! Item # 5708620473 Scott W3CV

From Llgpt at aol.com Thu Jul 8 17:56:39 2004
Subject: [R-390] post or perish

"POST or PERISH" Kinda like "USE IT or LOSE IT" Lots of truth in those quotes!!

I too had hoped for some more voices from the past, but remember, it's July and lots of people are on vacation or unsubscribe in the summer months.

I think the ballast tube thread had the desired effect and I privately heard from many who didn't post to the group.....that is a shame I think.

Yes, I/we get silly at times and many of us have a wicked sense of humor, maybe leaning to the macabe at times. But, we continue to give out technical advice, suggestions, tips and great shortcuts on various topics, not always related to the R-390 series. Hey, if I couldn't get a bit goofy at times, I might go crazy! Les Locklear Gulfport, Ms.

From ham at cq.nu Thu Jul 8 18:12:29 2004
Subject: [R-390] VFO / BFO with no ballast.

Hi, Actually if you want to check it out here's how to do it: Fire up your GPS and take it's 10 MHz

output or what ever frequency it comes out with into the front end of the radio. Tune it in with the BFO on and then feed the audio output into your PC. Run a spectrum analysis program on the PC. There are lots of free ones out there. If you get one with a waterfall display then you can watch it drift in real time. Take Care! Bob Camp KB8TQ

From ham at cq.nu Thu Jul 8 18:36:41 2004
Subject: [R-390] Calibrator tone every 90 Khz

Hi, That's a little far for the crystal to have drifted. I suspect that the multi vibrator circuit has a carbon comp resistor in it that has shifted value.

Here's how to figure out if it's the crystal: Crystals are pretty tough to tune very far at all. Fortunately they rarely drift further than you can tune them. A very wide tune range circuit will pull a crystal 0.25 % of it's frequency. When you do this the stability of the oscillator is degraded quite a bit. For stable operation you rarely see them pulled more than about 0.0025%. Note that in your case the percentages refer to the 100 KHz frequency. A 10 KHz shift is 10%, way more than the crystal can move without being physically damaged.

R-C circuits like the one in the multivibrator on the other hand can tune all over the place. That's why you see things like the HP 200 series audio oscillators using R-C circuits to set up their frequency. They trade off stability for a wide tune range. At audio you never notice the stability, but at RF you would be bothered by it quite a bit.

The manuals are generally pretty good at describing what is going on in the radio, but here's how the two gizmos work together:

The multi vibrator runs as a frequency that is close to 100 KHz, but not quite on. The crystal oscillator runs at a higher frequency. When a pulse comes along out of the crystal oscillator *and* the multivibrator is just about to go from one cycle to the next the crystal oscillator pulse makes the multivibrator cycle. The net result is that you can divide frequency this way. The technical term for all this is an injection locked divider. Back before digital IC's this was pretty common.

I don't know if that helps or not but I have to post a certain number messages in threads that do not involve or mention certain words or I'm back in the penalty box hhhmm I wonder if penalty box is one of the words Take Care Bob Camp KB8TQ

From ham at cq.nu Thu Jul 8 19:03:34 2004
Subject: [R-390] high dollar r-390a

Hi, Well that is a real military cabinet that it's sitting in. The cabinet is unusual enough that they usually go for a pretty high price. The black paint job is in very good shape on both the radio and the cabinet. It's certainly the nicest R-390A on the bay at the moment.

\$3750 seems a bit steep, but PT Barnum probably will be proved right if he lists it long enough. One side benefit - if your electrolytic capacitors explode and spread the dreaded black stuff all over the place ... you'll never notice it with this paint job.

As I recall this paint job was a special run back in 1967 for the Black Panthers .. makes it RARE. Enjoy! Bob Camp KB8TQ

From mjmurphy45 at comcast.net Thu Jul 8 19:34:36 2004
Subject: [R-390] Calibrator tone every 90 Khz

Hi Harold, Perhaps a Motorola feature? Did you rock C310 the crystal frequency trimmer to try and zero her back in? Do you run out of adjustment?

The crystal oven could have failed and cooked the crystal. Of course, it could just be a bad crystal. Most likely, the crystal has aged badly and drifted down in frequency.

Do you have a counter with a 10X probe that you can put on the crystal pins (octal pins 2 or 8 after removing the oven cover) to check for 100 kc? Do you have an old 100 kc crystal that you can plug in to the octal socket between pins 2 and 8?

Next try swapping out the tubes in the calibrator.

It also could be a cap or resistor failure in the circuit. This means pulling the RF Deck - much fun!

My R390A calibrator had poor output - you could barely make it out on most cal points. I pulled my RF deck a couple of months ago when I was doing my general re-cap exercise and replaced quite a few capacitors. I can report that several of the resistors in the calibrator, especially the plate resistors on the multivibrator were cooked and way off in value. I replaced R221, R224 and R226 with 1Watt flameproofs. Wishes for a much happier calibrator Mike WB2UID

From jordana at nucleus.com Thu Jul 8 19:40:15 2004
Subject: [R-390] Calibrator tone every 90 Khz

This is simply due to the calibrator being out of adjustment...setting it for zero beat with WWV will solve the problem... 73 de Jordan....

From mjmurphy45 at comcast.net Thu Jul 8 19:44:56 2004
Subject: [R-390] Calibrator tone every 90 Khz

Harold, I screwed up: the crystal is actually a 200 kc job, not 100 kc. The multivibrator is a divide by two affair much like a flip flop circuit, and thus it produces the square wave and dirty little 100 kc

From chacuff at cableone.net Thu Jul 8 20:30:38 2004
Subject: [R-390] high dollar r-390a

I thought all R-390A panels were painted on both sides with some silk screening on the rear to identify various parts locations. This one is either bare or treated as the other aluminum parts are. (alondizing?) Maybe it was painted up to be black...

I am thinking about doing one that way myself...I like the black look but didn't expect them to be so valuable.... Les used to own one that looked just like the one on the bay...cabinet and all...I've seen the pictures.... Who'd you sell that one to Les? Cecil....

From ham at cq.nu Thu Jul 8 20:38:20 2004
Subject: [R-390] Calibrator tone every 90 Khz

Hi, Oddly enough since the divider is also an oscillator a 100 KHz crystal will give you 100 KHz markers. The multivibrator is still timed by it's R-C circuit and it will lock lock directly to a 100 KHz input if that's what you give it. It will also probably do strange things like lock up at 100 KHz with a 333.3333 KHz input.

Truly and almost unbelievable is the ability to be driven in KHz and put out in KC. It is also rumored that the circuit can be driven with KC and it will put out KHz Take Care! Bob Camp KB8TQ

From Llgpt at aol.com Thu Jul 8 20:38:19 2004
Subject: [R-390] high dollar r-390a

A friend in Minnesota. That one is being sold by a guy named Lon Cottingham who used to be on this list, maybe he still is. \$3,500.00.....damn, I only got \$1,500.00 for mine.....:(Mine had the rear of the panel silkscreened, same cabinet though. Les

From Llgpt at aol.com Thu Jul 8 20:43:37 2004
Subject: [R-390] Calibrator tone every 90 Khz

That sounds almost too good to be true! Could this be one of those folk legend stories like the bloody stump attached to a hook hanging from a car door handle in lovers lane? Or the spanish fly legend?
Barry Williams

From ham at cq.nu Thu Jul 8 20:46:32 2004
Subject: [R-390] Calibrator tone every 90 Khz

Hi, It's all part of the great SI conspiracy Bob

From r390a at bellsouth.net Thu Jul 8 20:42:16 2004
Subject: [R-390] high dollar r-390a

Rick Mish will do a black front panel and cabinet as part of his one grand full rebuild. Maybe it's a Mish job? I couldnt' get a good look at the tag, looks like a 67 EAC.

I've got a '67 EAC as well. Think if I took the case to Maaco for a paint job, and sent the front panel to Mish (don't think he does cheap stuff like "just" finishing a panel anymore...) that mine would go for at least \$2500??? Heck, for that price I might include a set of headphones and one of the "rare" twinax connectors. (since my local electronics store has them in stock, but don't tell anyone..shhhhhh) Tom

From bill.riches at verizon.net Thu Jul 8 20:57:02 2004
Subject: [R-390] Black R390-a

There is a dealer outside of Philadelphia that has a black r390a and the meters are illuminated. He sells

vehicles, old test equipment and had a bus full of old blue stripers. Anyone have his name?? 73, Bill Riches, WA2DVU Cape May, NJ

From DavidBR549 at aol.com Thu Jul 8 20:59:31 2004
Subject: [R-390] PASSWORD

CANNOT REMEMBER MY PASSWORD HOW DO I GET OFF THIS LIST

From r390a at bellsouth.net Thu Jul 8 20:55:21 2004
Subject: [R-390] Racal RA17L repairs

AB Bonds over on the boatanchors list just spent several months refurbing one. Two words "never again". Seems all the parts are mounted on little boards inside that are perpendicular to the chassis. None of the components are accessible unless you remove the whole board, he says. Also on his it appears that in his particular receiver nearly all the resistors were out of spec by at least fifty percent, some much more, and all the caps were leaky.

Plays like new radio now. He did a wonderful job with it and he had more patience than I would have had.

I think he is close to being released from his stay at the "inpatient facility." with the padded walls and the funny jacket. Kept mumbling random things with a British accent like "valves" and "colours" and "metres"... Hopefully Roy had better luck! heehee Tom

From ham at cq.nu Thu Jul 8 21:20:25 2004
Subject: [R-390] high dollar r-390a

Hi, Hey, you could probably get even more if the serial number on the tag matched the serial number on the back of the radio Enjoy! Bob Camp KB8TQ

From r390a at bellsouth.net Thu Jul 8 21:22:19 2004
Subject: [R-390] 390 non A calibrator is not 200 kc

Far be it from me to start a fight or anything, but...

In my previous post, I said the 390 non A uses a 1 mc crystal I'm sitting here looking at the manual, and I quote - "Calibration oscillator V901A, a Pierce Crystal oscillator supplies a 1 mc signal for synchronizing multivibrator V902" Not 100 kc, not 200 kc, but 1 mc. I've got two versions of the manual here. Both say the same thing. Latest is TM 11-5820-357-35 dated 9 March 1962. The other is the "Air Force" printing which is the same manual same date. Also have the Navy Manual. Also says the Y2K CD.

The 390A does indeed have a 200 kc crystal oscillator in the cal circuit. So does the 392. Got both those radios right in front of me. Only have the manual for the 390 NON A right now. Mind you the manual and schematics may be wrong.... Tom Out of Lutefisk, so gotta stir up something. [Heck, I thought I was one of the old guys, now all I did was change my call from KA4RKT and no one recognizes me anymore... heehee]

From Llgpt at aol.com Thu Jul 8 21:25:02 2004
Subject: [R-390] high dollar r-390a

I have heard "rumors" that increases the sensitivity tenfold! I'm sure they are true, cause I heard it on this list! Barry Williams

From ham at cq.nu Thu Jul 8 21:25:42 2004
Subject: [R-390] Racal RA17L repairs

Hi, For some reason unknown to all the R-390 even though it is of the same vintage as the RA.17 does not seem to suffer quite as badly from the carbon composition resistor problems. We have our crummy black beauty capacitors and they have their resistors *and* capacitors. I don' know if the Brit's just bought cheap resistors or if it's something else. Take Care! Bob Camp KB8TQ

From r390a at bellsouth.net Thu Jul 8 21:28:20 2004
Subject: [R-390] high dollar r-390a

Ahhh, but that is part of the uniqueness of this particular rare radio. The special black models all had secret serial numbers like that.... hehe Tom

From AB3L1 at aol.com Thu Jul 8 21:30:02 2004
Subject: [R-390] Black R390-a

writes: There is a dealer outside of Philadelphia that has a black r390a and the meters are illuminated. He sells vehicles, old test equipment and had a bus full of old blue stripers. Anyone have his name?? If I remember correctly, he is Peter Graves or something like that. On the E place he is "Radiograveyard". Lives slightly north of Philly.

Howard Mills also does the black panels and usually doesn't paint the back either. The back of the panel in the Ebay sale looks to have a brushed finish which throws me a little bit as usually the panels get bead blasted before the paint job. Bob

From Llgpt at aol.com Thu Jul 8 21:33:38 2004
Subject: [R-390] Racal RA17L repairs

I had a RA.17C12 a few years back, the only problem I ever had was a few leaky caps. It had been in use at the fcc monitoring station in Allegan, Michigan many years back. It never appeared to have had any repair work done at that time. Good thing, as accessibility wasn't too good. Les

From r390a at bellsouth.net Thu Jul 8 21:38:21 2004
Subject: [R-390] Black R390-a

Have you seen the amount of stuff this "radiograveyard" guy bids on on Ebay? I've not checked lately as to how much of it he has won, but he has outbid me on at least a dozen items in the past Does he just buy stuff and stack it in old busses or something just so the rest of us can't have it??? LOL Tom (not that Tom, the other one)

From ham at cq.nu Thu Jul 8 21:46:27 2004
Subject: [R-390] high dollar r-390a

Hi, There actually was an agency that liked their 390's painted black. There was a thread about all this back 4 or 5 years ago. I can't remember if it was CIA or NSA that thought black front panels looked cool back in the 1970's.

Of course the color *could* be the result of a particularly dramatic electrolytic capacitor failure

If the cabinet is "virgin" it should have a marking panel or decal on the top. The fact that the seller is not showing the top of the cabinet suggests to me that the magic marking is missing. It's looking more and more like a re-paint job. Take Care Bob Camp KB8TQ

From DavidBR549 at aol.com Thu Jul 8 22:00:47 2004
Subject: [R-390] PASSWORD THIS DOES HELP I WANT OFF THIS CRAP!!!!!!!!!!!!!!!!!!!!

From ham at cq.nu Thu Jul 8 22:04:58 2004
Subject: [R-390] Black R390-a

Hi, I am never sure even what I'm doing on eBay. Figuring out the rest of the loons is way beyond my ability.

One correlation I have noticed. The bids seem to get more and more strange the later you go on Saturday night. I suspect that ethanol may be involved.

I'm not sure that if I was trying to get top dollar ever seen for a R390 I would do it with a couple of cheesy low resolution photos. The more I look at the listing the more it looks like somebody who is semi-clueless. Take Care! Bob Camp KB8TQ

From ham at cq.nu Thu Jul 8 22:11:11 2004
Subject: [R-390] PASSWORD THIS DOES HELP I WANT OFF THIS CRAP!!!!!!!!!!!!!!!!!!!!

Hi, If you start out at <http://mailman.qth.net/mmfaq.html> and follow the instructions from there it should send you an email with your password in it. That password should let you proceed. Bob

From ham at cq.nu Thu Jul 8 22:21:23 2004
Subject: [R-390] 390 non A calibrator is not 200 kc

Hi, Locking up a multi vibrator over a decade frequency ratio is quite a bit more tricky than over an octave. I suspect that's one of the reasons why they went to 200 KHz in the later radios. Take Care! Bob Camp KB8TQ

From ham at cq.nu Thu Jul 8 22:29:34 2004
Subject: [R-390] high dollar r-390a

Hi, Your obvious mistake was to put up all those high quality pictures and to describe the radio in exhaustive detail. If you had gone for a few poor photos and almost no description you *obviously* would have gotten more money for yours.

Maybe we should deputize you to run over and check out the radio.....

One question - is that the right contract number for a '67 EAC ? I didn't check it against the list. It's certainly an EAC back panel with the gray terminal strips but I don't think the front and back match each other number wise ... Enjoy! Bob Camp KB8TQ

From ham at cq.nu Thu Jul 8 22:32:53 2004
Subject: [R-390] high dollar r-390a

Hi, Well if "unique" is what runs up the value then you obviously want some kind of multi color front panel scheme. Maybe orange on top and blue on the bottom with green in the middle. Naahh, just go for red white and blue gotta be worth more. Enjoy! Bob Camp KB8TQ

From ham at cq.nu Thu Jul 8 22:35:51 2004
Subject: [R-390] 390 non A calibrator is not 200 kc

Hi, The problem I am having with this is that I had *exactly* this same thing happen on one of my radios. The answer was something simple and stupid, like a wrong tube or a mashed over part shorting out to the one under it. Wish I could remember what it was. Once I found it the fix was simple ... Take Care! Bob Camp KB8TQ

From r390a at bellsouth.net Thu Jul 8 22:44:43 2004
Subject: [R-390] PASSWORD THIS DOES HELP I WANT OFF THIS CRAP!!!!!!!!!!!!!!!

you will see "List-Unsubscribe" that is a clickable link. It is <mailto:r-390-request@mailman.qth.net?subject=unsubscribe> As I said in my email to you before, simply click on this line. The list software will send you a message. When you reply to the message you will be unsubscribed RIGHT AWAY FROM THIS CRAP!!!!!!!!!!!!, erm, as you put it. Why are you yelling so anyway???? Tom

From Llgpt at aol.com Thu Jul 8 22:47:44 2004
Subject: [R-390] high dollar r-390a

Yes, it's correct. That one is the order number the other one that is commonly seen is the contract number, both came from the 10,000+ 1967 EAC run. Les

From redmenaced at yahoo.com Thu Jul 8 22:54:54 2004
Subject: [R-390] high dollar r-390a

+++++++

Six-color CAMO!! Joe

From bmg50pa at suscom.net Thu Jul 8 23:15:24 2004
Subject: [R-390] High Dollar eBay R-390A

Gee, I wonder if the seller would like to buy my R-725 for his reserve price...
<http://www.m82a1.us/radio/Front.jpg> Still haven't order that stuff yet, Roy. Got a few more antique radios to get off the bench, first. Mort Denison

From bipi at comcast.net Thu Jul 8 23:21:35 2004
Subject: [R-390] PASSWORD THIS DOES HELP I WANT OFF THISCRAP!!!!!!!!!!!!!!!

Why am I getting these e-mails sent to my own e-mail address? I did not send this message??????? What the heck is going on?????? 73 de Mike K7PI

From bipi at comcast.net Thu Jul 8 23:24:09 2004
Subject: [R-390] PASSWORD THIS DOES HELP I WANT OFF THISCRAP!!!!!!!!!!!!!!!

what the heck is going on....I never sent this e-mail...I just sit back and enjoy the posts here....I have never asked to unsubscribe and if I wanted to, I know how. This is not my post!!!! 73 de Mike K7PI

From hankarn at pacbell.net Thu Jul 8 23:35:28 2004
Subject: [R-390] Black R390-a

Hey guys, I do them in , Black/Red, Black/Wht, Gray/wht, Gray/black, Gold alodine/black and you name it. back side is white silk screen. Hank KN6DI

From w5or at comcast.net Fri Jul 9 00:27:56 2004
Subject: [R-390] PASSWORD

I've helped the gentleman get off the list. He may have had 3rd degree burns. Seems someone has set the list on fire while I was away from email for a few days. Don W5OR@comcast.net If all else fails email me and I will get you on/off the list.

From w5or at comcast.net Fri Jul 9 01:48:28 2004
Subject: [R-390] List Note

List Members, **It appears that the format of the messages being delivered TO list members has changed. The mailman software is including the destination address of each post in the mail header and the subscribed as address in the expanded tag line. Your address is only visible to you. Others see their own email as a destination, and their own email in the tagline subscription note. However, If you reply without editing you will repeat your email address. Confusing, yes, revealing, no. This isn't a change initiated by me, and I've received no mention of it from the qth.net admins, as of yet. Looks like it went into production today. Don W5OR@comcast.net List Admin**

From Dave_Faria at hotmail.com Fri Jul 9 11:02:58 2004
Subject: [R-390] PASSWORD THIS DOES HELP I WANT OFF THISCRAP!!!!!!!!!!!!!!!

GM list. I just got up to find several emails like this one. Apparently someone is posing as me and asking how to get off the list. I've only posted 3 times in the last week and its been months since I have posted. Amazing, simply amazing!! I see someone else has gotten a similar email. I'll just simply hit the "delete button" from this point. Bob are you the list owner - if you could look in the properties of the requesting email and see if it indicates the owner - thanks. Sorry list, it was not me who requested the info. It takes time and energy to alter an email and pose as someone else..... Thank you
Dave Faria/WASTEZ

From brookbank at triad.rr.com Fri Jul 9 10:26:02 2004
Subject: [R-390] PASSWORD

This David is the one that started this nonsense. I do not know why he sent the e-mail to me, unless he is one of those Dominican or Fransican friars, now I am afraid that Torquemada will show up at my door

From lurch at theramp.net Fri Jul 9 10:41:51 2004
Subject: [R-390] PASSWORD

NOOOBODY expects the Spanish Inquisition! Cardinal, fetch...THE COMFY CHAIR!

From john at gumlog.net Fri Jul 9 10:53:40 2004
Subject: [R-390] Some body is spoofing my old account!

Don Reeves and others, Please turn off FLAME mode. My e-mail account used to be r390a@cgcabletv.com. It has now been changed to r390a*gum10g*net. There is no way I would insult the members of this reflector with a statement like that in all caps. I do know my password, but cannot originate any messages on the @cgcabletv.net address.

The first one I saw with references to "THIS CRAP" was from davidbr549@, it too is probably a spoof.
73 John Bunting, W4NET

From chacuff at cableone.net Fri Jul 9 12:53:45 2004
Subject: [R-390] Some body is spoofing my old account!

Group, The davidbr549 id is valid. I received a couple emails directly from David a couple of weeks back enquiring about some R-1051 parts. He types all his messages in CAPS...I don't think he is yelling, just a bad typing habit....I used to do it...it was just easier. Quit doing it when I was told by several folks that it was hard to read that way...

Someone has changed the settings on the reflector software and it now goes to the individual instead of the group when one hits "Reply"....it goes to the individual and is copied to the group when one hits "Reply All". I think it used to be the other way around didn't it? I know I misfired several notes to the group instead of the intended individual when hitting "Reply" in the past.

John B's note came "To" me and was "Cc"d to the group even though it appears he didn't actually direct the note to me at all....I have to guess that's the way the reflector software is set up at the moment....making it appear that the mass list mailing is directed to you individually.... I sent this

message to the list only....how did it show up? Cecil...

From ham at cq.nu Fri Jul 9 22:53:49 2004
Subject: [R-390] Confusion

Hi, Ok so if I understand this right

- 1) We had a hijacked email account and that generated a bit of junk on the list
- 2) Mailman for some obscure reason decided to change around the way it mangles headers
- 3) Since i was poster of the day yesterday the whole world decided I was going nuts (again
- 4) Maybe I did go nuts, if so it was unintentional, unlike my prior insanity which I take full responsibility for (except the part they made me do

So if I did do something weird yesterday - sorry about that!!! Take Care! Bob Camp KB8TQ

From ham at cq.nu Sat Jul 10 08:58:30 2004
Subject: [R-390] Wore out the poor server

Hi, Well looks like we totaled out the entire qth.net site with the increase in traffic on the R-390 list. There are only just so many electrons to go around So let's see what it is doing with headers when it comes back up. Enjoy! Bob Camp KB8TQ

From ham at cq.nu Sat Jul 10 11:34:20 2004
Subject: [R-390] Magic Server

Hi, Well I suspect that the total number of hours spent actually working on R390's went up a bunch with the server going a bit weird....

Here's a question for the group - Based on popular legends we left a *ton* of R390's in south east asia.

With contacts to that part of the world opening up, has *anybody* seen any signs of those radios showing up on the market? The storage conditions probably are not the best, but we certainly store them out in the rain for years over here. There certainly are a lot of other interesting radios showing up from dealers in China, but I have not seen any R390's. Take Care! Bob Camp KB8TQ

From AB3L1 at aol.com Fri Jul 9 14:16:51 2004
Subject: [R-390] Black R390-a

writes: Have you seen the amount of stuff this "radiograveyard" guy bids on on Ebay? I've not checked lately as to how

Yup, he is usually the first to bid on a lot of items. After you bid you can access the "contact the seller" mode. Maybe he tries to work a deal offline....?? I was going to buy a 75A-1 from him at one time. He was carting a vehicle for business in the nearby area and said he would bring the radio with him. I guess

he buys where he can pick up his winnings also. Bob

From odyslim at comcast.net Fri Jul 9 21:08:52 2004
Subject: [R-390] Attn: Mosie Starky from Oregon !!!

Mosie Starky, Please contact me off the list. I have some information for you. Anybody know Mosie?
Please forward this to him. Scott W3CV

From rbethman at comcast.net Fri Jul 9 15:28:58 2004
Subject: [R-390] OT - BUT - Very PERTINENT

List, This not the first time a list member's address was spoofed.

About a year ago, we had an issue of a list member's address being used to send a virus to various members. I had captured ALL header info, passed it to Don and Al. I also sent the specifics to ths FBI.

It doesn't take anything but a PC based SMTP agent (Internet mail program), some NASTY knowledge, AND one or two READILY available tools. I've been in the computer biz for 17 years. I've demonstrated this to investigators during a stretch in the Pentagon Email and Network control center.

I'm collecting headers right now to try and trace this to its source.

For Don and Al, STRONGLY suggest closing access to Email addresses in OPEN ACCESS archives!
This would REALLY reduce probabilities of additional occurrences. It would restrict the possibilities to list members only. Bob - N0DGN

From pulsarxp at earthlink.net Sat Jul 10 01:32:02 2004
Subject: [R-390] RE: Ole and Lena: (Oil for the R-390As)

Ole, a friend of mine in Minnesota sent me a box that had some 3 in 1 oil and some WD-40 in it. Ole said he did not need this anymore and that maybe I could use it to fix my R-390As. I asked Ole why he could not use the oil anymore and this is what he told me.

>> So anyway, late one night, Lena wakes Ole and
>> says,"I tink its time!" So Ole fired up the Yohn Deere
tractor
>> and took her to the hospital to have their first baby.
>>
>> She had a little boy, and the doctor looked over at Ole
>> and said, "Hey, Ole! You yust had a son! Ain't dat great!"
>>
>> Vell, Ole got excited by dis, but yust den the doctor
>> spoke up and he said, Hold on! We ain't finished yet!"
>>
>> The doctor den held up a little girl.
>> He said, "Hey, Ole! You got you a daughter!"
>> She's a pretty little ting, too ... Ole got kind of puzzled
>> by this, and then the doctor said, "Holey Moley Ole,

>> we still ain't done yet!"
>>
>> The doctor then delivered another boy and said, "Ole,
>> you yust had youself another boy!" Ole was flabbergasted by
> this news!
>>
>> A couple days later, Ole brought Lena and
>> their three children home in the self propelled combine.
>> He was real serious and he asked Lena, "How come
>> we got tree on the first try?"
>>
>> Lena said, "You remember dat night we ran out of Vaseline
>> and you vent out in the garage and got dat dere 3-in-1 Oil?"
>>
>> Ole said, "Yeah, I do. Uffda!, it's a damn good ting I didn't
> get the WD-40!

So that is why Ole sent me the 3 in 1 and the WD-40. Now I am going to have to find more R-390As to restore to use up this oil.

Lee, w0vt

From mjmurphy45 at comcast.net Fri Jul 9 17:26:28 2004
Subject: [R-390] 390 non A calibrator is not 200 kc

Good job Tom, Always read your manual. Mike WB2UID

From: wak9 at cornell.edu (William A Kulze)
Subject: [R-390] re:R-390a Ballast thread

Some of the stuff I've seen here reminds me of some HP engineers I saw going through a cornfield maze carrying calculators, gps units and aerial photos of the maze that appeared in the local paper. (this is a true story)I've had three 150 ohm 5 watt resistors in parallel in my old Motorola since about 1991 and it's run stable enough to do HF Fax into my PC. Of course, I guess I'm not too demanding. Numbers and Specs are fine, but Hey, how's it work? Bill Kulze

From r390a at bellsouth.net Fri Jul 9 11:26:11 2004
Subject: [R-390] Balanced Antenna Connectors Available

Someone asked about the twinax antenna connector availability offlist, and I will pass along the info here. This is a standard IBM Twinax Network cable connector and is still being produced (regardless of occasional ebay listings selling them as "rare" for \$20 each.)

There are two part numbers that are current with Amphenol.

Amphenol 82-5589
Amphenol 82-5589-RFX1

The two connectors are identical but for price.

The first one is fairly expensive, the second number is listed as a "low cost commercial version" of the first number and the last couple I bought were purchased locally for a bit under \$5. Mouser lists them in their catalog under those same part numbers. (www.mouser.com)

AMP/Tyco also produces this connector, and I have gotten them locally for about \$3, but can't seem to find the part number for them. 73 Tom NU4G

From saglek at videotron.ca Fri Jul 9 11:57:01 2004
Subject: [R-390] How to get Off This List

To All, I received the msg below last evening. I did not open it until after receiving the msg from DavidBR549 about 11:15 PM. I also did not request any password info.

There are nuts all over this world of ours. Don't know if any of you have heard about the Popup scam here in Canada. A Popup appears and if you attempt to delete it software is downloaded that allows another computer to use your phone line to dial long distance. Now Ma Bell, (Bell Canada) in her good conscience will bill your account with all these charges. Some customers have bills up to \$2000. Ma has threatened to remove service if these bills are not paid. Radio talk shows have latched on to this and as a result Bell has agreed to block the exchanges involved. There is talk about a class action suit against Bell for not informing the public. This was/is a gold mine for Bell. The story continues

Apparently these scams originate in the middle east with the knowledge and support of the local governments. Another attempt at economic terrorism which we are losing. Al

From roy.morgan at nist.gov Fri Jul 9 13:44:30 2004
Subject: [R-390] Calibrator tone every 90 Khz

wrote: >Truly and almost unbelievable is the ability to be driven in KHz and put >out in KC. It is also rumored that the circuit can be driven with KC and >it will put out KHz

Bob, PLEASE be careful here. You may start a discussion of the closely related "Cross Field Antenna".

You know, the one which works on the idea that Maxwell's equations are wrong? Where you can get the performance of a full size antenna from a thing the size of a bread box? The one which career physicists and antenna engineers don't believe? The proponents of which, when pressed to explain how it REALLY works, start claiming that no one understands the principles?

>It's all part of the great SI conspiracy

By the way, if you want to learn all about how to specify units in standardized form, see this link: <http://physics.nist.gov/Pubs/SP811/> "Guide for the Use of the International System of Units (SI)" Roy Morgan, K1LKY since 1959 - Keep 'em Glowing!

From r390a at bellsouth.net Fri Jul 9 18:57:56 2004
Subject: [R-390] An ON TOPIC ballast replacement question

A while back someone had come up with a ballast replacement that used a bridge and instead of a simple transistor arrangement it used a voltage regulator? Anyone have a recollection of that design or did it get mentioned and lost in the past weekend's clam bake? thanks Tom NU4G

From r390a at bellsouth.net Sat Jul 10 12:52:10 2004
Subject: [R-390] Magic Server

Probably like a lot of things that "came back" from SE Asia, they were demilled by tossing into the ocean. I suppose if you were good diver, or knew any divers, you could probably come up with as many as you could haul away, as well as jeeps, helicopters, etc. T

From richardlo at admin.athabascau.ca Sat Jul 10 16:02:39 2004
Subject: [R-390] KC KHz and SI units

wrote: > By the way, if you want to learn all about how to specify units in standardized form, see this link:

Hey Roy, I don't need any list. I know all the SI units by heart:

10¹² microphones = 1 megaphone
10¹² pins = 1 terrapin
10⁻¹² picolos = 1 pico-boulevard
10²¹ picolos = 1 gigolo
10 rations = 1 decoration
10 millipedes = 1 centipede
1 centipede/second = 1 velocipede
3-1/3 tridents = 1 decadent
5 holocausts = 1 pentecost
10⁶ bicycles = 2 megacycles
10⁹ micrometers = 1 kilometer = 200 pentameters
10 monologues = 5 dialogues = 1 decalogue
2 X 10³ millinaries = 4 seminaries (*) = 1 binary
10⁻⁵ dollars = 1 millicent
1 milli-Helen = the amount of beauty required to launch one ship
nano nano = a prefix designating 10¹⁸

Courtesy of Earl Rogers in "EE Times" 17-Aug-1981

From k4kwm at hotmail.com Sat Jul 10 15:25:38 2004
Subject: [R-390] Black R390-a

I sold him a couple of 30S1's and he came to my house in the Dayton Ohio area as he was delievering a corvette around here. Also got a basket case 32V2 from him as partial trade. Took 2 years to restore it but it is now a thing of beauty. See it at <<http://www.qsl.net/k4kwm>>. Pete is a nice guy and great to deal with. And yes, it does seem like he bids on everything. Guess if you bid on enough stuff you are bound to get some at the price you want to pay. John John Page K4KWM (ex W8PKU, N8BLB, NA8O)

From ham at cq.nu Sat Jul 10 15:50:02 2004
Subject: [R-390] An ON TOPIC ballast replacement question

Hi, Ok, here's the "bridge" version of the ballast tube replacement: You wire up a normal four diode full wave bridge rectifier to the two ballast tube pins (2 and 7 as I recall). The "ac" pins on the rectifier go to these pins.

On the "dc" side of the rectifier you put a 47 uf capacitor (to keep the regulator stable) and a nice normal three terminal regulator. Five, 3.3 and 1.25 volt regulators all seem to have been used at one timer or another.

Another capacitor, also a couple uf goes on the regulator output (also for stability).

Finally you put a load resistor on the regulator output that will pull 300 ma at what ever voltage your regulator puts out.

Since the load resistor is on the constant voltage side of the regulator it will always see the same voltage and thus always pull the same current.

The net result is a solid state DC constant current sink hooked up to do AC.

The down side is that the AC current flows in pulses rather than as a continous current. Thus you get RFI. You can play with the value of the 47 uf capacitor to make the pulses wider. The lower the value of the capacitor the wider the pulses and the more ripple at the input to the regulator. You have to stop dropping the value of the capacitor when the ripple gets so great that the regulator drops out.

No matter how slick you get with the value of the capacitor you will still have pulsing current, it's only a matter of how much you get. Also remember that a proper AC current waveform goes from zero to 1.414 times the RMS current during each half cycle. This little gizmo would be perfectly happy if the current was a square wave at the RMS value

All that said the circuit does work. If you have significant amounts of time when your line voltage swings from 95 volts up to 130 volts then I would strongly recommend you use something as ballast Take Care! Bob Camp KB8TQ

From ham at cq.nu Sat Jul 10 15:56:03 2004
Subject: [R-390] Lots of R390's

Hi, Well this is all very much third hand information so it may be (and probably is) a whole bunch of BS. The story goes that there where a significant number of radios (as in thousands) that never went through any kind of de-mil process. We simply left them in place. Last time they were seen they were in a warehouse or com hut or what ever in perfectly fine shape. Forty years later they are not going to still be in perfectly good shape, but they would still exist.

We are seeing stuff come out of China that obviously went over there before 1948. It's coming out now simply because trade relations are opening up.

If the stories are not BS then we eventually should see some 390 stuff show up from over there as well as things loosen up. So the question is, how real are the stories? Take Care! Bob Camp KB8TQ

From r390a at bellsouth.net Sat Jul 10 15:49:19 2004

Subject: [R-390] Re: OT - BUT - Very PERTINENT

Bob That is an *EXCELLENT* idea. Yahoo does not show emails in its archives unless someone does not trim the headers in a reply or includes it in a sig line. Not sure how easy it would be for the mailman list software to do.

It's *very* easy to spoof email addresses. A bit harder to spoof IPs but easy enough a 14 year old could do it.

The spam harvesting software out there these days is phenomenal, it can "spider" millions of web sites, usenet and email servers. While the web sites are public and an easy harvest, some news, FTP and mail servers might take more work. These programs scan and bang away till it finds a hole to sneak into and can harvests from these too.

The spam packages I find the most annoying are the ones who simply scan the net for domain names, then generate a methodical list of possible users and mass send to a particular domain, making a record per domain of bounced emails so it won't try them again next time. Most of these programs can harvest and generate millions of addresses per day.

From ham at cq.nu Sat Jul 10 16:05:08 2004

Subject: [R-390] Small Voodoo Antennas and Maxwell's Equations

Hi, If Maxwell is right (and in better than a century nobody's proved different) then you can make some pretty neat smaller antennas. The problem is that nobody has ever figured out how to do a good enough job of it.

This actually gets back to another R390 issue I keep fishing around on.

One of the ways to do a "compact dipole" is with a small resonant loop. The output impedance of these things can be almost anything depending on their design. They are inherently a low noise balanced antenna and you mess them up a bit when you convert them to a balanced line. The lowest noise configurations are generally shielded and balanced.

Now let's see, shielded balanced antenna that may have an unusual impedance. What radio's antenna input does that bring to mind?

So far I have found absolutely no evidence that such an antenna ever figured into the design of the 390, but I keep fishing. Enjoy! Bob Camp KB8TQ

From rbethman at comcast.net Sat Jul 10 17:07:42 2004

Subject: [R-390] Small Voodoo Antennas - a Vertical!

Hey Gang! Take this in another direction. Using one of those 50 ohm antenna connectors, I attached two fiberglass arrow shafts. I joined them together with a 1/4" dowel. I wound its length with #26 enameled wire VERY tightly and closely wound.

I have NO idea as to its impedance. BUT - my den is mostly below ground level. The reception is AS GOOD as an outdoor antenna of either dipole or any other I've strung! The R-390A loves it and performs flawlessly. YMMV. But it sure works for me! Bob - N9DGN

From ham at cq.nu Sat Jul 10 18:13:32 2004
Subject: [R-390] Small Voodoo Antennas

Hi, The wire wound arrow shaft antenna working well is actually a proof of Maxwell's fifth equation which more or less states "the antenna you count on the least will always work the best".

Most of us go (myself *very* much included) go overboard on receiving antennas most of the time.

Transmitting antennas are a bit of a different story. A lot of the theory we are taught applies only to a transmitting antenna. Which parts of the rule book apply to which kinds of antennas is rarely made clear either in the text books or in class. Often the reaction of anybody who has used an antenna is "electromagnetic theory is bunk". It's not bunk, it's just so complex that they rarely teach it in a comprehensible fashion.

If you sprinkle a bit of salt (maybe a bit more than most people would) on a damp piece of yarn (say very damp) looped over the back of a chair (a large chair) and hook it to your R390 whip antenna input. It is acting as an adequate antenna *if* the radio noise level (front end noise + antenna noise) rises when it is connected to the radio. It may not be the best antenna you could have but it is doing a job for you. For the full recipe and other exciting details on this dish please visit our web site

A lot of modern antennas are amazingly small by the standards of days gone by. One excellent example of this is an amplified whip antenna that a bunch of the guys from this list came up with. It uses a very expensive FET running hot enough to cook an egg. Very good performance from sub 100 KC up through 30 MHz (it even does that little trick as well ...). Most loran-C antennas are *very* small when you consider the wavelength of a 100KHz signal.

Most of us have more trouble from local noise than we used to. A small antenna located far from, or maybe at right angles to a noise source may be a better bet than a nice big one that runs right into the noise.

Soon by virtue of broadband over power lines we all will be able to get a *lot* more experience with this sort of thing. Or I suppose we could just stop playing with radios. Then we could turn this into a full time humor list Take Care! Bob Camp KB8TQ

From rbethman at comcast.net Sat Jul 10 18:21:24 2004
Subject: [R-390] Re: Small Voodoo Antennas

Hello! I am a LIVING experiment of BPL! Manassas, VA is running it currently. I hear EVERY burst from 2Mc up through 30Mc!

I HAVE to get out the reel to reel tape deck and start recording for both the ARRL and the City Council. Maybe even the FCC! It very DEFINITELY detrimental to the HF bands as a whole. FEMA definitely WILL have problems, along with us.

I agree that almost ANYTHING makes one darn good receiving antenna. My own little arrow shaft vertical was more than proof to me. The thing that started that project was looking at the collapsible whip on TOs and my Mohican. Bob - N0DGN

From ham at cq.nu Sat Jul 10 18:58:44 2004
Subject: [R-390] BPL

Hi, I have no doubt that a lot of government services that still rely on HF will be impacted by BPL. Their boss has signed up for the plan and they know who calls the shots

The "service" is nicely set up so it avoids the AM broadcast band and stops before it gets to the low end of the VHF FM public utility band. Somebody knows who not to bother. The public utility stuff still includes the police (Headline "BPL allows felon's escape ...") and the AM band has Howard Stern as a defender.

I am amazed that there has been no obvious reaction to this stuff from the short wave broadcasters. Obviously the BBC is gone, but there are still a few out there from countries that we talk to .. (hmmm , may be a short list ...).

The military has been going to satellite in a big way so HF is not as big a deal for them. I suspect that one of these days the lack of a working HF backup system will get them though. How many R390's did they haul out in the Gulf War ? Those radios were *not* talking to satellites.

The shame of it is that cable is getting so much faster year by year that they will be selling 9600 baud modems by comparison when they roll the thing out. I keep wondering if their main desire is to legally control their own equipment rather than sell the service to others. Obviously this is a hot spot with me sorry for the rant. Bob Camp KB8TQ

From rbethman at comcast.net Sat Jul 10 19:17:17 2004
Subject: [R-390] Another ballast tube replacement

All, While digging around the proverbial "junque" box, I stumbled across something from MANY years ago. It MAY prove to make another replacement for ballast tubes.

This particular item is an S)-239 connector with a GE-47 bulb soldered in. It also has a red flexible translucent tip. These were sold approx 20+ yrs ago as <cringe> CB dummy loads.

If this took the 4 watt carrier AND the modulation, AND provided a 50 ohm load, THEN a #47 soldered with wires one then inserted into pin 2 the other into 7, it SHOULD replace the ballast tube. NO RFI. Bob - N0DGN

From rbethman at comcast.net Sat Jul 10 19:28:04 2004
Subject: [R-390] New addressing to list method(s)

ALL

Send TO: R-390@mailman.qth.net

If you want to also include someone else on the message - use BCC: <their address goes here>

The apparent software change/upgrade made the reply functions act funny AND flood the mailman.qth.net servers.

By the way - one or two (I specifically remember ONE - Dave B.) requested my recipes for Kielbasa

and Pirogi. Are there any others? Respond direct. If enough do - it *MAY* be posted to the list! Bob - N0DGN

From ham at cq.nu Sat Jul 10 19:44:19 2004
Subject: [R-390] New addressing to list method(s)

Hi, Well there's only one small problem with the proposed solution - my email client does not include a BCC: option. It's certainly standard on a Windows machine but not on the vacuum tube based software I run here. I've already posted an antenna recipe to the list so I think that other food items are in order (or maybe on order) Fun Fun Fun Bob Camp KB8TQ

From rbethman at comcast.net Sat Jul 10 19:56:28 2004
Subject: [R-390] New addressing to list method(s)

Well - apparently multiple TO: s works also! Oh lord - my knee is twitching. Where is my Polish cookbook..... Bob - N0DGN

From hcjoel at direcpc.com Sat Jul 10 20:20:07 2004
Subject: [R-390] Small Voodoo Antenna

a bit of history about antennas, if you care.

As a youngster (1943) I was fascinated about anything radio related. Living in a boardinghouse for out-of-town highschool boys, some of us got into a contest (I could call it now a DX kind) to see who could pull in the most distant AM station using a crystal set. Chrystal sets were the only type of receiver we could indulge in (private listening, small, no AC power, etc). We had them on the small bedside table. Antennas!!! where to put them? Most just had a short hank of wire laying under the bed. There were two tall and unused flag poles about 50 yards in front of the building. My bed was next to the second floor window and reading about long-wire antennas I decided to "hoist" my antenna up there. On a week-end, with all the other boys gone home, I put a small wire loop around one pole, affixed a porcelain egg and attached one end of the antenna wire. Then attached a string to the loop and hoisted it up to the top (30 plus feet). Doing the same on the other flag pole, but just fed the wire through the eye of the insulator so it could move. Went up to the fourth floor attic and threw a long string to the ground to hoist the loose end of the antenna up. Down to attach the wire to the string then up again to the attic. Attached another insulator next to the roof line, then tightened up good on the antenna wire. Down at ground level I yanked hard on the halyard of pole number one to break the string. Now I had my long wire. Fed the down leg through the window. Presto. I won the DX contest by routinely receiving a strong signal from BBC London at my location in upper Bavaria. This was only possible when ALL AM stations shut down during air raid warnings. The other contestants wanted to know how I got the antenna up there. I led them to believe that I shimmied up on both poles. They were suitably impressed. PS: Listening to BBC was considered a criminal act by the Nazi powers, which made my private listening even more enjoyable. I can still here the station break audio of a deep kettle drum spelling out the V for victory morse code. They had a regular program on BBC named English by Radio which I enjoyed a lot. I have other early radio memories, but this is my favorite

From rbethman at comcast.net Sat Jul 10 20:54:29 2004
Subject: [R-390] Manassas BPL

Well, I've used the R-390A and <groan> a TS-930SAT to narrow it down. The bursts show s-5 on the Kenwood at 1.616Kc. At 29.6Mc it doesn't move the needle so much as it IS a constant audio pop. The results are the same on the R-390A. I just used the Kenwood to provide S Units for description. As I have said before - I live in the part of the city that the power is UNDERGROUND. I've put up to 5 rf toroidal chokes on both radios power cords with NO effect at all. It is definitely radiated! Now where is riley Hollingsworth's email address. I know I've seen it..... Bob - N0DGN

From Llgpt at aol.com Sat Jul 10 21:11:45 2004
Subject: [R-390] Small Voodoo Antenna

What a great story! radio was magic then and still is to me. Les

From barry at hausernet.com Sat Jul 10 21:13:12 2004
Subject: [R-390] Re: Small Voodoo Antennas

There was the first Manassas and then the second Manassas. Is this the third Manassas? The one where everyone loses except the power company. I've been hearing some buzz-sawing on my car radio in places where I've never heard interference before. You say it starts at 2 Mhz and goes up from there? Been a computer guy since the 60's but there are limits. Meanwhile, my 2.4 Ghz 802.11g setup keeps fading in and out, just going maybe 30 feet. Maybe they can get broadband to work through the sewer systems. Then, at least, we could install shielded toilet seat covers. Barry

From wb5hak at sirinet.net Sat Jul 10 21:17:12 2004
Subject: [R-390] Small Voodoo Antenna

Fantastic story, Harry!! Remember my first rig, an Knight Kit Span Master that wasn't much more than a crystal rig, but still introduced me to the world of shortwave radio. I built it, and after help troubleshooting, a 10 year old boy was amazed at what he could hear!! Thanks for the memories, Harry. 73, Don, WB5HAK

From rbethman at comcast.net Sat Jul 10 21:26:14 2004
Subject: [R-390] Small Voodoo Antenna

I can't even begin to equal it! My first experience in the 1950's, (Give me a 'little' break - I'm only 54!), My Uncle was living in the bedroom in the attic area. He had a S-38. I got mesmerized just listening to it. He even let me take knob in hand to search around. Bob - N0DGN

From ham at cq.nu Sat Jul 10 21:38:42 2004
Subject: [R-390] Small Voodoo Antenna

Hi, A very interesting story. I never had much luck with crystal sets past the local stations. Of course I did not have your devotion to putting up a real antenna for one either.

My first radio was a five tube Philco with a slide rule dial. It came as a hand me down from a distant uncle. If I remember correctly there were two short wave bands on it and everything up to maybe 12

MHz was crowded into two passes on a six inch slide rule dial. Most of the short wave bands were about the width of the dial pointer.

The radio got used for an occasional listen on the local AM stations until one day I tried the band switch. The radio was reputed to not work on short wave so I had not tried it up there. Not much happened and I more or less gave up. A couple of days later in moving things around I noticed the antenna connector screws on the back of the radio. As an experiment I hooked up a short chunk of wire and tried the short wave band again. Amazingly enough Radio Netherlands was coming in just fine ... I was hooked

Eventually the antenna evolved into about eight turns of wire around the ceiling of the bedroom. Nothing longer than ten feet was made up of wire from the same source. I kept adding more wire and rubber bands and stuff as I found them. It was amazing just how easy it was to convince my self that every modification made things work better. Never had as much fun with any radio setup as I did with that one. Take Care Bob Camp KB8TQ

From jmiller1706 at cfl.rr.com Sat Jul 10 21:57:35 2004
Subject: [R-390] Manassas BPL

As I understand BPL (which isnt much) it comes right to the wall outlet. That's the sell feature, your internet comes in on the same plug as power. So it may be in your house. I wonder if a heavy duty RF filter across the power main coming into the house would help? Yje ARRL is trying to fight it and needs support. www.arrl.org

From jmiller1706 at cfl.rr.com Sat Jul 10 22:05:19 2004
Subject: [R-390] Lots of R390's

Rumor has it that crates of unopened Collins radios were buried in "mass grave" trenches in Viet Nam during the last months of the war, before we left the country. Maybe an archaeological expedition is in order?

From ham at cq.nu Sat Jul 10 22:31:05 2004
Subject: [R-390] Manassas BPL

Hi, An awful long time ago I had some exposure to "carrier current broadcasting". This is a wonderful idea where you transmit AM directly into a building's power system in order to provide a listening experience for all the occupants.

The first thing you find out is that power lines were not designed as RF transmission lines, even at AM radio frequencies. The impedance between the conductors is well below an ohm at RF. You need to feed a lot more into the lines than you might think to get anything useful to happen.

The next amazing thing was that after you got all that power in there it would pop up all over the place. We would get hot spots as much as a couple of blocks away. This happened at power levels that just barely covered the building that was our target. Multiple feeds to the building made things even more exciting. Nulls and peaks all over the place.

If it's that tough to control at 500 KC then it's going to be a whole lot harder to control at 30 MHz. The primary and secondary power distribution systems were never intended to be part of an RF system in the

first place. Anybody who has ever had a RFI complaint into them can tell you just how good they generally are at RF.

The cable company runs a system that is designed from the ground up to be RF tight. Finding their carriers floating around in free air is awfully easy. It doesn't even take a R390, you can do it on a rice box. Even with that kind of system they have an awful time tracking down problems as well. The power company won't be any better.

The one hope is that the combination of complaints and competition will make this a system that nobody ever makes any money off of. If so it will die out. Remember the woodpecker back in the 1980's - it died eventually. If this thing interferes with what you want to do on HF COMPLAIN ABOUT IT TO THE FCC. The guy that comes around every couple of years looking to get re-elected to the House of Representatives might also be a good one to talk to. This is especially true if elections in your area tend to be closely contested. Boy .. this has me going even harder than the ballast tubes ... Take Care! Bob Camp KB8TQ

From rbethman at comcast.net Sat Jul 10 22:34:04 2004
Subject: [R-390] Manassas BPL

Yeah! BUT I'm the one living with it! Bob - N0DGN

From ham at cq.nu Sat Jul 10 22:35:39 2004
Subject: [R-390] Lots of R390's

Hi, Well we also turned an awful lot of stuff directly over to the ARVN when we left. I'm not sure how much or in what condition. Certainly you can find reports from travelers over there that talk about all kinds of gear still running around in one shape or another.

Of course the victors may have converted everything they found into Coke cans. They were not all that fond of the masses having radios that would tune the world Take Care! Bob Camp KB8TQ

From ham at cq.nu Sat Jul 10 22:38:12 2004
Subject: [R-390] Manassas BPL

Hi, But soon we will *all* get to live with it. Guys - if they hold hearings in your area on this stuff go and complain about it. It's going to mess you up.... Take Care! Bob Camp KB8TQ

From wa9msd at ggnet.net Sat Jul 10 23:18:03 2004
Subject: [R-390] Manassas BPL and I Vote!

It's a good start to go to any public hearings that are held in your area but this is coming from the fcc. Their policy is to encourage development of this kind of broadband access. It is being sold by saying that it will open up under served rural areas, which I doubt will happen. I think things are past the point of no return but I plan on taking the action that I can as follows:

1. I have set up a meeting with a US congressman from Chicago that I know and will do the same with my local congressman here where I live (Indiana).

We can all contact our congressman's office and set up a meeting (be persistent, groups are better). Our local democratic congressman is NOT supportive of Bush as it relates to Power companies but is not familiar with BPL. I plan on opening his eyes.

2. I sit on several committees with our local town council, I have and will make my position know and bring out the issues.

3. This is really coming from the Bush administration through the fcc. Those of you/us that are republicans need to contact our local republican headquarters and voice our concerns and rights. The local politicians are more sensitive to our voices than those in distant places.

4. VOTE, if this issue is important enough to you "through the bums out!" If you are in a swing state call your local public radio station (NPR has broadcasted several reports on this) and raise this issue. If any of you are broadcast engineers, talk (shout) to your news people. If anyone has any other ideas please share. 73, Joe WA9MSD

From frledda at comcast.net Sat Jul 10 23:39:51 2004
Subject: [R-390] Manassas BPL and I Vote!

If you give me enough money, I will love BPL..... thank you for ruining my hobby
<http://ww3.komotv.com/Global/story.asp?S=1969228>

From ham at cq.nu Sat Jul 10 23:55:32 2004
Subject: [R-390] Manassas BPL and I Vote!

Hi, I totally agree that you are far better off with a local approach. The ARRL has tried the "top end" approach and at this point has very little to show for it. As far as I can tell there are no other major organizations involved in opposing this mess.

I realize that radio manufacturing isn't the big deal it was back in the days of the R390 but it can it be so dead that they simply do not care about the market going away all together?

My observation also is that this looks a lot like a "fix is in" type deal. I'm not sure what level the real involvement is at though. Judging by the comments that get made who ever has done the selling did it clear up to the top.

We do have an issue versus most of the rest of the world when you look at broad band access. Places like Korea have us beat all to hell. We do have a problem that could be fixed. I just don't like this solution. It throws out the entire HF spectrum.

At least locally the cable modem outfits are outselling the phone line guys about 4:1. The satellite based broadband providers don't even show up on the charts. The very odd thing is that even out here you can in general only get one option at a given location. Either you are in an area that is covered by DSL and not cable or it's covered by cable but not DSL. Competition by not competing I guess.

If BPL goes the same way it will only go into areas that are not already served. To your point the only areas left are those that cable does not get to. If all of rural America gets BPL that is a lot of miles and miles of wire running BPL.

Let's see, the bigger the antenna gets with a constant level of current in the entire wire the power goes to where Even if you don't have BPL on your street it's going to get to you one way or the other.

The R390 is a great radio. It has a lot of sensitivity. It's biggest claim to fame is that you can dig out signals nobody else can get to. That's all based on what you had to deal with in days gone by. BPL is more like having another station on top of the one you are going for. No matter how good the radio is you are not going to tune it in. I probably should go find a suitable anesthetic .Take Care! Bob Camp KB8TQ

From stevehobensack at hotmail.com Sun Jul 11 07:55:33 2004
Subject: [R-390] Another ballast tube replacement

I think it was a PR16 flashlight bulb.Steve...KJ8L

From jmiller1706 at cfl.rr.com Sun Jul 11 08:24:42 2004
Subject: [R-390] Manassas BPL and I Vote!

Some more ideas for the BPL issue: The cable and DSL companies surely have a vested interest in competing against BPL. What is their strategy? How do they plan to compete against BPL? Help them compete.

The HF radio companies (Rockwell-Collins, Harris, Icom, others) must have a vested interest. Their market is about to be depleted by BPL. What is their strategy to stop it? Help them

Licensed hams with high power amplifiers can make themselves heard, so to speak, in areas where BPL is operational. If BPL comes to my area I will become more active in contests than ever before, full legal limit, 24/7, with a high gain beam aimed right at the power line or, if I'm lucky, right at a BPL "box" on the power pole. Interference can go both ways, right? Oh gee officer, I didn't know a transmitter could interfere with a power line. Show me the law.

Turn it into an opportunity. They sell noise cancellation devices to put in the antenna line right? MFJ sells some simple line noise cancellation boxes that use phase cancellation to null out line noise. Could a more sophisticated device be devised to nullify BPL noise before it reaches the receiver front end?

Learn more about the BPL threat to our hobby. <http://www.arrl.org/>

From k4kwm at hotmail.com Sun Jul 11 09:03:51 2004
Subject: [R-390] Manassas BPL

Someone on here asked about Riley Hollingsworth's email. It is "Rholling@fcc.gov" John John Page K4KWM Hollow State since 1953 (ex W8PKU,N8BLB,NA8O)

From ham at cq.nu Sun Jul 11 09:24:15 2004
Subject: [R-390] Manassas BPL and I Vote!

Hi, As far as I can tell the whole strategy in the DSL / Cable competition is to not compete. Somehow they split up the map and you get one service in area A and another service in area B. Obviously there

must be an area C (probably rural past the end of the cable) that neither one of them want to service. It's an odd way to compete but that seems to be what they are doing.

The radio companies are the ones that I would *think* would be more active on this. My only guess is that most of their money comes from government contracts these days. The part of the government that controls who gets which order seems to have spoken out pretty loudly on the topic of BPL. The ham radio end of the business seems to have been a loss leader for the Japanese radio companies for quite some time. The SWL business is not exactly a hotbed of new designs these days. That would suggest that it is even less of a profit maker for them than ham radio.

A high power amp is a cute way to go on the transmit end of things but it does not help much on receive. If the BPL crud is 20 db above the noise then you would need about 10 KW to get back to an even footing. Since BPL is spread spectrum a narrow band signal will not give them as much trouble as you might think, More or less: they are only running a few milli watts per hertz but they do it over a lot of hertz.

Noise cancelation is an interesting approach. It's got to help to some extent but the signal is a lot like the good old woodpecker over the horizon radar. It's not easy to take care of.

One of the major tag lines that the BPL guys use runs something like "all the people who are against us still use vacuum tubes". The fact that they feel this is an effective line suggests that we may not have been very good at explaining what we do to our friends and neighbors. A little PR for our "strange hobby" may be in order. The local TV station seems to put all kinds of unusual stuff on the air from time to time. I'm not sure that a R-390 would be out of bounds compared to the sauerkraut wrestling competition that was just on the news here ...

One other approach is to get in touch with the people who realize what this is going to do to them. The guys at the head of the agencies may be so political that they can double think themselves into anything. At some point below them there *must* be people who actually have to make the systems run. They can't make them run by wishing it was true. They must have a story to tell. They need a way to tell it Since they are radio guys they may share a hobby with us. It's not just FEMA, the FAA spends a lot of time on HF talking to planes over the oceans. They do it from a few towns down the road here. If I can't hear a weak signal then they can't either.

There is quite a group of people who *should* be bothered by BPL. It's not just an issue for one group and not for the rest of the HF users. What seems to be missing is a realization of just what this is going to do to all of us.

One way of looking at this is that it's too late to do anything. I don't think this is the case. There are no "real" BPL systems out there yet only a couple of pilot projects. The whole thing will most likely go through several rounds of technical changes before it gets deployed. It's crazy to think you can stop this, but you probably can get them to design it for less impact than it has had in the pilots. The way to do that is to demonstrate that a lot of people complain when they put a system in at the power levels they ran on the pilot systems. Obviously I'm still looking for my bottle of Valium Take Care! Bob Camp KB8TQ

From jmiller1706 at cfl.rr.com Sun Jul 11 09:40:40 2004
Subject: [R-390] Manassas BPL and I Vote!

There is a BPL conferenc in Orlando this month. Interesting insight into the mindset of BPL marketing: <http://www.iqpc.com/cgi-bin/templates/document.html?topic=233&event=4929&document=41137> The overview theme: "It Doesn't Take A Genius To Know That Broadband Over Power Line Is Becoming

Big Business, And Big Business Means Big Bucks. So The Real Question Is How Can You Ensure BPL Makes Money For Your Organization? And What Else Can It Do For You?"

From terryo at wort-fm.terracom.net Sun Jul 11 09:48:56 2004
Subject: [R-390] The politics of BPL

My friends in regulatory politics tell me BPL is being sold as the new REA, Rural Electrification Authority. Bring broadband to the country folk! This is especially galling because I remember my years of DXing in the country - hearing longwave stations from Europe deep in Midwest US because the noise level was so low. You think we have noise now, wait until BPL crisscrosses the country on those long rural lines. Talk about an antenna farm! Best, Terry O' WB9GVB

From jmiller1706 at cfl.rr.com Sun Jul 11 09:56:31 2004
Subject: [R-390] The politics of BPL

Yes, so the rural farmer or Appalachian backwoods kid can also experience the joys of unwanted pop-up ads, spam, browser hijacks, trojans, worms, adware and spyware with rapid response over his noise-producing BPL connection, all thanks to Billy Gates and his buggy software, and the money hungry telecom companies, at a subscription rate of probably \$90/month. Sounds like progress to me !

From wb5hak at sirinet.net Sun Jul 11 10:21:00 2004
Subject: [R-390] The politics of BPL

One question in this, does anyone know if both major candidates support BPL?? Maybe several thousand emails propoting to vote for candidate X that doesn't support BPL (assuming X is a major candidate, hi hi) might not hurt?? 73, Don, WB5HAK

From ham at cq.nu Sun Jul 11 10:22:29 2004
Subject: [R-390] Manassas BPL and I Vote!

Hi, Good grief. I thought you were doing a slanted paraphrase of the thing and it's a direct quote of their own summary.

If this goes the way the cable stuff did the utilities will sell off the rights to do data over their systems to an independent company. If that company fails then they do the same thing with another independent. If and when there is a success then they push them out of the picture. That's a lot of risk so I'm not to surprised at the general tone of the promotional documents. The crazier your idea the more you want to sell it as a slam dunk.

What that means to us is that you will deal with one company for the power and another company for the BPL. The power company plays dumb when there is a problem and the internet guy may not have enough funding to fix anything.

Without adequate regulatory oversight this is a recipe for disaster.

That said my local power and cable companies seem to do a darn good job. My local phone company is a totally different story. It is possible that they will turn out to be a bit more competent than I am giving

them credit for. I doubt that the odds are 2:1 in our favor though.

One thing you can do right now. Take accurate notes on the levels of noise at various times of day on your favorite frequencies. A R-390 with a calibrated AGC voltage is an *excellent* device for doing this. The AGC voltage is reasonably linear and it covers an enormous range of levels. The 16 KHz filter on the radio gives you a lot of noise all in one measurement. If you have the "before" data and things change then you can demonstrate the effect of the "after". Without some kind of data your task will be harder. Take Care! Bob Camp KB8TQ

From ham at cq.nu Sun Jul 11 10:42:13 2004
Subject: [R-390] The politics of BPL

Hi, If you follow the REA analogy (and I think you are correct) BPL is an interesting thing. REA was funded with a lot of government money. The economics of running big long power lines out into the middle of nowhere is highly questionable unless you charge a fortune for the power.

Last time I checked the population of the US has shifted a bit since the 1930's. What ever the economics looked like back then they don't look any better today. If you want a bit of proof hop in the car and do a quick ride through western Kansas and eastern Colorado. Probably a good idea to set aside more than one day for the trip. There are a whole bunch of empty towns out there. In between the empty towns there are a lot of empty farm houses. Welcome to the era of the corporate farm.

I can understand how as an equipment supplier the idea of putting in miles and miles of gear is a "good thing". What I still am unclear on is just how many paying customers there are for this kind of thing. You have cable companies in towns with no gas station so the customer density is pretty darn low past the end of the cable.

One other observation. A surprising lot of those "past the end of the cable" folks seem to own hf radios. Some are SWL's, some are CB'ers and some are Hams. Then there's the guys who watch the dams at the Corps of Engineers lakes. I wonder what that 40 meter dipole on *all* their offices is for I'll bet more than one is hooked up to an R-390 ...

I'm not sure their intended customers are going to welcome BPL with open arms. This is certainly true if they understand what the trade off is.

Here's the other driver on BPL. It's down at the bottom of the blurb from the Orlando show: Voice over IP = cut the local telephone company out of the picture. The local operating companies are the last profit making part of the phone business. The long distance thing is so down in the dirt now that there's no money in it. The reason the local phone companies still make money is that they have been *good* at stomping the competition in voice connection to the home. Hmmm...Take Care! Bob Camp KB8TQ
From ham at cq.nu Sun Jul 11 10:55:14 2004
Subject: [R-390] The politics of BPL

Hi, Well certainly there has been more vocal support for BPL from the party in office. The question is weather the other guys will take a stand that could be looked at as anti-technology and anit- small guy (rural user) at the same time. I suspect that the best we can hope for is simply a neutral stand.

As far as I can see given a neutral playing field we will do pretty well. If there are rules in place about interference *and* you can get them enforced that's a *lot* better than the picture we have now.

I'm not looking for an RFI cop on every corner, just an environment that encourages the BPL guy to take a complaint seriously. Everything that the BPL guys have done so far says that their approach to complaints will be a marketing solution (deny they exist) rather than a technical solution (fix the darn problem).

The FCC spent a very modest amount of money on Amateur Radio rules enforcement over the last five or ten years. However they spent it on some very high profile activities. The effect has been to clean up a bunch of significant issues without going nuts over it. Enforcement does not have to mean big government or rules that go on forever and ever. You do have to get the offenders attention though. Right now attention is the last thing BPL is giving to the interference issue. This is important, but we may be wearing out our welcome on this Take Care! Camp KB8TQ

From r390a at bellsouth.net Sun Jul 11 12:30:25 2004
Subject: [R-390] The politics of BPL

None of the Tennessee power companies that are offering are going to offer it in sparsely populated area, like, erm the country. Same reasons cable and DSL don't go out that far - it isn't cost effective. Winchester, TN is going to offer it pretty soon, but only in fairly populated areas, with no plans at all to offer it an actual "rural" areas. To the big companies out there, Winchester is considered "rural" .Tom NU4G

From rbethman at comcast.net Sun Jul 11 12:54:30 2004
Subject: [R-390] The politics of BPL & Manassas

I agree. It isn't being offered in RURAL areas. Manassas SURELY isn't rural. We also have cable and DSL access options, so competition isn't doing anything.

I'm going to do more testing, record to computer via soundcard, and send all results to the FCC - Especially Riley Thanks to those that responded with Riley's email addy! To those wanting the recipes, they are coming! I just have to divide my time between job hunting and other pursuits. Bob - N0DGN

From hcjoel at direcpc.com Sun Jul 11 13:03:31 2004
Subject: [R-390] BPL used during WWII?

The ongoing discussion of BPL and its ramifications has intrigued me much. It appears that the German equivalent (up to a point) of Homeland Security had designed installed a warning system used during pending bombing attacks by Allied airforces near the end of WWII. I have seen this system in operation, but must admit that I have little information about what frequencies were used. As all AM (no FM back then) stations went off the air to prevent them to be used as beacons with RDF equipment aboard the bombers and Pathfinders (ahead of the bomber squadrons) civilians had no early warning system about what to expect and take to shelters as needed.

The system transmitted voice messages via power lines to anyone using a free decoder box placed near an AM receiver. The decoder box received voice data from the wall outlet. A map came with the decoder box. The alerts always refered to a set of co-ordinates on these maps wich covered a few hundred miles in each direction from home base.

A typical transmission would go like this:

"Approximate 400 planes in A-5 heading southwest" and may be a shortly after "Turning west and

entering B-4" Quite often these alerts kept track of more than one array of bombers. The turns were often an attempt to disguise the ultimate target.

I have done a Google search but could not locate any reference to this early BPL system used by the Germans. I also read the info on <http://www.arrl.org/tis/info/HTML/plc/bpl-deployment.html> to gain some insight for a possible comparison.

From tetrode at comcast.net Sun Jul 11 13:45:30 2004
Subject: [R-390] The politics of BPL

> Hi, > Well certainly there has been more vocal support for BPL from the party > in office.

No doubt about it Bob, from Bush on down to his *Republican FCC appointees* Powell Jr and Ms Abernathy BPL has become part of the party-line.

You know I hate politics because people and parties become so polarized and zero-tolerant of the other guy that it's hard to get things done. In my view there is virtually no party that is all good or all bad, each has its strengths and deficiencies and personalities, and my Independent voter status allows me to vote my mind instead of my party.

Each political party has it's own stereo-typed characteristic which for the Republicans is

- i) favoring big business
- ii) deregulating or loosening regulations to support the above point
- iii) and then the environment suffers.

What I want to point out is that all three of these criteria (which have hit home to my hobby) apply to the present BPL situation:

- i) The war-cry is that BPL broadband is what the American economy needs and it will create jobs and provide much business to the Utility and Communications companies involved.
- ii) The part 15 regulations protecting the radio services need to be relaxed to accomplish the above goal.
- iii) The environment which is going to suffer this time is not the air quality, water quality, or remote Alaskan wilderness, it's the nation-wide RF ENVIRONMENT on which all point to point communication is based.

To me this indicates the FCC has totally lost its direction with respect to protecting the RF environment; I'm thinking the EPA should be brought in to investigate.

Anyway, come this November it should be no surprise which party I'll NOT be voting for. 73, John

From tetrode at comcast.net Sun Jul 11 13:51:56 2004
Subject: [R-390] BPL used during WWII?

I've heard of this WWII system but don't think BPL is an accurate term to use in this instance as it did not transmit multi-megahertz data bandwidth or use a frequency hopping or spread spectrum system as does BPL. John

From hbreuer at debitel.net Sun Jul 11 13:53:43 2004
Subject: Drahtfunk, was Re: [R-390] BPL used during WWII?

It was called "Drahtfunk" and used telephone lines as a media for longwave signals not power lines. The usual Volksempfänger could be used for it.
http://www.radiomuseum.org/dsp_forum_post.cfm?thread_id=6773 <http://www.drm-berlin.de/> 73 Heinz DH2FA, KM5VT

From mjmurphy45 at comcast.net Sun Jul 11 14:01:24 2004
Subject: [R-390] Wore out the poor server

Bob, If you went nuts, I didn't notice - dunno. Mike WB2UID

From rbethman at comcast.net Sun Jul 11 14:31:01 2004
Subject: [R-390] Wore out the poor server

Mike, IF Bob or I (The OTHER Bob) went nuts, would anyone notice or care? Actually - we MAY fit in even better! I'm doing the R-390A to SP-600 swap this evening. It will be interesting to compare an SP-600 next to another R-390A! More ammunition to fight BPL! N0DGN - Bob

From wb5hak at sirinet.net Sun Jul 11 14:42:48 2004
Subject: [R-390] Wore out the poor server

Let's see, and R-390A and SP-600 together. Is that "diversity reception"??? HI HI 73, Don, WB5HAK

From rbethman at comcast.net Sun Jul 11 14:48:21 2004
Subject: [R-390] The politics of BPL

All, I know we are in an election year. Feelings run VERY deep. I haven't heard a single peep from the Democrats about this item. Therefore I am making an assumption that THEY are for it too. This MAY prove to be erroneous. Time may/will tell. I suggest we keep politics in reference to Dem vs Rep out of bounds. Politics starts more wars on-line, on-air, and between countries even. I sign-off saying John's vote and mine will cancel each other's out. My greatest nightmare is Pres. Gore in office on Sep 11, 2001..... Bob - N0DGN

From rbethman at comcast.net Sun Jul 11 14:58:59 2004
Subject: [R-390] Wore out the poor server & SP-600 swap

Don, At the LEAST it IS diverification! I'd probably be listed under Adversity! BTW, that pic of the moon was taken at about half magnification for an 8" SCT.

For those not in on this last line, Don noticed my "Amateur Astronomer" line in my sig block. He queried me direct regarding getting into this ALSO fascinating \$\$\$ hobby. I have provided him with my input and numerous others, including some VERY esteemed JPL program folks to guide him on his way. Don is NOW starting on ANOTHER \$\$\$ Slippery Slope in his life!

Bob and I ARE both nuts! You have to be in order to go back to tubes, AM Radio, and all that goes with rescue & restoration! Bob - N0DGN (The OTHER Bob)

From rbethman at comcast.net Sun Jul 11 15:27:59 2004
Subject: [R-390] The politics of BPL

Expert is all relative. I'm a computer professional by degree and 17 years trade. I CANNOT see BPL providing twice the 0.7Mbps that I'm getting by cable. The power lines and the BPL systems "shouldn't be able to do THAT without causing so much interference that they WILL get yanked. Digital signals are the WORST for broadband interference! It is PURE square wave instantaneous switching. It's RFI is phenomenal! Bob - N0DGN

From chacuff at cableone.net Sun Jul 11 15:51:38 2004
Subject: [R-390] The politics of BPL

Group, I have been copying the mail on this one for quite a while now and times before...

Don't let this issue cloud your decision making when choosing your Presidential candidate this fall....

Four yeas ago we hadn't even heard of BPL and four years from now it may be gone....but there are many more issues that come with the choosing of a Presidential candidate that could be more profound.

I'll not attempt to campaigned for either but say that BPL was no more the brain child of the current administration than it was your local Utility company. Both of which have been sold this load of crap by highly paid folks that just do their jobs well. They both (Gov. and the Utilities) believe they are making the right decision based on the information they have been given.(and yes it's driven by economics....if you were driving a huge investor owned corp. you would be too.)

Moving this country to a Democratic Leadership won't change a thing...the same slick suits are going to be selling this junk to them as well...and they will buy it for the same reasons...and it will only be easier for them because it now has some level of momentum.

I don't like it...no more than you do! But I believe we have to get behind something more significant than it's disruption of our "Hobby". Hobbies are expendable in the eyes of Gov. and Big business.

I do believe you can't under estimate the power of a Grass Roots movement. I think the power on this is in our Senators and Congressmen. They pretty much run things and oversee various agencies. Each and every individual should contact his representation...but do it in support of something bigger...something more important than us loosing our ability to listen to the "Carrier from Pitcairn Is." That's not to say that you should not mention it's impact to you personally but I don't think we can get there from here.
(R-390X Land)

What are the large Public Safety Lobby's saying about this..what's their stand. I was told by a friend this last week that he knows of a DEA listening post near where he works that monitors the open waters and South & Central American areas for Drug trafficking activities. He's been in there to do A/C maintenance work and seen the place...of course they cover all the consoles before he is allowed to enter...but my guess is they are in the HF spectrum. How about FEMA.....and the Military...they use analog HF spectrum for Non-Secure com. This I would imaging would impact even some of their Digital HF stuff. Can you imagine what this trash sounds like at 30,000 feet?

I don't know who or how to get behind them.....but I believe that's what it's going to take.

Sadly I don't think Amateur Radio has the clout anymore with the FCC it once had because of the reputation it has developed....so that route is limited to the commissions violations of it's own rules of allowing an unlicensed service to interfere with a licensed one. Maybe once enough evidence is in place, a law suit against the FCC filed by the ARRL and other license holders in the effected spectrum to protect the Licenses it has granted as it agreed to do is the answer....

Anyway I have rambled around a bit I know but all this is to say we need a better approach and not to condemn the Republicans or your Utility just yet!

I'll speak more to the Utility side once I know more and can speak more intelligently than I am able to at this point.

My job in the real world is as an RF specialist for one of, if not the largest, Electric Utilities in the nation. I'm involved in the engineering and maintenance of communications equipment installations that control substations, transmission line and distribution switches etc...

I haven't heard of any interest in our utility getting into that business nor making our lines available to others wanting to get into that business. Utilities have to be careful about allowing Telecoms access to the transmission lines for use as transport because the majority of the "Right of Ways" that were negotiated for the lines were for the utilities internal use. (telecom and power transmission) When they start carrying "For Profit" traffic they have violated their "Right Away Agreements" with property owners. Law suits entail and everything gets real expensive. Many of the REA's in the southeastern US get their generation from us through ties to our transmission systems. They usually don't own generation of their own and locate their subs (relatively) closely to our transmission lines so ultimately don't own that many miles of transmission lines.

My understanding is that the biggest piece of this is the use of the transmission lines as their transport network...and I'm sure the distribution side as their delivery method...but I don't know if BPL can cross the distribution transformer or not....I know things like Power Line Carrier which we have used for years for various things cannot! They must have to bypass the transformers with a gateway of some type..

Anyway...I'll be asking lots more questions in the near future in engineering meetings and to executive management. I'll let you know what I find out.

Brings up a couple of thoughts though. The "right of way" issue might be a good leverage point. Another thing we might do is look at the FCC license database...it's on the internet now for all to see....and look at who the licensed users in the 2 thru 30 MC band are. A pattern might develop as to who else is not going to be happy about this thing. Just my thoughts... Cecil Acuff WB5VCE

From ham at cq.nu Sun Jul 11 17:14:42 2004
Subject: [R-390] The politics of BPL

Hi, One way or the other it's the power companies that are going to make the money on BPL. They are a highly regulated industry. Their profit and loss hinges on all kinds of tiny little changes on the part of state and federal regulators.

Like anybody else in that position they spend a lot of money on lobbying. I suspect they also contribute a bit to the candidates directly. They have to stay on good terms with the government or they are out of business.

When they decide to turn those same lobbying skills to something like BPL, well welcome to the result. That's why I'm not totally sure just who in which parties is sold or not sold on this little deal. It's obvious who a few of the buy in folks are, but not who all of them are.

We find our selves in a mode where some form of action seems to be required. However I totally agree that turning this into a branch of the Presidential election campaign is not a good idea.

What I'm suggesting is that a lot more than just the President is getting elected this year. Regardless of who you prefer to vote for in your local elections make them aware of what you think about BPL. If they support your position so much the better. If they do not support your position then at least weigh that along with everything else when you consider who to vote for. Making this an absolute test is not realistic. A lot of things go into any decision about who to vote for. At least know where your local representative stands on the issue ... Take Care! Bob Camp KB8TQ

From ToddRoberts2001 at aol.com Sun Jul 11 19:50:12 2004
Subject: [R-390] R-725 On The E-Place for \$4500

Just saw an R-725 listed on the E-Place for \$4500 buy-it-now, \$4000 reserve - wow. You can see it at <http://cgi.aol.ebay.com/aol/ws/eBayISAPI.dll?ViewItem&category=588&item=5709354369&rd=1>
Nice pictures suitable for framing. 73 Todd Roberts WD4NGG.

From Llgpt at aol.com Sun Jul 11 19:57:19 2004
Subject: [R-390] R-725 On The E-Place for \$4500

I must be totally retarded or just not as greedy as Lon Cottingham is. I only got \$1,000.00 for mine. Of course, it only had a Bud cabinet. Arvin Industries s/n 95. Les Locklear

From Llgpt at aol.com Sun Jul 11 20:00:16 2004
Subject: [R-390] R-725 On The E-Place for \$4500

He says "all alignment and cleaning done by Dario of Abilene, Texas" Sounds like a hairdresser...:-) Les

From r390a at bellsouth.net Sun Jul 11 20:38:43 2004
Subject: [R-390] R-725 On The E-Place for \$4500

simply shakes head

From: mark.richards at massmicro.com (Mark Richards)
Subject: [R-390] The politics of BPL

I think BPL is a symptom of a much larger problem. I believe it speaks of the worst embedding between government regulators and powerful commercial interests who have been given significant opportunity in many areas to increase business profitability. For example, increased use of offshore labor and materials raises corporate profit by reducing overhead, but cuts significantly into American jobs. A University of California study estimated that 300,000 of the 2.4 million jobs lost since the start of the current administration is directly associated with the offshore labor practice. Another 14 million jobs

remain at risk, and the current administration has the power, but no plan, to add restrictions that would protect American jobs. The interest here seems clearly against the average person. It's about the corporation.

BPL has the same glamor. It's a cash cow that can be easily milked with minimal infrastructure cost and low overhead. The interference problem can be eliminated simply by ignoring it - along with countless studies that clearly show the technique is an unmitigated communications disaster.

When (current) FCC Commissioner Katherine Abernathy gave a nice prepared speech before the "American Power Line Council" last year (picture a bunch of rotund, cigar-smoking men around a big walnut table drinking heavily and slapping each other on the back) I knew the rational opposition to BPL was in deep trouble. Studies be damned, it's on with the show. Her appearance, prior to any FCC decision, represented a disgusting conflict of interests or, at a minimum, the appearance of evil.

I think the presidential (and congressional) decision comes down to what BPL represents and how we got to where we are based on the the current administration's policies. The policies are wrong, and they will go - when the current bunch railroading things like BPL through are gone. Mark Richards k1mg

From terryo at wort-fm.terracom.net Sun Jul 11 22:38:10 2004
Subject: [R-390] BPL in the countryside

wrote: >None of the Tennessee power companies that are offering are >going to offer it in sparsely populated area, like, erm the >country. Same reasons cable and DSL don't go out that far -

I'm not saying the service is going rural now. The political effort has two goals, short term, which is approval of BPL so it can be used, and long term, where government financing makes the national system feasible. The political stage is being set for another round of government largesse. REA was the example I was told by an attorney who works with the regulatory agencies here. Any student of history can cite railroads, nuclear power, the DARPA net, the TVA, the space program and a myriad other examples where our tax dollars (or land for the railroads) went to create national systems that were economically infeasible for private industry. BPL may be popping up in cities now but there are no fiber optic or coax lines in the rural areas, just quietly humming powerlines ready to scream. Terry O' WB9GVB

From rbethman at comcast.net Sun Jul 11 23:48:47 2004
Subject: [R-390] Got the SP-600

Well Gang, I made the swap. I brought it home and HAD to get it on an antenna! I have to say that it IS a different animal. I have NO idea how to even TRY to do a comparison to an R-390A.

Yes, they are the same BUT they are different. This one needs a "little" work, but not much. One band works when it feels like it The issues appear to be tube pins to clean, and switches to clean. That's a WHOLE lot less than a restoration.

My first BIG like - much better audio! My first dislike - trying to figure WHERE to connect coax, when there are about FIVE SO-239s.

Of COURSE the one for the antenna is the UNMARKED one.

The front panel has engraved "Hammarlund SP-600. The tag on the VFO/Bandswitch enclosure(?) says

type J11. Then there is ALSO a Northern Radio tag on the front that says Model 159.

The internal tag has a different S/N than the Northern Radio tag.. the internal has a 17XXX s/n, The external has an S/N of 740.

Confusing. Ken please post the manual on your site so I can download it. I have high speed access - about 0.7Mbps. Scratching head - Enjoying MY NEW TOY! Bob - N0DGN

From rbethman at comcast.net Mon Jul 12 00:08:24 2004
Subject: [R-390] Got the SP-600

Jess, Do you have a manual in PDF for this critter? I could use one desparately! Bob - N0DGN

From pmills7 at houston.rr.com Mon Jul 12 05:46:03 2004
Subject: [R-390] R-725 On The E-Place for \$4500

Wow, you sure have a "smart" mouth. Too bad the same thing can't be said of your head. Phil

From hankarn at pacbell.net Mon Jul 12 06:37:57 2004
Subject: [R-390] R-725 On The E-Place for \$4500

Has anyone ever heard of Dario of Abalone??????????? Hank KN6DI His claim to FAME!!!!!!!!!!!!!!!!!!!!!!

From Llgpt at aol.com Mon Jul 12 07:43:39 2004
Subject: [R-390] R-725 On The E-Place for \$4500

And, in your esteemed opinion doctor, what is wrong with my head? I have the right to say whatever I care to say Phil. In case you haven't forgotten, this is still America. Get a life! Les

From Llgpt at aol.com Mon Jul 12 07:45:00 2004
Subject: [R-390] R-725 On The E-Place for \$4500

writes: Has anyone ever heard of Dario of Abalone?????????????

No, nobody I know, and I know many, many people in the radio community. Les

From r390a at bellsouth.net Mon Jul 12 08:17:11 2004
Subject: [R-390] R-725 On The E-Place for \$4500

Probably something like Dicker and Dicker of Beverly Hills, Lloyds of LLondon, etc. heehee

From ka4prf at us-it.net Mon Jul 12 07:38:39 2004
Subject: [R-390] R-725 On The E-Place for \$4500

I don't see that receiver on ebay anymore under that Link? Chuck

From ka4prf at us-it.net Mon Jul 12 07:41:22 2004
Subject: [R-390] R-725 On The E-Place for \$4500

Disregard my last. I clicked on the wrong link somehow. The receiver is still there, but no one has bid on it as far as I can tell? Chuck

From barry at hausernet.com Mon Jul 12 08:50:14 2004
Subject: [R-390] Got the SP-600

Hi Bob: Congratulations!

Just don't spin that dial too much in the first week you might get dizzy. Do not put any oil on anything mostly. The tuning mechanism is basically a friction/rim drive and if lube migrates to it, slippage occurs. You can put a tiny droplet on each shaft bearing.

As for S/N's while the SP-600 is not modular, so not as subject to depot dawginess as the '390A, the internal tag is usually on the turret cover and it's possible they got swapped at the depot. Some of those tags were never stamped and say "J-" or "JX-" nothing. Don't know about those.

I guess Northern Radio got a batch of new (or used?) SP-600's and refurbished and modded them. Enjoy!
Barry

From pmills7 at houston.rr.com Mon Jul 12 09:06:19 2004
Subject: [R-390] R-725 On The E-Place for \$4500

Well, since this is America and you consider it an infringement on your rights of free speech to make snide comments about other list members, you certainly won't be in the least offended if I label you the King of A**holes. Phil

From hankarn at pacbell.net Mon Jul 12 09:35:24 2004
Subject: [R-390] R-725 On The E-Place for \$4500

OK guys lets KOOL DOWN or take the fight private. Hank My .02

From Llgpt at aol.com Mon Jul 12 09:35:47 2004
Subject: [R-390] R-725 On The E-Place for \$4500

Not at all, you are entitled to your opinion. Les

From hbreuer at debitel.net Mon Jul 12 10:28:34 2004
Subject: [R-390] R-725 On The E-Place for \$4500

Well we all had the chance to avoid this posting and the one last week about the black R-390 too. Lon

K5JV offered his four R-390 family receivers on June 26 on the BAswaplist and the two Collins lists for a mere \$15k and would have even delivered them free of charge. Unfortunately nobody took his offer despite his warning that they will go to the Bay. I am not sure if he wants to test the market to see if the economy is really going stronger now or whatever his reason is. To me these prices are insane and I must admit that I have a history of paying insane prices in the past. 73 Heinz DH2FA, KM5VT PS: Maybe this is just to start a new thread after the ballast tube and the ukkumpucky.

From chacuff at cableone.net Mon Jul 12 11:33:38 2004
Subject: [R-390] Fire Sale at Les'

Group, Everyone has a different way of expressing their opinions...some more directly than others...but Phil the last two from you were...(checking my file).. a little out of character!

OUCH!

(remember I'm adding a little piece to each members perceived character file through the off and on topic posts we receive...kind of a way of me getting to know everyone a little better and what to expect on this ride.....earlier post...you'd a had to been there)

I don't know if this is just a bad day for you or maybe the aliens have hijacked another list members account and decided to have some fun.....

Humm... maybe the aliens have hijacked a real list member and forced him to go on an out of character flame fest on select list members.....No matter!

In any event I think most will agree the prices being asked are a little out of the ordinary...no matter who has "Tweaked" them most recently. (Lon or "Dario" may be personal friends of yours...who knows)

It's the typical "Collins Syndrome" that has caused the prices on most of that gear to be untouchable by most....but I guess that adds to the exclusiveness of the club. I am glad the R-390X series have been spoiled for typical Collins collecting crowd by being "Depot Dawgs" as we call them...that's probably what has kept the prices on what most consider a superior performing piece of gear designed by Collins in the reasonable realm. (no matter whose modules are in it!)

I'm planning to build an R-725 out of one of my standard R-390A receivers as soon as I get all the parts together....should be a good combination...

Hum...won't be a Mans radio....or a boy's radio....what do we call the 725?

Anyway.....

It's certainly anyone's right to ask anything they want for what they own...in the end the market will usually set the price anyway...except for those privileged few that are willing to pay well above market for the things they wish to possess.

I think that's what this fisherman is fishing for....

I do hate the threats of "Going To Epay" though...not sure how many sales that really stimulates from list members.... Best of luck to him! Les got those flames out yet??? Hope you get to feelin better Phil! Cecil....(wearing Nomex underoos)

From w5or at comcast.net Mon Jul 12 11:52:11 2004
Subject: [R-390] Posting reminder

Gentlemen! Let's not willfully get off topic, and certainly let's not wage any flamefests here. Move on.

Don Reaves R-390 list administrator <mailto:r-390-admin@mailman.qth.net>
Rules: 1. Stay on topic2. Be civil and courteous Don Reaves w5or@comcast.net

From rbethman at comcast.net Mon Jul 12 12:11:45 2004
Subject: [R-390] Posting reminder

Amen! Differences between individuals SHOULD be discussed DIRECTLY between them. ALL of us have personality quirks that OTHERS will NOT like. Let's get back to RADIOS only! Bob - N0DGN

From wak9 at cornell.edu Mon Jul 12 12:23:56 2004
Subject: [R-390] unwanted thread stuff

I feel must apologize for my first posting so far on this list. I usually read my mail for the group during lunch at work, and I come back after the 4th and find about 350 postings. I'm sorry, but I replied after only getting through about a hundred or so of the dreaded dead horse (do I really dare say ballast tube at this point?). I have since made it up to the ones expressing disappointment in it being somewhat overdone, so I appologize (most sincerely) for adding one more.

I would now like to officially send greetings to everyone on the list. I joined last fall hoping to find a good resource of advice on this fine radio. I was a Ground Radio tech in the Air Force in the late 70's, but wound up maintaining an op station in Hawaii and never worked on a single radio. But in school we used the R390 to study Rx principles. Around 91 or so I managed to get a R390-a, Motorola 14-phil-56, s/n 924. Looked as if it had been dropped, one back corner of the frame being folded in pretty good. It worked, though, but the BFO was stuck at a pretty high freq. Turned out the slug had come off the shaft in the BFO can. Superglued it back on. Later found one of the rectifier tubes was bad, which explained why I only had 75v after the regulator. I've got the Army tech manual for a long time, and have since downloaded as much as I could find. I've got a URM-25F and an old Mil VTVM, and have aligned it pretty well. It's quite a pleasure to pick up those little flea farts out in the middle of nowhere.

Also in the collection are a Hammarlund Super Pro 200 that used to work, but too many passives are too far out of value. Good project someday. National NC-173, RCA SRR-13, and a couple other old BA types. I'm not a ham, but my dad was, dating back to the mid 1930's. Some of my earliest memories are of him in his "shack", with the warm glow of all the dial lamps and some guy crackling out from halfway round the world.

You guys take care, thanks for all the good info, and in a few days I should be caught up with all the current postings. Bill

From bill at iaxs.net Mon Jul 12 13:45:05 2004
Subject: [R-390] Fire Sale at Les'

Cecil said, "Hum...won't be a Mans radio...or a boy's radio...what do we call the 725?" Perhaps "cheap DF set"? It does the DF work of the R-390 with the stripped-down innards of a 390A.

Prices? Remember that "free market" means whatever the market will bear, as well as freedom to buy up any company that you can. That's why the megacorps want more countries to have free markets.

Building a character file for each member? I'd like to see mine, to see if there are any misperceptions of my flawless character. Can't imagine how you'd see any of Les' writings as other than gentle attempts to correct inaccuracy. That flame-proof suit must be insulating you from reality. :-) Regards, Bill Hawkins

From chacuff at cableone.net Mon Jul 12 15:30:23 2004
Subject: [R-390] unwanted thread stuff

Welcome Bill, No sweat on the Ballast tube post...no harm done. Sounds like you have some good projects going....should be fun! There is a good group here...we enjoy a little humor now and again, that's the personality of this group....but there will also be a lot of good information as well.. Don't be a stranger... Cecil....

Hi Bill and Group,

It's only a mental file.....and it perceptual...of course. One can represent himself anyway he wants on here I guess. (so I guess it's not altogether accurate) Have had the pleasure to meet in person a few of the members....Les being one of them...He's straight up...and owned more radios than many....I've seen the pictures! (and many of the radio's) A gaggle of 390's (including a black faced one in a black Mil cabinet) and SP-600's (and a few Leary's for good measure) not to mention the high end offerings of most all of the major builders of the time. Bought several from him myself. (including a Leary)

He's known to kick a beehive now and then but no more than others. Need radio advice or info he has that too...just ask.

As for my reality it's in pretty good shape the prescribed medications see to that.....It's no wonder I can't afford expensive radios....goes to Co-Pays... Suit kinda itches though... Cecil....

From lester.veenstra at lmco.com Mon Jul 12 16:06:44 2004
Subject: [R-390] URM-25 RF output measurement

The following is useful when URM-25x meets modern test equipment

dBm Watts Volts RMS Volts P-P
50 Ohm 50 Ohm

20 0.10000 2.23607 6.325
15 0.03162 1.25743 3.557
10 0.01000 0.70711 2.000
5 0.00316 0.39764 1.125
0 0.00100 0.22361 0.632
-10 0.00010 0.07071 0.200

-20 0.00001 0.02236 0.063

**dBm Watts Volts RMS Volts P-P
50 Ohm 50 Ohm MicroVolts**

-7.0	2.00E-04	0.1000000	0.283	100,000
-13.0	5.00E-05	0.0500000	0.141	50,000
-21.0	8.00E-06	0.0200000	0.057	20,000
-27.0	2.00E-06	0.0100000	0.028	10,000
-33.0	5.00E-07	0.0050000	0.014	5,000
-41.0	8.00E-08	0.0020000	0.006	2,000
-47.0	2.00E-08	0.0010000	0.003	1,000
-67.0	2.00E-10	0.0001000	0.000	100
-87.0	2.00E-12	0.0000100	0.000	10
-107.0	2.00E-14	0.0000010	0.000	1
-127.0	2.00E-16	0.0000001	0.000	0.1

From wa6knw at sbcglobal.net Mon Jul 12 17:12:25 2004
Subject: [R-390] Fwd: R-725 thread

Hmmmmm, Should I jump into this? Hmmmmm, Bee Hive has been kicked over. Hmmmmm, SH*T has been stirred. Hmmmmm, Flames are licking our posteriors. NAAHHHH... I think I'll sit this one out. BTW I just got a COSMOS R-390 PTO and an R-648 Spectrum Generator on the E-Place.....

No Geko's though. RICH WA6KNW

From ka4prf at us-it.net Mon Jul 12 16:45:11 2004
Subject: [R-390] Short time

Hi all,

I have only belonged to this list for a few weeks now, but to be honest with you, it's very exciting here. The submissions are always very interesting. I hope they stay that way. Chuck B ka4prf@us-it.net

From ba.williams at charter.net Mon Jul 12 18:31:07 2004
Subject: [R-390] R-725 On The E-Place for \$4500

> Wow, you sure have a "smart" mouth. Too bad the same thing can't be said of your head. Phil

What exactly is your problem?

From ba.williams at charter.net Mon Jul 12 18:32:22 2004
Subject: [R-390] R-725 On The E-Place for \$4500

> And, in your esteemed opinion doctor, what is wrong with my head? I have the > right to say whatever I care to say Phil. In case you haven't forgotten, this > is still America. >> Get a life! >> Les

I'm nominating you for the penalty box....

From djmerz at 3-cities.com Mon Jul 12 19:03:01 2004
Subject: [R-390] DMM bounce

Hi, here's a general question related to making resistance measurements when an inductance is involved, e.g. the winding on an audio transformer. Generally, I make such measurements either with my BK DMM on a fixed scale setting or with a Simpson 260 old-style multimeter, and I usually have no problem. But recently I repaired an audio transformer and sent it to the lucky guy and he emailed that the primary was ok but his digital meter just bounced on the secondary and never settled on a reading. I thought maybe I made a bad solder connection. The approximate inductance of this secondary is about 360 henries. He sent it back to me and I measure it as ok, about 1500 ohms, using my usual methods. I do notice that the reading shows a couple of high reading before settling down. This doesn't happen on the primary which is much lower inductance. My question - are there some DMMs, maybe the autoranging types, that have problems with such measurements. I could imagine this could happen depending on the rate at which it tries to "range" the reading but it would seem that it should eventually settle down. He tried it with two different digital meters and couldn't get a stable reading. I sometimes use this measurement method on 390a parts, hi. Hopefully waiting for illumination, Dan.

From chacuff at cableone.net Mon Jul 12 19:17:01 2004
Subject: [R-390] Short time

Welcome Chuck,

It's a great list...very helpful folks when you need help...a little humor in between. What kind of projects do you have going. If you're like most you probably have more projects than time...at least that's my case.

I've got 2 R-390A's one is currently disassembled one still intact but sick....also have 2 SP-600's one a VLF waiting their turn on the bench...finishing up an SX-28A at the time....not to mention a couple Fender tube amps.

May be picking up a few more in the next few weeks...

Also have around a dozen R-1051's and various modules, extender cables, components, misc bits and manuals that may be offered only as a package deal to someone looking to branch out into the repair of those radios.... I've decided to close up shop....not enough interest shown to justify keeping it going...

Let us know what you've got going or are planning! And again Welcome, Cecil Acuff WB5VCE

From ka4prf at us-it.net Mon Jul 12 18:26:42 2004
Subject: [R-390] Short time

Cecil, No projects except for changing an antenna sometimes. I have an R390A on order. Not sure what I'll get, but hopefully it'll satisfy my expectations. I used R390's while in the Navy years ago, so I am not new to it. I have solid state receivers here, and want check out the tub type against them. Everyone says I be happy. Chuck

From redmenaced at yahoo.com Mon Jul 12 19:51:50 2004
Subject: [R-390] DMM bounce

What frequency are your voltmeters calibrated for? Joe

From ham at cq.nu Mon Jul 12 23:28:43 2004
Subject: [R-390] DMM bounce

Hi

If you are using a trusty VACCUM TUBE instrument then you will have no problem with vacuum tube impedances.

A modern super duper high speed auto ranging DVM will to just a little nuts trying to measure the resistance of your 360 Henry inductor. Some of them at least drive the device under test with a constant current source. This is fine for a capacitor or resistor. On an inductor the current ramp gives you a voltage ramp. Up goes the voltage and it auto ranges. Even if it runs a constant voltage it will still auto range if it's fast enough. The coil will look like an open circuit at first so the things little brain decides to go to a higher resistance scale. In either case you can get a situation where it just bounces back and forth with no tendency to settle at all.

Simple solution - hook a low voltage power supply (like a D cell) in series with the DVM and the secondary. That should give you about a milli amp though the secondary. Unless this is a very low level transformer the current shouldn't bother it to much.

I use a similar setup for checking caps on the R390. A 60 volt power supply, a 5 micro amp DC meter and a 22 meg resistor all in series with the capacitor makes for a pretty sensitive ohm meter / cap leakage tester.

You can use the same resistor in series trick to keep the current in the secondary low. In that case I probably would measure the voltage on the secondary and figure the resistance out by formula. Figure that kind of stuff out for a living and they make you a Lord Don't know if that helps or not. Take Care Bob Camp KB8TQ

From djmerz at 3-cities.com Mon Jul 12 23:41:08 2004
Subject: [R-390] DMM bounce

Hi Joe, my DMM is BK 2905 calibrated with dc and for ac with 400 hz. I

have no idea yet of details on the other guy's meters except I think they are autoranging type for ordinary dc and 60 hz measurements. I'll try to get more details on his meter but I don't think they are types for measuring much above 5 khz. I use my meter occasionally for measuring up to 5 khz, though I have no idea how accurate it really is up there but I use it to get voltage ratios for evaluating audio transformers. I have checked it against my HP 403B meter and decided for what I was doing it was good enough. It reads about 3% low at 12 khz and close on up to 7 khz. Thanks for any thoughts on my question, best regards, Dan.

From djmerz at 3-cities.com Tue Jul 13 00:00:40 2004
Subject: [R-390] DMM bounce

Hi Bob, ok, that helps. I wondered if the autoranging process did what you mentioned - and didn't allow the current thru the inductance to settle enough before the next range check. I never ran into this before with my meter which isn't autoranging. And the other guy evidently hasn't run into it with his autoranging meter either but this particular transformer has a high permeability nickel core that contributes to the high inductance compared to most audio transformers that I've run across. Most of them have about 5, 10 or maybe 20 H primary with corresponding 45, 90 and 180 H secondaries based on typical 3:1 winding ratio. I'm kicking myself for not suggesting that he try an old style ohmmeter before sending the thing back to me. thanks for the response, best regards, Dan.

From flood at Krohne.com Tue Jul 13 10:59:35 2004
Subject: [R-390] Short time/ R-1051

Cecil, You just had to post this didn't you. Just thinking about the freight costs to Boston scare me, but the packrat in me has to ask.... what kind of money are we talking here. I picked up a couple of R-1051's recently and have them both running. (Band cruising was to easy on the R390 series and I needed something more challenging.) For some strange reason I now have an interest in these beasts.

R-1051 list seems all but dead. I have access to a few more radios in unknown working condition but the thoughts of trying to fix them without extenders, or service manuals for that matter, was a bit daring and somehow common sense took over. It is just like me to have an interest in a radio series that most others have passed by.

Please reply with a price that is much to high for me to even consider taking on this project.

From flood at Krohne.com Tue Jul 13 14:23:10 2004
Subject: [R-390] Short time/ R-1051

Sorry to the list.

I meant this to go only to Cecil. However, it did bring out a few people with info/interest in these beasts out of hiding!

Cecil, You just had to post this didn't you. Just thinking about the freight costs to Boston scare me, but the packrat in me has to ask.... what kind of money are we talking here. I picked up a couple of R-1051's recently and have them both running. (Band cruising was to easy on the R390 series and I needed something more challenging.) For some strange reason I now have an interest in these beasts. The R-1051 list seems all but dead. I have access to a few more radios in unknown working condition but the thoughts of trying to fix them without extenders, or service manuals for that matter, was a bit daring and somehow common sense took over. It is just like me to have an interest in a radio series that most others have passed by.

Please reply with a price that is much to high for me to even consider taking on this project.

From Tubsc66 at aol.com Tue Jul 13 19:16:23 2004

Subject: [R-390] Re:(R-390): Short time

Great to see you on this list too Chuck, I lurk on this list mostly (I do most of my posting to the SWL list) but things have been especially interesting and entertaining here lately. You'll love the R390A for SWBC DX, its quiet and sensitive, I recently moved mine out of the listening post, Im using a pair of R648's for monitoring now but will rotate the R390A back into the mix shortly. I also own an R390 (non-A) and an SP600 both of which are ready for overhauls. I find the technical know-how on this list to be amazing, and I plan to dig into them as soon as the temperature in the garage drops back below 150 degrees... Summer in Oklahoma can be miserable... Anyway, just chimin' in, great to see the list is vibrant again! Chris Krug KC5IIE Tulsa, OK

(PS, anyone interested in trading something for an R-648?contact me off list, thanks)

From N4BUQ at aol.com Tue Jul 13 21:47:24 2004

Subject: [R-390] Sweat Shops

I thought I was the only one with a garage oven for a workshop. It ain't much fun when you start sweating the first 3 minutes. Flips side is it is too cold most winter nights out there too. Maybe one day I'll have a nicer shop... Barry(III) - N4BUQ

From ToddRoberts2001 at aol.com Wed Jul 14 00:04:01 2004

Subject: [R-390] Sweat Shops

writes: I thought I was the only one with a garage oven for a workshop Barry(III) - N4BUQ

Hi Barry. Can you install a window air-conditioner in your garage? Prices have come way down in recent years. I think you can get a window air-conditioner at Wal-Mart for less than a hundred bucks? Or not too much more. Sounds like a worthwhile investment. 73 Todd Roberts WD4NGG.

From dwade at pacbell.net Wed Jul 14 00:25:19 2004

Subject: [R-390] Sweat Shops

We have a similar problem here in Sacramento with summer heat. Do you think a window a/c unit would to any good without any insulation overhead? Dennis

From ToddRoberts2001 at aol.com Wed Jul 14 00:33:54 2004

Subject: [R-390] Sweat Shops

writes: We have a similar problem here in Sacramento with summer heat.Do you think a window a/c unit would to any good without any insulation overhead? Dennis

A blast of cold air has gotta help. If it's a closed room a window a/c unit can do a lot of good. I see Wal-Mart has 5200 BTU window air-conditioners for \$79.00, a 6000 BTU unit for \$124.00. I know there are gonna be tons of variables - size of room, height of ceiling, insulation/no insulation, but it might make the difference between trying to work in an unbearable hotbox and a room you can work in. 73 Todd Roberts WD4NGG.

From barry at hausernet.com Wed Jul 14 01:56:07 2004
Subject: [R-390] Sweat Shops

We're a bit OT, but corrosive sweat dripping down into the RF coils is a condition to be avoided.

To give you an idea, I just replaced an old Sears 5000 BTU A/C with a 5700 BTU Friedrich which I bought at a local appliance chain (PC Richard) for \$179. This was the highest BTU unit I could find at the right size similar to R-390 dimensions about 19" wide X 12-13" high and 14 in. deep. It's full featured with remote control, which does come in handy. The same store had basic 5k units down to about \$99 before haggling. The Friedrich was \$199 before a gentle prod got me \$20 off.

These are all window A/C's, meaning they come with the expanding sides and don't have slide-in shell cabinets. In my case, I have it mounted through the wall in the same spot as the old one.

The room is about 12' X 14' maybe a bit smaller, ground floor with two floors over it and sharing an insulated wall with an unheated, non-A/C garage, one small window. It is barely powerful enough to keep the room comfortable in 90 plus days. While the rating is nominally higher than the old one, it seems to be no more powerful and possibly somewhat less so. The old A/C used Refrigerant-12, the new ones all use something that's more ozone layer safe - -and less effective.

I doubt if a unit like this would be effective at all in an uninsulated garage typically at least two or three times larger than my little room. Unless you can somehow partition off your workbench area, you might not even get a cool enough breeze out of it to be worthwhile. You'd probably at least need a barebones unit of 12K BTU's or higher.

Before going to that trouble and expense, try a good quality fan. If the garage is detached, and particularly if it has an open peaked roof, an exhaust fan mounted near the peak can do a lot. Draws off the rising heat and creates a convection effect which makes the garage equivalent to being in the shade with a breeze.

But try a regular fan first. It's a form of evaporative A/C. As you sweat, the breeze evaporates it, cooling skin temperature. Of course, this principle doesn't work on humid days. ;-(

Sharper Image is pushing a gimmick that goes around your neck. I don't know if it uses ice cubes or those electronic cooling elements, but the idea (I think) is to cool the blood as it flows turning your circulatory system into an inside A/C system. Maybe it just cools your head? They're about \$30-40.

In the old days, my mother used to set us up with a table fan and a bowl of ice cubes. Not terribly effective, but it was the thought that counted. Another method soak your T-shirt in cold water, wring it out and put it back on. Probably not a good idea around electrical work.

Seriously though, you're better off with a bigger capacity A/C no frills as you'll have it on full blast all the time. Also, it will be a true through-the-wall unit and easier to install. Get as many BTU's as you and your electrical system can handle without running a dedicated line. You might have to spend \$300-400 with some good results, vs. \$100 and change for next to nothing. YMMV Barry

From Tubsc66 at aol.com Wed Jul 14 05:52:58 2004
Subject: [R-390] RE: R 648 and Sweat

Hi Everyone, I received several inquiries as to what an R 648 is so I thought I'd elaborate.

The R648 is sometimes called the airborne version of the R390, though its a much different radio, it does sport the odometer frequency readout and has a pair of mechanical filters, one 6kc and the other 1.5kc. Its about the size of the BC 348. Mine have both been covered to AC power, originally they have a 26 volt dynamotor in them. Sorry for initiating the off topic sweat shop post, a window air conditioner would be nice out there, but first I'd have to build a window :))))). 73's Chris KC5IIE Tulsa, OK

From mikea at mikea.ath.cx Wed Jul 14 07:30:48 2004
Subject: [R-390] Sweat Shops

I'll agree with that, in spades.

My garage is (as appears to be a common arrangement) the catchall storage place, my workshop, and my operating position. It would be absolutely uninhabitable in summer if it weren't for the air conditioner I installed. The gas heater keeps it warm enough in winter, too. Now all I have to do is clear out enough stuff to be able to work

The air conditioner and heater don't have tubes, but a lot of the radios do. Mike Andrews

From mikea at mikea.ath.cx Wed Jul 14 07:32:30 2004
Subject: [R-390] Sweat Shops

> Do you think a window a/c unit would do any good without any insulation > overhead?

Absolutely. Sacramento's summers are very much like those in Tulsa and Oklahoma City. The absence of insulation may mean that your aircond has to work harder and run the compressor more. A good, big fan to stir the air also does a bunch of good. Mike Andrews mikea@mikea.ath.cx Tired old sysadmin

From N4BUQ at aol.com Wed Jul 14 10:42:30 2004
Subject: [R-390] Sweat Shops

Hi, Todd, As another list member put it, I'd have to build a window first :) Until then, I guess I'll have to be happy with two months in the spring and two months in the fall. Barry(III) - N4BUQ

From buzz at softcom.net Wed Jul 14 13:14:21 2004
Subject: [R-390] Sweat Shops

I live in Reno, NV. H-O-T in the summer, (but it's a dry heat) and C-O-L-D in the winter. The best thing that I ever did to improve temperature control was to sheet rock, then insulate the ceiling. Next I cut into the heat duct for winter, and that holds the shop at 55 degrees... not too bad.

Next I installed the biggest swamp cooler that I could find that would fit into a window. Swamp coolers work very well in Reno because our humidity hovers around 20% ! After I installed the swamp cooler and had it running for awhile I was disappointed that the output wasn't all that cool. Upon investigation I found that due to the low humidity the pads were only about 50% wet so I added a second pump and that solved the problem. On a 90+ day the temp out of the swamp cooler is in the upper 70's.

In the summer the temp in the shop attic is 140+. In the winter it's in the low 40's. So insulation is money well spent. Plus, I put in a pull down stair way so I have a lot of storage area. Buzz

From rbethman at comcast.net Wed Jul 14 14:06:01 2004
Subject: [R-390] Sweat Shops - OT

Buzz, I must take issue with the "dry heat" adage. Ive been in the driest heat that I know of - Saudi Arabia. Man when it is 135 to 145, dry or NOT it IS hot and unlivable. Here in VA, when it is 84 and humidity makes it feel like 92, it STILL is miserable. Bob - N0DGN

From redmenaced at yahoo.com Wed Jul 14 17:51:52 2004
Subject: [R-390] Sweat Shops, bigger fans

wrote: > We're a bit OT, but corrosive sweat dripping down into the RF coils is a condition to be avoided.+++

Point to consider about "bigger" A/C units, they also have BIGGER blowers in them which can count for a LOT! Joe

From ka4prf at us-it.net Wed Jul 14 17:45:07 2004
Subject: [R-390] Antenna Trimmer

Hi again, I don't have my R-390A yet, but I was wondering about it anyway. Does the R-390A have an antenna Timmer? If so, what is it's characteristics? Thanks Chuck

From djmerz at 3-cities.com Wed Jul 14 19:29:52 2004
Subject: [R-390] DMM bounce

Hi Joe and others, I confirmed that the problem was due to autoranging bounce combined with the high inductance of the secondary of the transformer. There's too much inductance for the meter to settle down and make a reading of resistance. I confirmed this with a small pocket RS multimeter that has only autoranging. On the secondary winding, it just keeps flipping from 0 to OL reading when trying to read the secondary resistance. On the primary, which is lower inductance, it flips once or twice then stabilizes on the correct 400 ohm resistance reading. As I mentioned, I had no problem reading this with my BK average quality, non-autoranging meter and I checked it with the \$4 meter I bought from Harbor Freight, which of course is not autoranging. The guy I sent the transformer to was using a Fluke meter on autoranging, which was the start of this escapade. The moral: never send in a man to do a boys job, and of course if you have a Harbor Freight model, you can send in a baby. And the Fluke can be trained for the job by turning off the autoranging. Thanks for the comments. I far as I know there are no inductances in a 390a that are large enough to cause this problem . But I have only a smattering of knowledge about the various ways that today's exotic meters perform all their magic. Dan.

From ba.williams at charter.net Wed Jul 14 20:25:24 2004
Subject: [R-390] Sweat Shops

When I was stationed in Korea in 1991 we were in new, modern quarters with kick-butt a/c. Only thing was, they wouldn't turn the a/c on to save money for the energy conservation award and we sweated

around the clock. Korea gets extremely hot and humid. So, the electric bill skyrocketed because everyone bought 3-4 fans for their single occupant rooms. I also did what the other guys were doing, running the cold shower all day long and using a fan to blow the air out into the room. It did lower the temp around 10 degrees. You could walk down the hallway during duty hours and hear the showers running. I wonder how much they 'saved' that summer.

Barry non-Hauser

P.s. When I was outprocessing to return home, the units left for the field for 3 weeks. The base a/c was turned on about an hour after everyone pulled out. I think the guys got them back though as everyone anticipated such a dastardly tactic. Everyone left their a/c switches on and set to the coldest setting for those 3 weeks. Some guys left their showers running too.

From ham at cq.nu Wed Jul 14 20:55:16 2004
Subject: [R-390] Antenna Trimmer

Hi, Yes the R-390A does have an antenna trimmer, and no nobody knows what it's characteristics are.

I realize that sounds a bit much, but like a lot of stuff on these radios it's true. We really do not know what range of impedances the little knob will work with. \

What is known is that just about any antenna you hook up can be "peaked up" with the antenna trimmer. Like a lot of other things, it works even though we aren't quite sure why.

You could do a bunch of math and figure out what's going on, but that's better done in the winter when there are fewer other things to do. I would bet that the thing will tune out a couple hundred ohms of reactance, either inductive or capacitive.

Hopefully that's the information you were looking for. If not just yell at me ... everybody else around here does :) Take Care! Bob Camp KB8TQ

From bill at iaxs.net Wed Jul 14 21:16:09 2004
Subject: [R-390] DMM bounce

If all you wanted was the DC resistance of the secondary, and all you had was an autoranging DMM, could you short the primary to calm down the autoranger? Bill Hawkins

From djmerz at 3-cities.com Wed Jul 14 22:54:37 2004
Subject: [R-390] DMM bounce

Hi Bill, now why didn't I think of that !!! Z transformation or short-circuit reactance?? In either case, the input impedance is going to be lower. I tried it with the transformer in question and the pocket autoranging meter - it took 6 bounces before settling on the correct reading of 1500 ohms on the secondary. You have won my respect for thinking of trying that. Since it took 6 bounces, I suppose there is probably a meter out there that wouldn't work with that solution if it has a faster autoranging rate, but then that would depend on how the particular meter sends current through the transformer to make a reading each time it does its autoranging routine. I like your idea, thanks for a great idea to try and it worked with the autoranging meter I have, one of those small toothbrush case RS models of about 7 years back. Dan

From w7itc at hotmail.com Thu Jul 15 01:40:53 2004
Subject: [R-390] Sweat Shops

I took a heater box out of a old car and instead of Hot water I ran cold well water through it. The air came out at about 60 degrees F it worked great. Now basking in the breeze from my Fedder A/C Ken and the Chew Crew Kenneth A. Crips W7ITC

From LairdThomasN at JohnDeere.com Thu Jul 15 08:28:14 2004
Subject: [R-390] RE: Antenna Trimmer

> I don't have my R-390A yet, but I was wondering about it anyway. Does > the R-390A have an antenna Timmer? If so, what is it's characteristics?

here are some old posts from my archives: Tom Laird WC9M Moline, IL.

>Got around to installing the worm gear assembly back onto the antenna >trimmer bracket so I could adjust this from the front panel (I had been >turning the gear with my fingers from the top). I now notice something: >if the teeth of the gears are engaged, the signal increases about 10 >to 15dB. I noticed this when I rocked the knob back and forth. It goes >from engaged to not touching to engaged in the other direction with the >signal drop occurring during the disengaged portion.

There are a couple of things you need to watch out for on the antenna trimmer. One is that the insulating bushing and thrust washer for the shaft that goes to the front panel are intact and oil and residue free.

The second is that the insulating washer for shaft that enters the can itself isn't cracked or mispositioned. It's got a tiny little step on it that is supposed to center it in the hole. It usually doesn't. I've seen number of RF decks where it was mispositioned and would allow a short when the gear was loaded in one direction or the other resulting in sensitivity going South.

Kill the power to the set and measure the resistance of the shaft and gear that goes into the can to ground. I don't have the manual in front of me but it should be very high, hundreds of K maybe. Keep the lead on the center of the shaft/gear and start rotating the trimmer knob. If the resistance reading drops, you've probably got a misaligned insulating washer or some debris in the can.

-----more-----

The worm gear on the shaft was touching the shaft, thereby grounding it. I left the gear too far forward allowing it to touch the shoulder on its shaft. Not only did this ground the gear, it left way too much axial play in the shaft. I loosened the locking screws and pushed the gear away from the shoulder (about 1/16" or more) to where there is almost no axial play in the shaft. This stopped the intermittent grounding and now the shaft stays in the same position along its axis.

From roy.morgan at nist.gov Thu Jul 15 12:13:31 2004
Subject: [R-390] RE: Antenna Trimmer

wrote: >... the insulating bushing and thrust washer for the shaft Are there to insulate the rotor of the capacitor from ground. The antenna trim cap is connected across whichever RF input transformer is

selected by the band switch. The RF Transformer secondary winding carries the AGC voltage to the grid of the first RF Amplifier tube.

Note: That shaft is then a convenient place to test the AGC voltage that is getting to the 1st RF stage in trouble-shooting the AGC system. Use a VTVM of the old style with a 1-meg-ohm resistor in the probe to avoid detuning the stage. The 11 or so megohms of most DMM's or VTVM's may not affect the DC values much, but be alert for that happening to some degree. Test point E-208 is tied to the first RF Grid through a 470K resistor and is meant for just this purpose. It would help you confirm an open RF Transformer, or bad contacts on the transformer plug pins or the band switch. Roy

From r390a at bellsouth.net Fri Jul 16 12:57:51 2004
Subject: [R-390] How to ruin Radio As We Know It

GACK!!! Dont let the current idiots at the FCC see this

From ham at cq.nu Fri Jul 16 13:20:28 2004
Subject: [R-390] How to ruin Radio As We Know It

Hi, The problem is - they can't.

wrote: > GACK!!! Dont let the current idiots at the FCC see this
<http://www.nwfusion.com/columnists/2004/071204eyejohnson.html>

The FCC can only do what is allowed by international treaty. Anything that radiates past our borders is covered in this way. In order to re-allocate in the fashion the article describes you would at least have to get Canada and Mexico to go along with the idea. Good luck on that.

This also places a limit on what they can do with BPL as well. If the system in Buffalo or Detroit messes up stuff north of the boarder a FCC ruling that it's ok won't help at all. Of course if the Canadians go along with the BPL idea then that's not going to matter ... Take Care! Bob Camp KB8TQ

From sdaitch at ibb.gov Fri Jul 16 13:31:58 2004
Subject: [R-390] How to ruin Radio As We Know It

I was chatting with one of our streaming guys regarding the impact that streaming has on the size of an incoming internet link a business has, if a lot of employees listened to streaming audio at their work stations.

He and I agreed that the morning streaming done, the larger the internet pipe has to be from the outside network, but he said, well, maybe the next step after copper and fiber will be wireless. I thought about that a moment, and told him hmmm, don't we call that radio! Sheldon

From pbigelow at us.ibm.com Fri Jul 16 14:30:06 2004
Subject: [R-390] How to ruin Radio As We Know It (with a word change)

YIKES!!!! Crazy like a fox? How about just plain crazy. Keep that crud off the airwaves. Paul Bigelow
EAC 1967 R-390a/URR Ser. No. 121 Collins 1951 R-392/URR Ser. No. 1254

From richardlo at admin.athabascau.ca Fri Jul 16 15:58:15 2004
Subject: [R-390] How to ruin Radio As We Know It

wrote: > He and I agreed that the morning streaming done, the larger > the internet pipe has to be from the outside network, but he > said, well, maybe the next step after copper and fiber will > be wireless. I thought about that a moment, and told him > hmmm, don't we call that radio!

But it is much less efficient than radio. An AM radio station clutters up 15KHz and that signal can be used simultaneously by millions of listeners within the listening area and the listeners can use a device with eight odd transistors plus a fist full of additional components in a plastic box with minimal power requirements. The bandwidth required for the same data over tcp/ip to your computer is larger and you don't get to share (with the present protocols etc.) so everybody will want their slice - the wireless concept here (and cable modems for that matter) give you lots of bandwidth but you run out when you start to share it with other users because you don't share it but rather you slice it up. A radio signal is truly shared but network bandwidth is sliced up. Next, it takes very serious hardware to translate data into audio - you will not find little boys building sound cards on a wooden breadboard with a stolen razer blade and some wire.

Our network administrator has blocked the majority of such connections because we cannot afford the bandwidth. If our staff wants to listen to radio they can spend \$10.00 and buy a radio.

We need to relearn the concept of appropriate technology.

From vculver at verizon.net Sat Jul 17 13:04:14 2004
Subject: [R-390] Hang AGC Circuit

Sorry this originally sent to wrong address. I hope it doesn't duplicate.

Hello, Group. A really good friend gifted me this morning with something he said I really needed for my R-390 a very competently built "HANG AGC" unit. Two tubes, even!. The information indicated that it was from a design published in 'the handbook.' I assume this handbook is an older version of the ARRL Radio Amateurs Handbook. Would anyone care to comment on the pro's and/or con's of adding a hang AGC unit to a radio beyond the fact that some of us don't want ANYthing that 'ain't stock.' Thanks, Vic

From ham at cq.nu Sat Jul 17 16:49:10 2004
Subject: [R-390] Hang AGC Circuit

Hi, The AGC in the R390 has a slower attack speed than more modern AGC circuits. A number of people have done a number of things to change this. Probably the most common way to go these days is to put a couple of solid state diodes and a couple resistors in the AGC. The idea usually is to speed up the attack time and leave the decay time where it is. The net result is an AGC that cuts in fast and then drops out slowly. One term for this is "hang".

The solid state diode mods are no cut, no chop mods. They are easily reversed if in the future you decide to go 100% stock. For that reason alone I would recommend them over some of the earlier tube based designs that involved more surgery to the radio. I do not know if the tube versions worked as well as the solid state versions, but it is safe to say they did not work any better. Enjoy! Bob Camp KB8TQ

From ezeran at concentric.net Sun Jul 18 23:50:11 2004
Subject: [R-390] The politics of BPL

> Feelings run VERY deep. I haven't heard a single peep from the Democrats about this item. Therefore I am making an assumption that THEY are for it too.

I don't think many of the political types, of any stripe, are very technical.

From francesco.sartorello at virgilio.it Sun Jul 18 06:39:27 2004
Subject: [R-390] R390A GAIN ADJ and final testing

Hello, everybody! in accordance with TM 11-856A, para 148 (adjustment of GAIN ADJ Potentiometer R519) signal generator should be connected to J513 v ia an MX-1487 Impedance Adapter: is this a simple 50 ohm termination for the Signal Generator as the CU-406/URM-25F or else?

About overall sensitivity, I have the impression that approximately the same results can be achieved with both antenna inputs (Balanced and Unbalanced), with proper setting of the Antenna Trimmer and alignment of the first set of RF coils is not so dependant from the antenna input used: will someone comment on this?

What about Electrical Dummy Load DA-121/U mentioned in Section 5- Final Testing? Is it, maybe, something like a DA-109/URM-25F with a resistive partitor to obtain balanced output? Ciao a tutti!
FSarto

From ham at cq.nu Sun Jul 18 13:39:41 2004
Subject: [R-390] R390A GAIN ADJ and final testing

Hi, Since the manuals were written there have been some changes in how we do things in these areas.

The input to the radio at the antenna jack should be the same impedance as the antenna you will use. If you use a 50 ohm antenna then use a 50 ohm generator. The dummy load mentioned in the manual is only required to convert a 50 ohm generator into a 120 ohm generator. Since we do not have very many 120 ohm antennas we rarely use the dummy load.

The IF gain setting in the manual was intended for running multiple radios in a diversity system. Some of these systems used the AGC voltage as part of the "voting" between the receivers.

Today thanks to members of this list we think that there is a better way to adjust the IF gain. We set it to optimize the sensitivity of the radio. This is a lower gain setting than the military recommended in the manual. Because it is a lower gain setting it also improves the overload performance of the radio.

The web site www.r390a.com has some good information on both of these points if you are looking for more information. Enjoy! Bob Camp KB8TQ

From norm at wa3key.com Mon Jul 19 11:15:27 2004
Subject: [R-390] T-195 help needed

Hi Gang,

I recently found a nice, clean T-195B transmitter and am having difficulty getting it going. Perhaps someone on this list with T-195 experience can give me some pointers. Here's a list of things I've confirmed so far:

- Low B+ (OA2 lights on key-down) and filaments
- High B+ (measured at plate of PA tube)
- All tubes checked good on a TV-7D/U
- PTO oscillator output at 1.5MHz
- Rear and cooling fan interlocks closed
- Re-seated all connectors accessible without removing modules

There is no power output ... not even one milliwatt. If I wrap an insulated pick-up wire around the antenna binding post (with the 50 ohm output still connected to a dummy load) a very weak signal can be heard about 10-20db down from wrapping the lead around the oscillator tube.

Everything mechanical seems to function properly and the antenna coupler goes through the motions until the red tuning indicator lamp comes on. When going key down with a mic or using the "test key" in CW, I can hear additional blower noise and the current drain increases to about 20 amps from the 9 amp standby current. (Remember this is a "B" with transistorized power supply.) Although I can't test the 4X150D's, the filaments are OK and swapping the PA with one of the modulators made no difference.

I checked with the rig's former owner and he confirmed it was working fine before being placed in dry storage about 2 years ago. One odd thing I noticed is that the transmitter won't power up unless I rotate the "service selector" switch all the way around to "remote" at which time I hear a click and the dial lights blink. Then if I go back to any other position (except "off") the transmitter will power up.

Any trouble shooting pointers on this rig will be greatly appreciated. I'd also like to know if the transistor power supply from a T-195B can be transplanted into a regular T-195 without additional modification.

I subscribe to this list in digest form, so your reply by e-mail will be faster. Thanks much for reading this post. 73 de Norm - WA3KEY norm@wa3key.com

From norm at wa3key.com Mon Jul 19 19:56:36 2004
Subject: [R-390] Re: T-195 help needed

Thanks to all who responded to my help request. The problem turned out to be simple ... the TX was configured internally for FSK operation and needed a front panel BNC jumper to restore normal operation. I'd have never found it on my own. 73 de Norm - WA3KEY

From rbethman at comcast.net Tue Jul 20 09:03:00 2004
Subject: [R-390] Help with info on a STRANGE SP-600

Gang, I've acquired a "peculiar" Hammarlund SP-600. It is a Model J-11, s/n 9758. [No "X"]

Modified by Northern Radio Company for the Diversity Aspects. NRC Type 159, Model I, S/N 740.

Tagged Receiver, Radio R-450/FRR-28.
<<http://home.comcast.net/~rbethman/sp600j11front.JPG>>

<<http://home.comcast.net/~rbethman/sp600j11rear.jpg>>
<<http://home.comcast.net/~rbethman/sp600j11ncrdata.jpg>>
<<http://home.comcast.net/~rbethman/sp600j11.jpg>> Bob - NODGN

From chacuff at cableone.net Tue Jul 20 09:30:23 2004
Subject: [R-390] Help with info on a STRANGE SP-600

That's interesting.....looks as though it can be racked up and control within a band relinquished to one console mounted master receiver. It would be fun to have a couple of those rigged up for diversity and attached to two different antennas....say a Carolina Windom on one and a long wire or inverted L on the other....bet that would take care of the selective fading on SWL broadcasts....

Wire the audio outs to a stereo headphone jack or into a stereo amp and run one on the left channel and the other on the right.... Sounds like great fun...

Kinda doing something like that with the R-1051 and it's double sideband with two IF's and two Audio chains...has an unbelievable sound when zero beat on an AM SW station.....fading all but disappears.

I guess that's what the JX-17 was designed for as well....with those nice red knobs.....

Wasn't that also what Manson Labs did for the R-390A...or am I off base on that one? (maybe they just added a master osc. for several rx's....) Cecil...

From rbethman at comcast.net Tue Jul 20 09:46:42 2004
Subject: [R-390] Help with info on a STRANGE SP-600

Fixed the THIRD link. Have NO bloody idea why it didn't work. What's worse - I'm a computer freak!
Try now. Bob

From tetrode at comcast.net Tue Jul 20 11:06:55 2004
Subject: [R-390] Help with info on a STRANGE SP-600

Bob, check out the Hammarlund Historian page (is that Les ?), there's a paragraph about the R-450/FRR-28 towards the bottom. <http://www.hammarlund.info/sp600.html> BTW looks like removing the ncr from the file name in the 3d link fixed it. 73 , John

From mjmurphy45 at comcast.net Tue Jul 20 19:34:27 2004
Subject: [R-390] Help with info on a STRANGE SP-600

Bob,

Concerning Diversity operation at HF, R390A, SP600 or otherwise, you have the right idea. Using two different types of antennas should work OK.

There are three ways to use Diversity at HF.

1. Simple Space Diversity - Here we need two identical antennas, that is the same polarization, gain, and

arrival angle. These could be a couple of dipoles at 100 feet. They should be spaced out several wavelenths apart (!!)

2. Polarization Diversity - This setup purposely uses two different kinds of antennas, like what you were suggesting, a Carolina Windom and an inverted L. The antennas should not have drastically different gains, or the system will not "vote" properly. Better choices might be a Marconi vertical or sloper dipole and a regular dipole.

3. Arrival angle Diversity - Requires the use of a receiving antenna with discrimination in the vertical plane. For this reason it does not appear to be a method that is in common use for HF. With a vertically steerable array comprising short vertical monopole or active loops, worthwhile improvements are possible by isolating the different ionospheric mode and using them in diversity.

This was from a paper <http://murray.newcastle.edu.au/users/staff/eemf/ELEC351/SProjects/Fitzsummons/elec352.htm> Composed by: Troy Morris Jay Fitzsummons Tony Parezanovic of Newcastle College Mike WB2UID

From wjneill at lcc.net Tue Jul 20 22:30:23 2004
Subject: [R-390] Help with info on a STRANGE SP-600

There's a fourth way, which I used quite a bit when in the US Army 37 years ago. It's frequency diversity. The same traffic is transmitted on two different frequencies, thereby minimizing fade. Works quite nicely, especially on long skips. Bill Neill Conroe, Texas

From r390a at bellsouth.net Wed Jul 21 06:15:18 2004
Subject: [R-390] Celebrating Diversity (reception)

>Michael Murphy sez --

>1. Simple Space Diversity - Here we need two identical antennas, that is the >same polarization, gain, and arrival angle. These could be a couple of >dipoles at 100 feet. They should be spaced out several wavelenths apart (!!)

If you have hundreds of acres, this would work well on AMBC and 160 heehee..

>2. Polarization Diversity - This setup purposely uses two different kinds of >antennas, like what you were suggesting, a Carolina Windom and an inverted >L. The antennas should not have drastically different gains, or the system >will not "vote" properly. Better choices might be a Marconi vertical or >sloper dipole and a regular dipole.

I have used simple crossed dipoles for this. Even when I was trapped in an apartment, I set up such an "orthogonal" antenna on the balcony. The R-390A's and the SP-600 for that matter, have sufficient gain to work with shorter antennas. Orthogonal antennas or loops/vees/dipoles at 90 degrees are a simple solution and work quite well for this. Keeping up crossed antennas here lately has been a chore with all the recent winds. I can't tell much difference between my recent "two dipoles on a pole" and the horizontally mounted very short dipoles that I had at the apartment. Both work(ed) wonderfully eliminating fade on SW and MW AM signals.

A pair of R-390 or 390a's work for diversity "right out of the box" simply by tying the diode load and agc lines together and using separate antennas per the directions in the manual. Tom NU4G

From sdaitch at ibb.gov Wed Jul 21 08:28:09 2004
Subject: [R-390] Help with info on a STRANGE SP-600

Let me mention two other methods of diversity...

Frequency - using two (or more frequencies), not generally practical at HF, but can be done, provided the transmitters are at the same site and use the same "programming" audio. One application that we used was for our WWV monitor, one RX was on 15 MHz, the other on either 5 or 10 MHz, so we did not have to worry re day or night time propagation. Frequency diversity is really useful at microwave frequencies.

We also used audio frequency diversity on HF RTTY with the Northern Radio tone units, using a high set of AFSK tones and low set of AFSK tones, in the audio channel, and the tone demodulators had a voting methodology to determine mark or space, if the two channels did not agree. If I remember correctly, it was level driven. (Remember, selective fading in the audio channel.)

Time - Generally related to data. Barry Research had some RTTY products which used 7 tone channels for the same RTTY data, only each channel was shifted in time slightly on transmit, and the matching modem, reshifted them in time, and used a voting methodology to decide if it was a mark or space, depending on number of channels indicating that "time" item was a mark or space. This way a static burst would take out different data bits, because of the time shifts. This BR stuff was fairly high dollar gear, I think. 73 Sheldon WA4MZZ

From hcjoel at direcpc.com Wed Jul 21 14:11:21 2004
Subject: [R-390] Xtal Set/Antenna Follow-Up

This is an follow-up to my July 10 story about my longwave antenna installation for my crystal set. The designers of quality crystal sets, without the benefit of modern circuit theories, applied features to get the most 'output' to the headphones with no amplification. To mind comes the use of 'honey-comb' wound tuning coils (often the plug-in type). After installing my flagpole long wire, I realized that a good ground connection of the antenna tuned circuit was mandatory. But alas, my beside set was too far from any metal water pipe. AC outlets were the two wire type with no ground. In an experimenters magazine I came across the expression 'counter point' to replace a ground connection. On a hunch I made a good connection to the steel spring frame under the mattress and it worked like a champ. My theory is not up to snuff on this. It seems that the counter-point was the third element in the series connection of longwire-tuned circuit-counterpoise. Any ideas from the gurus?

My music teacher (organist at a church two blocks from his apartment) used a no longer used private phone line to the church office as a super-duper long wire. He picked up a really strong signal. Glued a large seashell to this earphone and the volume was good enough for listening across the room! Being a radio aficionado he also had build a superheterdyne receiver.

From hcjoel at direcpc.com Wed Jul 21 14:38:37 2004
Subject: [R-390] The story of Grundig

Any review of vintage radio offering on the e-Place will have a good number of vintage Grundig table model superhets. You may not know how Grundig grew to be the German equivalent of IBM+SONY. Before the start of WWII, in my beloved birthplace, Fuerth, Bavaria, I remember seeing a whole-in-the-

wall radio sales and repair shop run by a gentleman named Grundig. It was stuck between the one and only seafood store and an Italian ice cream emporium. During the war Grundig received many army contracts to fabricate transformers and sub-assemblies for army communication gear. The army supplied all raw materials and the government supplied assembly buildings and the work force made up of Eastern Europe countries forcefully expatriated and kept in primitive living quarters within the assembly compound. Unlike other contractors, Grundig treated this work force with compassion and respect and managed to get extra food rations for them. Then came the end of WWII. During the next few months, the expatriated workers of other contractor went on a revenge binge of looting. The Grundig crew however posted guards at all entry points and kept looters away.

Thus Grundig had a stash of radio components at his disposal being the de-facto owner. There was a big demand for new radios, with pre-war models going bad. The US provisional government had put in effect a law which banned any manufacturing of radios. Grundig used a loophole in this law by offering radio KITS. The where simple regenerative receivers using two 12P2000 MIL style pentodes, selenium rectifier, transformer, and all other bits and pieces including a simple cabinet and of course instructions. The kits were flying off the shelves and Grundig used the profits to set up a development lab and was thus ready with a really super good line of receivers when the ban on manufacturing was lifted. Soon his line included TV's, tape recoders and many other electronic items. So goes the story about turning human compassion into an electronic empire.

From mikea at mikea.ath.cx Wed Jul 21 15:57:38 2004
Subject: [R-390] The story of Grundig

What a really neat story! Thanks very much for some interesting human (and radio) history I hadn't heard before. Mike Andrews

From mmdues at hal-pc.org Wed Jul 21 18:21:56 2004
Subject: [R-390] The story of Grundig

Harry Joel wrote: > Any review of vintage radio offering on the e-Place will have a good number of vintage Grundig table model superhets. You may not know how Grundig grew to be the German equivalent of IBM+SONY. Before the start of WWII,

Harry, Excellent post. Thanks for the insight. Regards, Marshall M. Dues, WB5MYO Katy, Texas

From richardlo at admin.athabascau.ca Wed Jul 21 18:41:04 2004
Subject: [R-390] The story of Grundig

"forcefully expatriated", I love that kind of careful phrasing. Richard Loken

From wb5hak at sirinet.net Wed Jul 21 17:43:00 2004
Subject: [R-390] The story of Grundig

Keep the stories coming, Harry!!! You are adding much to our radio history files. 73, Don, WB5HAK

From g4gjl at btopenworld.com Wed Jul 21 17:45:40 2004

Subject: [R-390] R-391

Guys, sorry for the late post..... I have R-391 serial number 154....nine off yours, Clay! 73 Pete G4GJL

From mjmurphy45 at comcast.net Wed Jul 21 22:45:02 2004

Subject: [R-390] Xtal Set/Antenna Follow-Up

Harry, Take the flagpole and drive it into the ground until about 6 inches is exposed. This will be our ground. Next... Mike WB2UID

From jordana at nucleus.com Thu Jul 22 19:38:28 2004

Subject: [R-390] Racal RA-117 Assistance needed

> I have just acquired a Racal RA.117 receiver.... > viewing... > > 73 de Jordan....

From jordana at nucleus.com Thu Jul 22 19:39:57 2004

Subject: [R-390] Re: Racal RA-117 Assistance needed

P.S... Help in the area of V-24 would be great too.. seems there were different versions of the rig that used either a tube or a silicon diode for V-24... agn 73....de Jordan...

From N4BUQ at aol.com Fri Jul 23 12:53:50 2004

Subject: [R-390] Handy?

<http://www.fairradio.com/0mini-t.htm> Barry(III) - N4BUQ

From vk2abn at batemansbay.com Fri Jul 23 19:29:31 2004

Subject: [R-390] Racal wadley loop RX s

I have Repaired large numbers of these recievers the the commonest fault is open circ resistor 100k assosiated with the third mixer 6F33 or US versions 6AS6 also some sets have red disc ceramic caps that havnt stood the test of time , the 40 mhz band pass filter and the 37.5 mhz filter are easily alighned using a 141T system and 8444 tracking gen , there is a test point no 2 I think that you can put a vtm or HF oscilloscope on and you can see the 1mhz pips passing as you turn turn the MHZ dial which is the 40-70mhz VFO, another fault that is quiet common is in the 100khz I F the transformers are wound with LITZ wire and over the years some strands have given way at the termination effecting the Q of the transformers and not beihg able to attain the bandpass characteristics in the manual , I cure this prob by Resldering the conections inside the can and running solder into the multiple wires the varnish burns off after a few secs of heat, another thing I have found is that you can increase the signal to noise ratio by judicious selection of the first and second mixer tubes, my RA17 was made in the 9th month 1974 and they started making these RX s in 1954 so it was a long production run ,I also have the SSB converter for this radio which turns it into an ISB system, they are a nice Rx and very reliable over long periods of time and very simple mechanically compared to the 390A , I also have the solid state model RA1217 ,only 3 inches high . regards to everyone Bernie N

From hcjoel at direcpc.com Fri Jul 23 19:35:01 2004
Subject: [R-390] Manual For Fluke

Hello, I don't know if a Fluke Model 335A DC-Voltage Standard, Differential VM would be usefule for some measurements on BA's. I have acquired one cheap at an auction. Does any list member either have, or knows where to get a manual. I have checked BAMA, he does not list it. Thanks

From ham at cq.nu Fri Jul 23 21:42:55 2004
Subject: [R-390] Manual For Fluke

Hi, There seem to be a ton of these showing up right now. I'm not real sure who is dumping them but I'll bet it's the government. Needless to say I picked up something similar.

The neat thing about these items is that they have monstrously high impedance when they are set to null. I keep thinking that would make them a very good thing to use as a high resolution meter to watch the AGC voltage on a R-390. Being able to say for sure that your signal report is 1.237 micro volts and doing it with a tube radio seems like a fun thing to do. Enjoy! Bob Camp KB8TQ

From egirland at tiscalinet.it Sat Jul 24 13:54:03 2004
Subject: R: [R-390] The story of Grundig

Great post. Thank you very much Harry. Ciao.

From jbhharvie at erols.com Sat Jul 24 15:23:06 2004
Subject: [R-390] [R390] R1051B/UU for sale

Members, Thanks in advance for the bandwidth

Now available

(1) R-1051B/URR receiver//includes rack and bottom mount adapter plates//N to BNC adapter//120v fused line filter//Unit "Field Changes Accomplished" 1, 2, 3, 4//v.g. mechanical, electrical, cosmetic condition//pictures available//includes spare tubes//manual reprint in 3-ring binder// first best offer received by 2300 hrs on 27th July 2004 CONUS only Shipment terms negotiable
vr//jbharvie@erols.com Maryland USA

From ka4prf at us-it.net Sun Jul 25 05:51:42 2004
Subject: [R-390] [R390] R1051B/UU for sale

Hi All, I am not familar with the R-1051B/URR. Can some one inlighten me on this receiver? Thanks Chuck Just trying to learn.

From ham at cq.nu Sun Jul 25 10:01:09 2004
Subject: [R-390] [R390] R1051B/UU for sale

Hi, Well this is far from the whole story and it's pretty biased as well.

More or less the R-390A was the last fully tube based general coverage HF receiver fielded by the US military. The R-1051 was more or less the first mostly solid state radio fielded by at least one part of the US military. Both radios saw use more or less side by side for a lot of years.

To what ever extent a SP-600 is a better band cruiser than a R-390A the R-390A is a better band cruiser than the R-1051. Anybody suffering from R-390 wrist need not investigate the R-1051.

The R-390A is very much an easier radio to work on than the R-1051. A lot of the semiconductors used on the R-1051's are a bit hard to find these days. Also while both are modular radios the R-390A modules are a bit easier to work on. As complicated as the R-390A is mechanically the R-1051 is pretty much in the same league.

The 1051 is a lot more stable than most radios from the era and for that matter more stable than most of the radios made today. It is a true SSB / ISB radio, unlike the R-390A that really needs an outboard gizmo to do well on SSB. I find that I like the sound of the R-390A on AM a bit better than I like the sound of the R-1051 running AM but that may just be me.

Both radios can be a bit high maintenance. A lot depends on the individual radio you happen to have. There are examples of both radios running 24 hours a day 365 days a year. On average though I would expect to have to work on either radio from time to time in order to keep it running at top performance.

At least from the examples I have here I would say that the R-390A has better sensitivity than the R-1051.

If from all of this you gather that they are two different radios then you have the right idea. The real replacement for both radios came with the generation of radios like the Harris RF-590. Even now later versions the R-1051 are in active service along side much newer radio designs. If the R-390 is still in active military service it's pretty well in stealth mode compared to the 1051.

If we believe in the power of the market to determine the merit of a radio then you have to admit the R-390A sells for more money then the early R-1051's when both radios are in similar shape. Since there are a lot more R-390A's out there you might argue a bit with this conclusion. I don't know if that answers your question or not. Take Care! Bob Camp KB8TQ

From w5or at comcast.net Sun Jul 25 11:11:31 2004
Subject: [R-390] R-1051B vs R-390

In addition to Bob's comments, for furthur info see http://www.acadiacom.net/nlee/r-1051_index.html

I like Bob's band cruising ability analogy, the R-1051B is to the R-390 as the R-390 is to the SP-600. Those individual tuning knobs on the 1051 are *hard* to turn. The Navy wanted a receiver to put on a frequency and it stay there, even when the big guns on board were firing. Don W5OR@comcast.net

From EmailEmaul at cs.com Sun Jul 25 12:01:18 2004
Subject: [R-390] Re: R-390 Digest, Vol 3, Issue 76- R-1051B

Hello John, I'd appreciate some pics if not a lot of trouble. What part of Md do you live? I might be able to pick up if OK on your end. Thanks and good BA-ing. Eric Maul n3gox

From jordana at nucleus.com Sun Jul 25 12:09:11 2004
Subject: [R-390] Re: Racal RA-117 Assistance needed

Can anyone give me any tips or info on the reliability of components in the older RACAL receivers...I'd like to know what someone else may have found regarding the Paper Caps , resistors etc....Does anyone know an e-mail address for Robin Filby, who is supposed to be one of the vintage RACAL experts..? The RA.117 that I'm working on has a date of 1965 and a Canadian Marconi 'Depot date' of 22/10/1975.... The previous user had disassembled the ENTIRE radio right down to the modules, and I really could use some discussion with some who has some experience on these fine receivers...I'm breaking it down section by section , and re-capping and replacing out of spec resistors...So far, what I've found is the resistor values are lower than spec.. ie., a 1k resistor measures 912 ohms... a 15k resistor reads 14.2k....I realize that the heat of summer isn't the best time to be starting this, but given the extent of the work, and a 1 module per week in my 'spare time' , it'll still be a couple of months before I attempt to re-apply power to the reworked receiver...

Interesting to note, the reason the previous user did the rework in the first place was that he had no 6688 tubes, so he 'modded' the radio to use 6EH7 tubes...it's also filled with 6AU6WA tubes in place of all the 5749/6BA6 tubes...and he tried to use 1/2 of a 6AL5 dudl diode to replace the EA76 subminiature AGC rectifier....The radio did work to some extent , otherwise I wouldn't have bothered...

The RA.17 is one of my favorite 'Band cruisers' , and I'm sure this will be the case once the buttons go back on this RA.117.... I will be taking detailed pictures and notes of the entire process, just for posterities sake, and to document what is easily the broadest 'rework' I have ever attempted... Here's to summer and to Vacuum tubes...! 73 de Jordan....

From ezeran at concentric.net Sun Jul 25 12:51:42 2004
Subject: [R-390] [R390] R1051B/UU for sale

More or less the R-390A was the last fully tube based general coverage HF receiver fielded by the US military. The R-1051 was more or less the first mostly solid state radio fielded by at least one part of the US military. Both radios saw use more or less side by side for a lot of years.

* True in the mid-late '60s Navy anyway with the '51 set up on fixed freq nets like Fleet Broadcast and the R390/390As set up in LOPs for individual operators and freqs that would change.

The 1051 is a lot more stable than most radios from the era and for that matter more stable than most of the radios made today

* The Navy made the swing to SSB and tone diversity multiplexing for broadcast in the mid-late '60s. The mux broadcast was decrypted with KW-7s, 14s, or 37s then run through a UCC-1V to break out the channels. If the RX drifted the result was garbled messages or dropped crypto. The 1051 was up to the job. EdZ

From glennmaillist at bellsouth.net Sun Jul 25 13:06:13 2004
Subject: [R-390] [R390] R1051B/UU for sale

A down side on the R-1051 series is the filter selection is made with the mode. When CW mode is selected, the widest filter in the radio is selected. Don't know why, just this is the way it works. The

front end has a tube in it for EMP protection. We used the R-1051 on submarines and it is definitely stable. Even more so when connected to an external Cesium standard.

The radio is definitely NOT a band cruiser.

The R-1051 is more stable than the R-390A

The R-390A requires thought in filter selection, the R-1051 selects filter with mode.

The R-390A is easier to tune. The R-390A is easier to fix. 73 Glenn WB4UIV

From ham at cq.nu Sun Jul 25 14:27:19 2004

Subject: [R-390] Carbon Comp Resistors in RA.17's, RA.117's and R-390's

Hi, This also relates to the resistors in the R-390 carbon composition resistors in the R-390 so it is worth repeating here. Carbon comps came in three flavors 20%, 10% and 5%. A lot of people have commented that the 5% tolerance was more a wish than a specification. A 10% 1K resistor that reads 912 ohms is still in specification.

In order to check a carbon composition resistor for value there is a bake out procedure you have to go through. I don't remember it exactly but 48 hours at 125 C sounds about right. The value of the resistor was measured something like 24 hours after it returned to room temperature.

On the R-390 most of the carbon composition resistors are 20% tolerance parts. They tend to drift up in value with age. As far as anybody can tell the radios work every bit as well with resistors that are 30% high as they did with resistors that are on value.

Every time we swap out a part on these radios there is a risk of damaging something else on the radio. I would only swap out parts that I am sure are a problem. I'm not suggesting that you keep the BBOD's in the radio, or that you do a ten hour test of every part you swap out. I'm only suggesting that you be reasonably sure the reward from replacing the part is worth the risk of damage. Enjoy! Bob Camp KB8TQ

From jbhavie at erols.com Sun Jul 25 14:28:52 2004

Subject: [R-390] [R390] R1051B/UU for sale

Bob, Chuck , Don and others, Due to the interest and questions on the R1051 series please find 21 URLs, others are likely out there...

<http://www.laud.no/la6nca/staaland/>

<http://www.fernblatt.net/m11.html#a2147>

http://www.acadiacom.net/nlee/r-1051_index.html

http://www.roveroresearch.com/ss_ba/r1051.html

<http://www.eham.net/reviews/detail/2628?ehamsid=5e4c247d44702862da0ebda98b962ef8>

<http://mikea.ath.cx/R-1051/>

http://216.239.41.104/search?q=cache:hox0Oq3OFUYJ:jtrs.army.mil/documents/RadioFactSheets/CLUSTER_3_INDEX.doc+R+1051B&hl=en

http://www.qsl.net/ik0moz/admm_intern.htm

<http://www.shlrc.mq.edu.au/~robinson/plugs/index.html>

<http://www.jamminpower.com/main/r1051.jsp>

<http://www.antiquewireless.org/otb/albacore.htm>

http://www.k1uq.com/restoration_story.htm
<http://www.fas.org/man/dod-101/sys/ship/ddg-51.htm>
<http://mcgp.cellmail.com/database/dailyindex.htm>
<http://www.history.navy.mil/photos/images/u120000/u129207.jpg>
<http://www.usspueblo.org/v2f/aftermath/pueblotourist.html>
<http://users.erols.com/eengineer/pueblo.html>
http://users.erols.com/eengineer/096f_13.jpg
http://search.archives.gov/cs.html?url=http%3A//www.archives.gov/research_room/research_topics/korean_war_casualty_lists/co_alphabetical.html&qt=pueblo+ship&col=&n=21
<http://www2.arri.org/news/features/2003/08/27/1/?nc=1> thanks John N3JKE

From k3oqf at localnet.com Sun Jul 25 22:25:37 2004
Subject: [R-390] R-1051

Gentleman;

Some thoughts about the R-1051 from ex RM who served in the mid 1960's. In radio central onboard Essex class aircraft we had a number R-1051's beside the R-390A's. We used the R-1051 for ISB or USB and LSB to receive MUX (Multiplex) radioteletype. The R-1051 was very stable but was always failing due to heat, the heat in the radio room was always about 90 to 100 degrees F with A/C running.

The transistors could not take the constant temperature off Vietnam. The receivers keep failing daily where the R-390A's kept working. R-390A was good on SSB without the adapter when receiving MUX. Also they were excellent for receiving regular radioteletype transmission with 850 cycles shift.

The R-1051 is knob twister delight and far as I am concerned it should be deep six. However, when it is working its good. It either good or darn bad....so much for my opinion....which stems back to my days in radio central of yesterday years. Rgds, Walter

From ham at cq.nu Sun Jul 25 22:42:08 2004
Subject: [R-390] Power Transformers

Hi, One of the things that there "are no more of" is the power transformer in our favorite radio. Given the way they made these we are unlikely to get together and make up a batch of them. Obviously this is not the only part in the radio that might be in this category ten or twenty years from now. Let's just focus on the power transformer right now.

I have never seen a R-390 with a blown power transformer. How common is power transformer failure in these radios? Certainly it is not in the top ten or even the top 20 observed failures. That alone is an encouraging thing. It is especially encouraging when I compare it to the number of computer power supplies I seem to see.

There are things we can do to lengthen the life of the transformers we have *if* it's an issue. All of these things have an impact so you really don't want to fix one thing only to break another. So, has anybody ever seen a blown power transformer in one of these radios? If so do you have any idea what caused it to fail? Thanks! Bob Camp KB8TQ

From ham at cq.nu Sun Jul 25 22:52:55 2004
Subject: [R-390] R-1051

Hi, This is from about ten years later but I suspect it is also relevant to the comparison.

The first R-390A I ever played with I picked up with at Fair Radio in about 1972. It was a Saturday morning and business was slow in Lima. We went back to an warehouse that was full of an enormous pile of R-390A's. I picked one out and we carted it back to the main office to run it through a basic check before I drove it back to Rochester.

Along the way we passed a stack of these odd radios with a bunch of knobs on them. At the time I had no idea what they could be, but I have sense figured out they were R-1051's. The stack was pretty good sized, but no where near as big as the R-390 stack. I asked about them and the comment that came back was "FMS (Foreign Military Sales) nobody seems to want them in this country".

The 1051 has been suffering by comparison with the R-390 for a long time .. Enjoy! Bob Camp KB8TQ

From wb5hak at sirinet.net Sun Jul 25 23:01:18 2004
Subject: [R-390] Power Transformers

Bob, Fair Radio still shows them on their website for \$25, unless they have run out and haven't fixed the site yet. 73, Don, WB5HAK

From Llgpt at aol.com Sun Jul 25 23:04:36 2004
Subject: [R-390] Power Transformers

I have had 33 pass through my hands, none were bad. Picked up 7 R-390A's today, haven't checked any of them out yet, but expect all of them to be fine. Also, 1 R-390 and expect that to be ok too. Les

From ka4prf at us-it.net Mon Jul 26 06:11:05 2004
Subject: [R-390] Never heard the real R-390

Hi all, As I was tuning around this morning on my NRD545, I was thinking about the R-390A I am waiting to arrive in the near future? I used the R-390 in the Navy back in the 60's and 70's and as I reminisced, I realized that I never really heard the true sound quality of the R-390 receiver in those days. Why? Because I always used those cheap head phones that had a round piece of metal that vibrated to produce the sound. Sure, sometimes we had an R-390 on a speaker, but the speaker was just as cheap as the ear phones.

So I am looking forward plugging in my own R-390A shortly and actually hearing what everyone is talking about. Chuck Bolland

From stevehobensack at hotmail.com Mon Jul 26 08:12:54 2004
Subject: [R-390] Power Transformers

The power transformers can go bad in a certain way. I have a '62 Imperial-Tel. Before pitching the trans in the *hit can, I used a screwdriver and chizzled off the back plate and removed the potting near the plate voltage leads. The potting had carbon tracked across the little porcelan feed-through bushings. There was a dead short. The repair was easy. Break out the tubes and replace with good insulated hook-

up wire, then melt the potting back in. Be sure to do both hv bushings. 73..Steve..kj8l

From stevehobensack at hotmail.com Mon Jul 26 08:28:00 2004
Subject: [R-390] R-1051

I use an R-1051b as an auxiliary rx in the ham shack. When changing bands, is it better to move the mode switch to the standby position, before changing bands (mhz)? The motor doesn't start and stop as much, but it puts more wear/tare on the mode switch. Is there a better procedure for changing bands?
..Steve..KJ8L

From stevehobensack at hotmail.com Mon Jul 26 08:32:16 2004
Subject: [R-390] Never heard the real R-390

Chuck, just in case you don't know, the speaker output is 600 ohms impedance. You can use a cheap radio shack 12 volt filament transformer (smallest one) to match the common 8 ohm speaker. Even then, stock audio isn't impressive. 73...Steve..KJ8L

From jamminpower at earthlink.net Mon Jul 26 08:55:24 2004
Subject: [R-390] Power Transformers

If for some reason Fair Radio is no longer supplying R-390/R-390A power transformers (they are different), I have a number of them I could part with for the same price, \$25 (plus shipping). James A. (Andy) Moorer

From mikea at mikea.ath.cx Mon Jul 26 09:52:15 2004
Subject: [R-390] Never heard the real R-390

wrote: > Chuck, just in case you don't know, the speaker output is 600 ohms impedance. You can use a cheap radio shack 12 volt filament transformer (smallest one) to match the common 8 ohm speaker. Even then, stock audio isn't impressive. > 73...Steve..KJ8L

I suspect that when the RX is tweaked to meet the book specs, which include 1% THD if I recall correctly, the sound from the Diode Load terminals is at least a bit better than "not impressive". I may be wrong on the THD figure, though, and if it's much more than 5%, it could indeed be not impressive.
Mike Andrews

From ccc24547 at vip.cybercity.dk Mon Jul 26 11:46:13 2004
Subject: [R-390] Sound of the R-390A

It is easy to sound better than the NRD-545, its many other qualities untold. And with the diode load hooked up to a hi-fi amplifier the R-390A does in fact sound impressive. It does not, however, quite rival the Eddystone 880, some of which were used by the BBC for its relays in Australia others for monitoring. Its output stage can also be used for Public Address purposes. Full, bassy sound which can be toned down if one is going for DX legibility. Best, Clemens S. Ostergaard Aarhus, Denmark

From drewmaster813 at hotmail.com Mon Jul 26 16:19:02 2004

Subject: [R-390] Power Transformers

wrote: <snipped>>So, has anybody ever seen a blown power transformer in one of these radios? If so do you have any idea what caused it to fail?

The only "failure" that I have personally witnessed is emanation of a loud acoustic hum. The transformer in my '67 EAC exhibits that behavior, but electrically all is copacetic. I had heard of a remedy consisting of baking the transformer at sufficiently high temperature to reflow the internal tar. After removal of the rectifier bracket and associated wiring I tried baking for about an hour at 250 degrees F IIRC. Small amounts of tar leaked out of a corner proving that the tar had liquefied.

After cooling, I powered the transformer (no load) and it still hummed loudly. I tried baking several times again with transformer in various positions and it still hummed upon subsequent test.

My final "solution" was to loosen the 6 captive mounting screws a turn or two and stuff an old glove between the transformer and the table upon which the receiver sits. That acoustic isolation damped the sound down to an acceptable level and has worked well for at least 15 years now.

I have read anecdotal reports of dielectric failure of the rubber feedthroughs for the high voltage terminals. Those were repaired IIRC by replacement with insulating tubing. Drew

From roy.morgan at nist.gov Mon Jul 26 16:54:19 2004

Subject: [R-390] Power Transformers

wrote: >... >There are things we can do to lengthen the life of the transformers we >have *if* it's an issue.

Yes.

- Use a line voltage reducing transformer.
- Apply a fan to any non-A type radio (R-390, R-391, R-389)
- Install a line inrush current reducer
- (Do NOT run your radios on a variac that can get turned up past your line voltage inadvertently.)

>So, has anybody ever seen a blown power transformer in one of these radios?

Nope. Roy

From stevehobensack at hotmail.com Mon Jul 26 16:58:21 2004

Subject: [R-390] r-390a power transformers

I tried posting this message earlier but it must have gotten lost in cyber space. Before trashing your power transformer do to a shorted out winding, chisel off the back plate and remove the potting near the high voltage feed-thru. my unit had carbon tracked through the potting tar to case ground at the entrance to the small porcelain tube. The fix is easy by removing the tube and installing good hook-up wire in its place. Replace the tar. 73...Steve...KJ8L

From jordana at nucleus.com Mon Jul 26 19:07:02 2004

Subject: [R-390] Source for axial caps

Does anyone know a good source for axial caps ie .0047, .047 ,.022 etc.... @ 250-400V..? Preferably film type caps.. Poly tubulars etc... 73 de Jordan...

From jamminpower at earthlink.net Mon Jul 26 20:03:51 2004

Subject: [R-390] Re: [Boatanchors] Source for axial caps

There are lots of sources (Mouser, Digikey), but I think Angela Instruments has the best prices: <http://www.angela.com/> James A. (Andy) Moorer

From ham at cq.nu Mon Jul 26 20:33:12 2004

Subject: [R-390] Power Transformers

Hi, Well here are a couple of ideas. As far as I can tell they are not really needed at this point. We don't seem to have very many failed power transformers out there. At the moment there also seem to be a reasonable supply of replacements at reasonable prices. Seems like this may be something the list will need to deal with in another few decades.

Here are a couple of ideas 20 years ahead of the need:

- 1) Since we don't run the heaters on the crystals any more (oven switch always off) we don't need as much current into the transformer. We should be able to drop the main line fuse to about 2/3 of it's specified value.
- 2) The mod you mentioned is one I had forgotten about. Fusing the high voltage is a good idea. If the fuse was in the return tap it should blow when the high voltage arced inside the transformer.
- 3) A MOV on the primary, or on the high voltage secondary is a cheap way to reduce the insulator flash over failures. They are cheap and fairly small. I don't see a down side in using one.

Transformers are amazingly good at handling short duration over current / over power situations. Long term overload will over temp the insulation and once the insulation goes you are in trouble.

There's my ideas. We'll know if they are needed in a 20 or 30 years. See you then !! Take Care Bob
Camp KB8TQ

From mjmurphy45 at comcast.net Mon Jul 26 20:44:15 2004

Subject: [R-390] R-1051

Steve, When going to college at Rochester Institute of Technology, I had to obtain and hold (or at least try in a very tight 1978 economy) a Co-op job every other quarter for three years. My first job was a bust, cutting out chassis all day for test fixtures (similar to Grundig story) which were used a Xerox and Kodak, Rochester's two largest employers at the time. Co-op student = slave.

My second job was a better one where I actually got to work on the bench and test and trouble shoot radio gear (as a young ham was eager to do). It turns out that the "start up" was a company that repaired a very specific type of radio for the military. Why? Because nobody else wanted to touch them because they were apparently too difficult to service.

FYI - The Albacore Sub (nearby in Portsmouth NH) used this gear, which was considered state of the art in 1961. http://www.k1uq.com/restoration_story.htm

It turned out that the boss was a former General Dynamics engineer, and he felt confident enough to work on these blasted things. We also had another advantage, we had the complete microfiche set of drawings for the R1051 radios and all known variants. Strangely, I never worked on the R1051, but I sure had some experience on its brothers and sisters, the including the RT-618 Transceiver, T-827 AN/URT-23 transmit only variant and the AM3007 Amplifier. I also worked on a few GR-106's. All of these wonders came out of a General Dynamics design in the late 1950's.

What we did at Radionics Inc. was repair/replace/certify radios to 100% specifications. It is important to understand that these radios were considered to be long obsolete by the original manufacturers by 1978! Anyway, all refurbished radios were inspected by a government source inspector, who hovered over the lucky techs shoulder. We fabricated all parts that we could not refurbish. Trucks full of surplus radios (won on bid) would show up from time to time and we used these as boneyard parts. We stripped panels, sent them out for paint, and re-did lettering. The carousel tuning sections were our specialty. We actually made these from scratch including winding and cooking coils. The most common failure in these radios was a mis alignment of the carousel contacts and the complete or partial destruction of the assembly. Another common failure was the 500 kHz master oscillator heater which would run away and cook everything. We rebuilt these and sent them out for NBS calibration before replacing them in the radio.

We also built some custom gear; a VLF rack mount unit which up-converted 100 - 2000 KHz to 5 MHz, if I remember correctly. This unit matched the R-1051. Thank God I am beginning to forget everything. I have never been tempted to look inside another one of these. Mike WB2UID

From r390a at bellsouth.net Mon Jul 26 22:04:03 2004

Subject: [R-390] Re: Source for axial caps (and much more)

Just bought a bag from www.justradios.com, they sell on ebay as well, username just either justradios or just-radios. Their email is justradios@yahoo.com

from 29 cents for .01@630V to 45 cents for .1@630 volt poly film Also has "Orange Drop" clones at similar prices. Good prices on filter caps as well, highest cost part is 100 mf at 450V. All new fresh, not NOS dried out caps. And they have 500 V micas.

Poly film Orange Drops up to 2.2 mf! Axials to .5 mf, Orange Drops and ceramic to 1600 volts. Cap kits too with common values. I've bought all my caps from them for some time now. good stuff. Tom NU4G

From cgalbrai at umich.edu Tue Jul 27 13:08:08 2004

Subject: [R-390] Source for axial caps

Hi Jordan and gang, I like the 630V metallized polypropylene films made by Illinois Capacitor (IC), available through AES (www.tubesandmore.com). Pretty cheap, under a buck for 0.1uF/630V.

You can get to their performance specs at this link (select the "MPW" line): <http://www.illcap.com/Film.asp>

Pretty low dissipation factor, rated to 105 deg C, and relatively small in size compared to SBE

715P ("orange drops") (but still an *axial* that fits all BA applications I've tried). If you use 630V rated ones, you may get a longer life in BA rx duty (200-350V typically), as capacitor lifetimes increase as you "de-rate" temperature and applied voltage. Good for bypass and coupling.

In fact, 400V polyester units should be plenty of capacitor for bypass applications...and polyesters are rated to 125 deg F. They have a higher (worse) dissipation factor (i.e. lower Q/higher E.S.R.), but I'm not certain that would matter much. But, for not much more money (cents), I just buy the 630V MPWs for everything and simplify my life a little bit.

As an aside, I'm curious why "orange drops" are so popular in BA restorations. They look like they're better suited (and are recommended) for audio coupling or high current/pulse bypass or filtering. I recall looking at their impedance vs. frequency once and noting that 0.1uF units were getting rather close to their self-resonance for 455 kHz applications.

My thinking is that I'd like to replace these capacitors once, at least in my lifetime. We're lucky to have such nice materials and manufacturing these days. 73, Chris KA8WFC

From jordana at nucleus.com Wed Jul 28 11:17:27 2004
Subject: [R-390] Collins Winged Emblem colors

Hi.. does anyone know what the significance of the color of the bars in the Winged Emblem..? Why are most of the bars red in color, and others have orange bars..?? 73 de Jordan...

From roy.morgan at nist.gov Wed Jul 28 13:43:38 2004
Subject: [R-390] Never heard the real R-390

wrote: >I suspect that when the RX is tweaked to meet the book specs, which >include 1% THD if I recall correctly, the sound from the Diode Load >terminals is at least a bit better than "not impressive".

Mil Spec 13947B says:

"3.13.41 Audio harmonic distortion.- Harmonic distortion shall be no greater than 1- percent with 500 milliwatts outputs at the local audio channel, and no greater than 6 percent at the line audio channel. (See 4.41)"

"4.41 Audio harmonic distortion.- Audio harmonic distortion shall be measured with a Distortion Analyzer Hewlett-Packard Company Type 330-B, or equal, to determine compliance with the requirements of 3.13.41. Signal input shall be 1000 microvolts. The receiver audio outputs shall be loaded with a non-inductive resistance of 600 ohms, one Watt rating or larger." Roy

From djmerz at 3-cities.com Wed Jul 28 13:47:12 2004
Subject: [R-390] Collins Winged Emblem colors

Hi, I think they starting running out of red paint and had lots of yellow left over from a parking lot project and stretched the paint by mixing in some yellow resulting in an orange color. I may be wrong about this. It may be another color they mixed with red. For fear of saying something stupid, I'm going to let it go at that.

I'm a little intrigued with color of communications receivers - for a long time they were black, black, black and the backlit dials provided the only color, aside from white lettering and chrome or nickel plate here and there. I suspect the mentality was "this equipment really does something, it doesn't need color to sell". The National NC-200 around 1940 and Post WWII receivers, like the hq 129 , starting showing colors in the sense of contrasting tones and subdued colors, culminating in the colorful NC-270 and others of that period. What could a manufacturer of more "professional" gear do, put a little red on an emblem, use a little different shade of a sober color, switch from red to orange on an emblem. After all, this is the ultimate type of radio and color should be perceived as a secondary issue. However, color probably was not an unimportant issue. Witness how many of us want our old radios to have authentic colors when restored or are appalled by non-authentic paint jobs. The user expects a certain look to some degree.

I don't think I've helped with the question directly to any degree but there may be others who know the real story on red vs. orange, best regards, Dan

From sdaitch at ibb.gov Wed Jul 28 16:41:00 2004

Subject: [R-390] Never heard the real R-390

Maybe I have missed it, isn't 6 per cent distortion pretty high? I asked a colleague and his idea on 6 per cent was pretty high, and should be very audible. But he also said below about 3 per cent starts to get into the area where folks stop complaining. Audiophiles want it to be a lot lower, though, and maybe with good equipment, you can hear in A-B testing, between 3 per cent and something a lot lower.

I believe the old standard for AM broadcast transmitters was a maximum of 5 per cent, except at the lower audio frequencies, where the limit was 7.5 per cent. I guess I ought to check an old rule book. Sheldon

From wb5hak at sirinet.net Wed Jul 28 20:44:23 2004

Subject: [R-390] Multiple Radios

Is anyone interested in several radios to "revive", restore, etc?? I bought several over the years to restore, but they are just sitting and collecting dust and other things the critters choose to deposit on them! Purchaser would have to drive, as shipping would be out of the question. I have:

2 Collins R-390's (non A's)

1 Motorola R-390A

2 Hammarlund SP600 JX's

The "A" has an original case and I have other "miscellaneous" goodies to throw in with them. Group purchase only, picked up in Southwest Oklahoma or could meet within a reasonable distance. Let me know and can supply a few more details, but not a many details as I haven't started the work on any of them yet. ALL will need TLC. Thanks, Don, WB5HAK

From wb5hak at sirinet.net Wed Jul 28 21:21:49 2004

Subject: [R-390] Multiple Radios

Please hold off on the emails. Had a flood, hi!! If no sale from the ones I have (and I've already had an offer to buy at my asking) I'll re-post. Tks for all the interest! Don

From chacuff at cableone.net Wed Jul 28 21:29:08 2004

Subject: [R-390] R-1051

I can second Bobs comments with plenty of first hand experience...Prices have fallen in the past couple of years....as well as interest it seems.

I know somebody, somewhere is sitting on countless dozens of them waiting for them to be worth something someday...and someday maybe they will be. Right now there are none to be found in the common surplus channels. (you would think that would drive prices up) A few show up now and again on Ebay...and I know many list members have one or more...but no one wants to spend the money on them like they would the 390 series or even the SP-600's.

They are complex and difficult to work on at times...but when they work properly they are nice radio's....especially if you have a need to monitor one specific frequency for long periods of time. ISB is great for AM SWL'ing with the dual IF's and Audio's and it's a great SSB rig. A bit noisy compared to the earlier tube gear....but there are lots of Germanium transistors in them all the way up to at least the D model.

I bought the last of the complete Fair Radio R-1051 stock 3 or so years back and still have several.

If you are the adventurous type and want to take a shot at doing repair work on that series drop me note off list and I'll discuss a package deal or trades. I could use the room! Cecil Acuff

From ham at cq.nu Wed Jul 28 21:48:25 2004
Subject: [R-390] Power Transformers

Hi, I obviously am going brain dead. When I read this message I noticed something odd about it but could not exactly identify what it was. It's taken me a couple of days of thought to figure out what it was. How in the world does "picking up 7 R-390A's" fit in with "a need to slim down the stock of radios" mentioned in your earlier posts?

This sounds like a recurring sickness. The only solution is of course total abstinence. You must immediately dispose of all of the R-390's. I will forward my shipping address directly
Take Care! Bob Camp KB8TQ

From chacuff at cableone.net Wed Jul 28 21:55:21 2004
Subject: [R-390] R-1051

That's good stuff Michael,

Today the same failures are just as common. I can't figure out why an engineer would put all the parts they did inside the oven on that Frequency Standard. It bakes things that don't need to be baked....all at 85C. I have seen many that the oven has run away and melted the solder on the back side of the 5MC board killing the radio. I have also repaired many with damaged contacts in the Turret assembly. Fortunately the contact material has a high silver content and is very forgiving to straightening. Very different radio...as radio's go! Cecil....

From andy at champ1.freemove.co.uk Tue Jul 27 09:29:37 2004
Subject: [R-390] Never heard the real R-390

> Chuck, just in case you don't know, the speaker output is 600 ohms > impedance. You can use a cheap radio shack 12 volt

A good source for 600 Ohm to 8 Ohm matching transformers is the LS-166/U loudspeaker used with various vehicle and manpack sets. The transformer is rated at 2 Watts and has a stated frequency range of 250 c/s to 5000 c/s. Either use as-is or connect to a better 'speaker for improved "Fi". They are not too hard to find even in the UK or Europe so I imagine even easier in the US. Andy G8JAC

From mmdues at hal-pc.org Thu Jul 29 13:46:23 2004
Subject: [R-390] Re: reforming electrolytics per MIL-HDBK-1131A

Hi, Murry,

Thanks for the heads up on reforming electrolytics. I found it at the following URL:
<http://www.dsccl.dla.mil/Downloads/MilSpec/Docs/MIL-HDBK-1131/hb1131.pdf> I found it interesting that they recommending discarding electrolytics that are older than 12 to 15 years old. Regards,
Marshall Dues, WB5MYO Katy, TX

From LairdThomasN at JohnDeere.com Thu Jul 29 12:04:15 2004
Subject: [R-390] Never heard the real R-390

You can also purchase a new Hammond matching transformer from AES in Tempe, Az. for \$18.95 USD, that is made for this application. Tom WC9M Moline, IL.

From buzz at softcom.net Thu Jul 29 12:26:27 2004
Subject: [R-390] Never heard the real R-390 Amps. FOR SALE

Listers, Share the exciting sound of your R-390 with your neighbors. I have a few Altec Lansing 200W solid state amplifiers for sale. These amps will operate from 115V AC or 24V DC. For Specs see.
<http://nleinternet.net/alteclansingunofficial/proelectronics/proamplifiers/1590E-Manual.pdf> Special offer to R-390 members at \$100 each plus shipping from 89506. Buzz

From r390a at bellsouth.net Thu Jul 29 13:06:39 2004
Subject: [R-390] Never heard the real R-390

And the Hammond transformer has better freq response than the one out of the LS-166 The Other Tom NU4G

From chejmw at acsu.buffalo.edu Thu Jul 29 13:42:07 2004
Subject: [R-390] Never heard the real R-390

Some time back in years, I bought the Radio Shack 1K ct. to 8 ohm transformers, about 10 of them. I also purchased blue perfboard and "stacking terminals" mounted the transformers on the boards. I use one on each output of the various receivers that have 600 ohm output for the audio, including SP-600JX-17, SP-600JX21, a pair of R-390As and my band cruising Hallicrafters SX-62A, all with no problems and the audio sound great. I have a pa amp at 30 watts that is in the garage and it is fed from a single R-

390A in the house, also sounds darned good outdoors. Jim WB2FCN

From chejmw at acsu.buffalo.edu Thu Jul 29 13:44:34 2004
Subject: [R-390] Never heard the real R-390

That is because the LS-166 is termed a "Communications Quality" speaker system. Jim WB2FCN

From LairdThomasN at JohnDeere.com Thu Jul 29 13:57:15 2004
Subject: [R-390] Never heard the real R-390

AES part number: P-T119DA (\$18.32) www.tubesandmore.com

quote: Developed in response to requests from the "Collins Collectors Association", this is a matching audio transformer for older equipment with 600 ohm audio output, driving modern speakers.

Or for "classic" high impedance speakers used with newer equipment, simply swap primary for secondary (ie...4 or 8 ohm input and 600 ohms out). Tom Laird WC9M Moline, IL.

From r390a at bellsouth.net Thu Jul 29 14:02:13 2004
Subject: [R-390] Never heard the real R-390

Nahhhhhh, I'd have never knowb it, he says, looking at the probably half dozen LS-166's and other green radio gear on his shelf. ;-) Tom

From flood at Krohne.com Thu Jul 29 15:59:03 2004
Subject: [R-390] Multiple Radios

Greetings, Is there any additional value to a R-1274 over the R390A it was made from. It is a single unit and none of the external high stability oscillators are with it. I want to be fair in my offer for the unit. I am told that it is functional using the internal hardware. John Flood KB1FQG

From ham at cq.nu Thu Jul 29 18:44:23 2004
Subject: [R-390] Multiple Radios

Hi, Well like anything it's a matter of supply and demand.

Without the extra stuff that went with it the radio does not do anything that the R-390A didn't do. So in that sense it's not worth any more.

Of course there are people out there trying to rebuild the entire system. If they have the synthesizer I'm sure a R-1274 is something that is now on their wish list. From what I have seen the radios are a lot more common than the synthesizers. I suspect that the radios went back into normal service when the synthesizers no longer were worth maintaining.

One other interest group would be those witches involved in things like putting a solid state synthesizer in place of the original external box. Not many people will admit to this form of deviant behavior in

public though.

If you can find somebody in either of these two small groups then I'm sure the radio is worth a premium to them. You may spend quite a while looking for one of them though.

Not that it has any relevance to the value of the radio, but what do the tags on it read? Take Care! Bob Camp KB8TQ

From r390a at bellsouth.net Thu Jul 29 21:10:53 2004
Subject: [R-390] Type C to Type N cables you know where

Folks wanting adaptors for their 390's, there is a guy with a couple 20 foot C to N cable assemblies up for auction on Epay.

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=15051&item=5712291804> and
<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=15051&item=5712191084> Tom NU4G
Manchester, TN

From r390a at bellsouth.net Thu Jul 29 21:52:11 2004
Subject: [R-390] Multiple Radios

When I see these on Epay, they seem to go for twice the price of a regular 390A, with the description usually telling of the radio being used in the space program, etc I have a set of the synthesizers, but so far none of the ebay buyers actually want them, they just want the "rare" radio... which I can't afford one to go with my external boxes because it has been deemed rare and collectable. Tom

From ezeran at concentric.net Thu Jul 29 23:17:16 2004
Subject: [R-390] Type C to Type N cables you know where

>Folks wanting adaptors for their 390's, there is a guy with >a couple 20 foot C to N cable assemblies up for auction on Epay.

C to N shouldnt be that big deal...

From flood at Krohne.com Fri Jul 30 12:28:09 2004
Subject: [R-390] Multiple Radios

Thanks for all of the replies,

First of all I do not have the radio for sale. There is one locally that is available to me. I have not seen it yet, so I cant give any tag data. I was just trying to get a feel for a fair "local sale" (non e-pay) price to offer. I am also a bit confused, (no surprise to those who know me) about the part numbers. I was told that it is a "NASA" unit. I come up with both R-1274 and R-1247 hits on my internet searches. Are both of these "real" part numbers or is one a typo?

Tom, Please let me know off list how much you wanted to get for the ext. synth. just in case I get real brave! John Flood

From mwells at gcea.coop Fri Jul 30 16:02:05 2004
Subject: [R-390] Hello

I am new to the list. I just picked up a couple R-390A's last week and thought I would see what sort of helpful pointers I could get. The receivers I picked up are nice units. One is a Collins built unit and the other is a Capehart unit.

I'm sure that there has been lots of chatter about the 26Z5 rectifier tubes. I am in need of one and started looking around and it appears they may be hard to find and expensive. Is there a good source for them?

I am also curious about the calibration of the carrier level meter. I have adjusted the zero set point, however with the two 390's setting side by side one registers a much higher reading on the same signal, yet they both hear very well. Guess that only listening by ear isn't a good sample so would you think its just an alignment problem? Thanks Mike W0FD

From ham at cq.nu Fri Jul 30 17:15:58 2004
Subject: [R-390] Hello

Hi, Congratulations on getting some "real" radios. You may want to take a look at <http://www.hausernet.com/r390a/>

For a copy of the Y2K version of the R390A manual. It is posted on Barry's site and he's a regular here on the list. There are also scanned copies of most of the military manuals available for download at various places on the net.

You might also want to check out <http://www.r390a.com/> as a good starting point for a lot of R-390 information.

I would not worry about finding any 26Z5's. The military started replacing them with solid state diodes quite a while back. These days there isn't a lot of price difference between low voltage and high voltage diodes so I would go with 1KV rated diodes. The same applies to the cost of low current versus high current diodes. I would go for something like 3 amp parts. Both of those ratings are overkill but the 25 cent price difference probably won't impact your lifestyle to severely.

The whole carrier meter calibration thing gets a bit involved. The radios probably need a full alignment if they have been in storage for a while. As part of the process you set the carrier meters up so they agree with each other. A signal generator is pretty useful for this process. The IF gain is also set as part of this process and that also affects the radio quite a bit. There are differing opinions on the best setting of the IF gain.

One nice thing about having a pair of radios is that you can swap modules between them if you suspect a problem. This makes the whole maintenance process a whole lot easier. For example you might have a leaky capacitor on your agc line. That line runs all over the place. It's nice to be able to swap out the IF deck to isolate the general location of the problem before you tear into the RF deck.

I'm sure some of that doesn't make a lot of sense right now, but hopefully it will as you dig into the radios.

Don't be afraid to work on these beasts. They were designed to be maintained and aligned by your average joe. They are tube based so they will require a bit more tender loving care than a solid state radio. That said, they are well worth the effort. Enjoy! Bob Camp KB8TQ

From mwells at gcea.coop Fri Jul 30 18:32:49 2004
Subject: [R-390] Hello

Thanks to all that replied. I appreciate the help and I will see what I can get accomplished this weekend. You guys have already provided me with lots of good info to get started. I think I'm pretty lucky to get a couple R-390A that are in decent shape and it will be fun to go through them and learn what makes them tick. Mike W0FD

From drewmaster813 at hotmail.com Fri Jul 30 19:19:51 2004
Subject: [R-390] real R-390 Never heard the

wrote: <snip>>A good source for 600 Ohm to 8 Ohm matching transformers is the LS-166/U <loudspeaker used with various vehicle and manpack sets.

Don't forget the common 70.7 volt line matching transformer used in PA systems. Connect the secondary (typically has taps for 4,8,16 ohms) to match your speaker. Connect your 600 ohm source to the primary 10 watt tap. That will present a 500 ohm load to your 600 ohm source, close enuf fo' gummint work. Mouser sells those transformers and last I checked Radio Shack did also. Of course, the Hammond transformer would provide better audio quality. Drew "Vicariously repairing and modifying the R-390x series via advice to others"

From dathegene at hotmail.com Sat Jul 31 10:47:56 2004
Subject: [R-390] what is it?

Hi gang--there's an EAC up on Epay right now. On the back of the radio it has some attachment in the center I've never seen. What is it? Gene NA0G

From ham at cq.nu Sat Jul 31 11:41:19 2004
Subject: [R-390] what is it?

Hi, It's a bit tough to see from the pictures. Judging by the stuff on the front of the radio I would bet that it's been worked on fairly heavily by a ham. Certainly the replacement meters are a bit interesting. I can't even tell from the pictures weather the modification chassis has transistors plugged into it or Nuvistors ... I don't think the modifications have increased the value of the radio any Enjoy! Bob Camp KB8TQ

From tetrode at comcast.net Sat Jul 31 11:56:30 2004
Subject: [R-390] what is it?

Hi Gene, Hmm, good question. (BTW it's item # 5712724918)

My guess it's some type of audio distribution or amp setup. Visible on the left are a wire pair going to the Local Audio output terminal, and there appear to be a few 1/4 inch phone jacks and also RCA type jacks on phenolic insulators, which is a way to reduce ground loops. (Could be Nuvistors or transistors too but I'll stick to the RCA guess)

The round green transformers on top are about the right size for line-levels, and the round thingy on the far right might be another connector or possibly an old style power transistor. Could be some additional connections under it that we can't see.

Also another couple of things going on, there's a nicely done C to SO-239 minibox adapter, and extension cables for external meters which appear to be connected via those blue wire nuts on either side of the rear of the front panel.

There seems to be an endless variety of custom modules and hang-on gizmos for these radios, saw quite a few of these unknowns a few years back when perusing the piles at Fair Radio. John