

The Official Newsletter
Of The Steel City
Amateur Radio Club

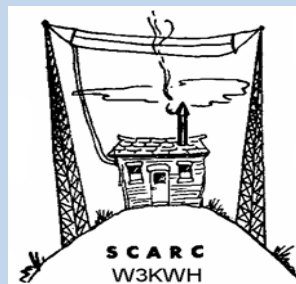
All the (Amateur) news
that's fit to print

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FLASH!! Special meeting to be held on Weds. Sept. 12
@ the Club House to discuss road improvements.
Your presence & input is needed!! Meeting starts @
8:00PM. BE THERE; IT'S IMPORTANT!!



KiloWatt Harmonics

Check us out on the web: www.w3kwh.com

September, 2007

Editorial Ramblings



Well, it's hard to believe that summer is almost over. Here it is, the end of August, and I'm wondering where the time went. Pretty soon, (too soon) the first day of fall will be upon us! Football season, kids going back to school, cooler weather, the summer just went by way too fast.

Now that we prepare to make our way indoors for the coming cold season, consider doing some operating events with the club this coming contest season. Lots of fun operating/social events are coming our way too: Our annual Corn Roast is this month (see below), plus many contests to

keep you active on the bands as the contesting season heats up; the CQ WW RTTY contest is this month, and the PA QSO Party is next month, plus some of the best DX Contests all year in October and November, the CQ WW SSB/CW tests. So, consider getting active in your club again and participating in some of these great operating events.

As stated last month, I'd like to start a Swap 'n Shop listing, so send me your for sale/wanted items and I'll stick them in the newsletter. Also, someone suggested a shack-of-the-month section. Good idea!! Send me your shack photos; I like to see other members' shacks, how they're laid out and such. So please, send me photos of your station!!

As always, your thoughts/comments/criticisms/articles/ideas/pictures are welcome at: KQ3DX@hotmail.com

CU on the bands!! (And at the Clubhouse!!) Thanks/73 de KQ3DX et al.



Next Meeting: Sept. 18. Corn Roast Too!!

Our next business meeting will be held on September 18th at the clubhouse. Also, it was decided to have our annual Corn Roast combined with the meeting. This would be a great time for you to come out and meet new friends and hook up with old ones too! (Not to mention meeting ye olde editor!) Lots of important stuff was

discussed at the last meeting, so please consider coming out and participating in the meeting, not to mention the great food too!

Mark it in your datebook: Business meeting, Sept 18th @ 8:00PM, to be held along with the annual Corn Roast.

CU at the Clubhouse then. Be there!



The Steel City Amateur Radio Club:

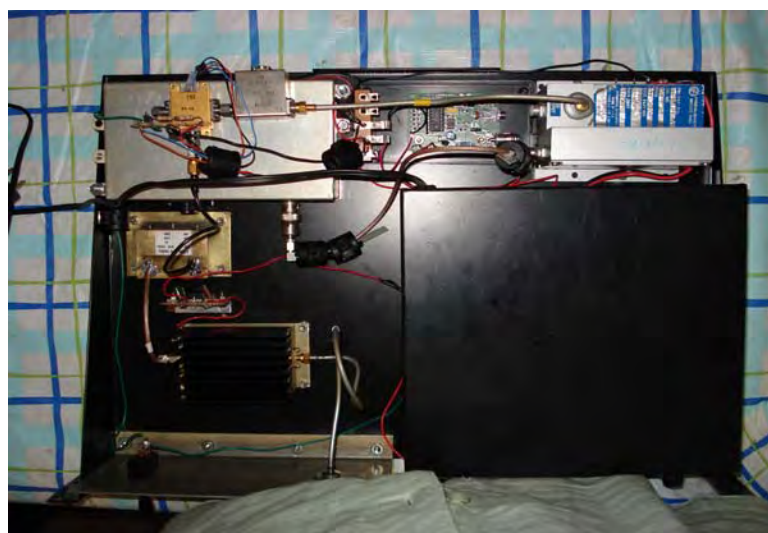
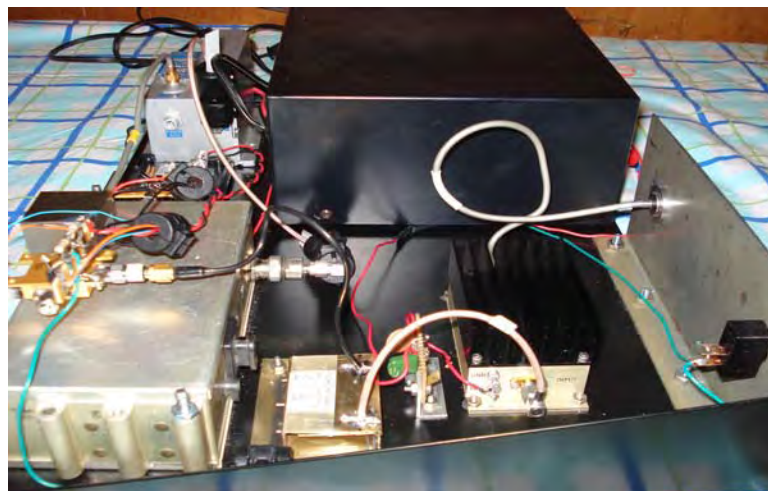
- **President:** Michael Sapp, WA3TTS
(412) 364-2740
- **VP:** Madison McKee, W3MAC
(412) 279-8756
- **Treasurer:** Walt Adkins, KA3YNO
(412) 276-0825
- **Recording Secretary:** Joe Mielnicki, WA3FWA (412) 922-6340
- **Corresponding Secretary:** Harry Trentes, K3GJS (412) 221-1086
- **License Trustee:** Karl Pastorak, WA3VXJ (412) 429-8055
- **Editor(s):** Greg Babin, KQ3DX
(412) 367-8845, KA3LNG, W3SVJ

Club Stuff/Local Goings-On

More 1296MHz Beacon Stuff

Editor's note: Many thanks to our club Prez Mike, WA3TTS for this update on the beacon.

Hi Folks: Tuesday evening I upgraded the 1296.269 beacon to the 1 watt level and also added a 3 pole filter made from a 1980's era ARRL handbook. The signal is loud enough now that I can hear it in any direction on my 432 Yagi at home, whereas before I could only hear the beacon in one direction. The filter is 40db down in response +/- 100Mhz from the 1296 center frequency. This should hold any harmonic generation from the RF PIN switch to a minimum. (It pays to be good neighbors with the cell phone companies and the FAA.) As of this writing I received an e-mail from K8TQK in EM89if, southwest of Columbus, Ohio, reporting he was hearing the beacon s2 to s5 this morning. That is about a 190 mile path, so it looks like the beacon is doing it's job to let hams within a few hundred miles radius of W3KWH know when the tropospheric propagation is favorable. The beacon is listed on the Internet and can be found at: www.newsvhf.com/beacons2.html. It can also be accessed from a link at the lower part of the 144MHz page at www.dxworld.com. (More beacon pics/updates on page 15.)



Pictures of the 1296 Beacon built by Mike WA3TTS. (Thanks to WA3TTS and N3EQP for the photos.) More pics on pg. 15.



The following comes from John, N3EQP:

At the SkyView HamFest, I attended a presentation by the ARRL leadership. I found that the ARRL can provide a complete set of ARRL publications for donation to libraries for \$175. I checked and that would also apply to our club. This is a great opportunity to update the club library. We may want to consider donating the same publication collection to worthy local libraries as part of our educational mandate. If anyone has suggestions for additional publications please send your list to me at N3EQP@ARRL.NET

I also found out that there is a Power Point presentation that covers earning the (Boy Scout) Radio merit badge. Any one can teach the course but a certified merit badge representative is needed to sign off and give out the merit badges. If anyone is interested in running this course or knows a certified merit badge representative let me know. Thanks, John Simpson, N3EQP
(more club/local news on page 9.)

**KiloWatt Harmonics,
September 2007**

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& Regulations section
501 (C) (3)**

DX News & Views

- ◆ I wanted to clarify a listing in last month's issue on the upcoming 3B7C operation. They will be on from September 7-24 on ALL bands. I may have alluded to a 6M only operation and that was not my intention. So look for them on all bands, 160-6M, SSB and CW. They will be active from the Isle du Sud, St. Brandon. www.3b7c.com
- ◆ Look for Ed Sawyer, N1UR to be active from a number of countries in Asia this fall. He'll be making a stop in Bhutan, and will operate as A52UR from Sept. 28 to Oct. 2. He will then move on to East Malaysia and will be signing 9M6A in the CQ WW CW DX Contest. Also in the works is an operation from the Spratly Islands March 22-30. He will also be staying in Xiamen, China with some BY ops and hopes to get on from BY5 sometime in the future. QSL A52UR to K2RET, and QSL 9M6A to N2OO.
- ◆ Be on the lookout for 4U1WRC from the ITU Geneva Headquarters during the CQ WW DX SSB Contest in October. QSL via 4U1ITU.
- ◆ The 55th annual W9DXCC convention will be held on September 14-15. Some of the goodies lined up include: **BS7H Scarborough Reef - Mike McGirr, K9AJ**, ZL8R Raoul Island - Ralph Bellas, K9ZO, **continuing search for Amelia Earhart's Airplane - Tom Vinson, NY0V**, Propagation - Cycle 24 Predictions and More - Carl Luetzel-schwab, K9LA, **Island On The Air (IOTA) Update - Bruce Osterberg, N9BX**, The ARRL Forum, with Central Division Vice Director Howie Huntington, K9KM; Membership Manager Dave Patton, NN1N; Chief Development Officer Mary Hobart, K1MMH; and DX Advisory Committee Member Jim O'Connell, W9WU, **Elecraft K-3 Next Generation Transceiver - Eric Swartz, WA6HHQ**, Loop Arrays - Low Band Receive Antennas - Gary Breed, K9AY, **V63J - Micronesia IOTA Tour - Mike McGirr, K9AJ**. The Banquet Speaker will be Glenn Johnson, W0GJ. He'll be reporting on the VU7 Lakshadweep Island DXpedition which occurred in January 2007. For more info and/or to register, check out their website: www.w9dxcc.com.
- ◆ SPAIN, EA. In commemoration of the European basketball championship EuroBasket 2007, special event stations AN0EB, AN4EB, AN5EB, AN6EB and AN7EB will be QRV from September 1 to 16. QSL all calls via EA4RCH.
- ◆ ISLE OF MAN, GD. Dieter, DL2BQD plans to be QRV as MD/DL2BQD from September 6 to 13 or 14. Activity will be mainly during his evenings on 40, 30 and 20 meters using QRP power. QSL to home call.
- ◆ MINAMI TORISHIMA, JD1. JA6GXX is QRV as JD1BMM from Marcus Island until September 20. Activity is on 80 to 10 meters using CW, SSB, RTTY and PSK. QSL to home call.
- ◆ EUROPEAN RUSSIA, UA. Special event station RC150KTS is QRV during September to commemorate the 150th anniversary of the birth of Russian scientist and pioneer of astro-nautic theory, Konstantin E. Tsiolkovsky. QSL via RU3SD.
- ◆ INDIA, VU. Members of the National Institute of Amateur Radio in Hyderabad are QRV as special event station AT60MY until November 17 to celebrate the 60th anniversary of India's independence. QSL via VU2NRO.
- ◆ INDONESIA, YB. Rich, PA0RRS is QRV as YB9/PA0RRS from Bali Island, IOTA OC-022, until September 24. Activity is mostly on 40 to 10 meters, but will try 80 and 6 meters as well. QSL to home call.
- ◆ Look for C50C and C52C from The Gambia October 17-30 on all bands, 160-10M. This will consist of a group of 6 ops from the OM0C Contest Crew. They plan to be especially active on 160M.
- ◆ G7COD plans to be active from the Maldives as 8Q7AK from September 30 to October 12. Mostly SSB with some CW on 30-12 Meters. Look for him around 0830-1030UTC and 1300-1515UTC. QSL to the home call.
- ◆ VK9WWI (Willis Island) will be active from September 25 to October 5. A 2-Man DXpedition starring AA7JV & HA7RY.

(From ARRL DX Bulletins & DX-IS News Site)



Meeting Minutes: August 2007

Minutes of the Steel City ARC Meeting Tuesday, August 21, 2007

The meeting was called to order by the President, Mike, WA3TTS at 8 PM. The Pledge of Allegiance was recited and followed by a moment of silence for our Silent Keys. 28 members and 5 guests were present.

Minutes of the July meeting were accepted as e-mailed and as printed in the Aug. newsletter. Treasurers report was given by the Treasurer, Walt, KA3YNO and accepted by the membership.

Committee Reports:

Clubhouse: Mike, WA3TTS brought electronic textbooks that were discarded from a local library for SCARC's library. Karl, WA3VXJ has the lawn mower and weed trimmer out for repairs. There was a discussion on security measures for times that the clubhouse is unoccupied; ideas only, nothing definite.

Nate, W3SVJ has bids out for paving the club road, a section of 10 feet by 300 feet. The encroaching shrubbery along the road needs trimmed to avoid damaging vehicles driving up to the clubhouse. The fuel oil supplier is reluctant to drive their new trucks up due to the present condition. There is a work party scheduled for the weekend of Sept. 8 and 9 to clear that overgrowth. Al, NU3S has been contacted to check the AC system.

Technical: Dave, WQ3T has the cable to wire the TS-2000 for his project. Mike will add an amplifier to his 1296MHz beacon. He cautions all operators not to pull the transceivers out from their positions on the operating tables as the cable connections will most likely be ruined and require much time to diagnose and repair or re-solder.

Membership: Art, WA3BKD gave the 2nd of 3 readings for prospective members Matt, KB3PJW and Rick, WA8NLX.

Newsletter: Editor Greg, KQ3DX thanked all who contributed articles to the newsletter. He asked that we consider placing ads in the newsletter for members who offer goods or services.

Ways and Means: WA3FWA, Joe will have the 50/50 raffle after the meeting.

Contests: The ARRL Sept. VHF QSO Party will be on the 8th and 9th, the ARRL 10GHz contest will be on the 15 & 16th and the PA QSO Party will happen on October 13 & 14. Art will be operating a special event station at NY3EC, on the submarine USS Requin, Sept. 28 & 29 for the sailors reunion of that ship.

Volunteer Exams: The next session will be held on Sept. 17 at the clubhouse as the Chartiers Valley School location will be closed for renovation.

Old Business: John, N3EQP requests the members input for what books they would like to have in the club library.

New Business: The Corn Roast will be held after the next meeting on Sept. 18. A special meeting may be called in order to allocate funds for the paving of the road.

Good of the Order: Carol, KB3GMN announced that her OM Richie, N3SBF passed the extra class exam, and he mentioned that the SkyView club HamFest will be held next Sunday, the 26th. Nate is organizing a special event operation for the Club House's 50th anniversary on Nov. 24 and 25.

Motion to Adjourn: by Lloyd, KA3MSE

50/50 Raffle won by Bob, WB3HDI.

Minutes submitted by Recording Secretary Joe, WA3FWA.



Happy Birthday, Hams!!!

The following members celebrate that big day this month:

Don Link, N3BMT 9/7
Joel Bussard, KB3FBE 9/10
Mac McKee, W3MAC 9/12
Bob Kelly, WA3CYU 9/13
Jack Engle, W3UUH 9/14
Marc Strayer, AI3J 9/29

Many happy returns, all!!! May a North Korean (P5) station answer YOUR CQ call!!!

The Steel City Swap 'n Shop

Editor's note: If you have anything you wanna sell, or are looking for that special something, lemme know. Send it to me and I'll stick it in here. Thanks/73 de KQ3DX

For Sale:

RG-58 Mil Spec coax (Good stuff) I am selling off some of this surplus to my needs. Cable @ .20 cents/foot for SCARC members and .25 cents/foot for non club members with the extra proceeds going to the SCARC OM Retirement fund. Seems they need to buy new wickets for the croquet field. Get yours before it's all gone. Contact Bob WB3HDI @ 412-276-5106, or E-Mail me at: rlenfe429@aol.com

The following is a list of Amateur Radio gear for sale. Frank Kelley was an old friend & was an active Ham for some time when I first met him in January 1961. He passed away several years ago and his XYL, Barbara is now selling his equipment. The list was prepared by Dave, K3SI. I do not know nor have I ever met Dave. Barbara lives in Central Penna, north of Harrisburg near the Susquehanna River & Sunbury, PA. I am (as K3SI is) just trying to help Barbara with this task. See page 9 for contact instructions. FYI: I can see some nice gear in the list. How about the 30L-1 Linear Amp. for example.

73/Jerry/N3EMZ

Estate of Francis Kelley (N3FK)

Kenwood TS-450S Transceiver, Like New.

Kenwood TS-430S Transceiver, some wear on cabinet sides, front Good.

Kenwood TS-50S transceiver w/mike & manual, VG condition

Kenwood TS-570D transceiver, like new

Kenwood PC-1 Phone patch

ICOM HT IC-T2H 2 meter, 6Watts out, Like new.

Yaesu FT-2500M 2 meter Transceiver

Collins 30L-1 Linear Amplifier w/manual

Collins 302C-3 SWR Meter

Ameritron AL-811H Linear Amplifier

Heil GM-4 Microphone and Desk Stand

Heil Speaker

Amp Supply AT120C Antenna tuner 10-160M

MFJ 945D Mobile Antenna Tuner

MFJ Headphones

MFJ 4125 Switching Power Supply

MFJ 4225mv Switching Power Supply

Astron RS-35 Power Supply

Ameritron FS-30M Power Supply

Bird #43 Wattmeter w/100w 2-30MHz slug

Drake TV-1000LP low pass filter

B&W Coax Switch, 2 position

CD rotor control for AR-22 rotor

Larsen mag-mount antenna w 5/8~ 2 meter whip

24 hour clock, made for US-Govt. key wound

ARRL Handbook 1966

Kenwood soft carrying case (TS50)

Heathkit HW202 2 meter transceiver with GE mobile mike

Heathkit HW202-1 Power Supply

Heathkit HD-15 Phone Patch (2)

Heathkit HM-2102 SWR Meter

Heathkit Coax switch 4-position

Heathkit Two-er 2 Meter Radio (Benton Harbor Lunchbox), like new

Lakeview triple mount

HI-Q Antenna end insulators (2)

(continued on page 9)

Credits/Thanks

I've got so much stuff jammed in this issue that I forgot to leave space to thank those who made it all possible:

WA3TTS, KB3ORR, WA3FWA, W3SVJ, WB3HDI, ARRL, K3RYA, WB3CRC, N3EQP, N3HKQ & Chuck Rippel

Thanks for making our newsletter informative and FUN!! to read. (If I forgot your call, thanks to you, too!!)

Thanks/73 de KQ3DX et al.



The E-Bay Report

A monthly feature where I try to highlight some of the more interesting auctions going on at E-Bay. **Ye olde Editor's disclaimer:** I have no interest, either pecuniary or monetary, in the auctions listed herein. I'm just trying to make for interesting reading. Thanks/73 de KQ3DX

Our topic this month: The R-390A/URR Military receiver and "The One That Got Away."

First off: "The One That Got Away." I am a big Ten-Tec fan. Just love their stuff. I've always wanted a Corsair II to add to my collection; it's a rig I've lusted after ever since I got active in radio. One of my "dream radios", you could say. I just never had the cash to do it. Well, one came along on E-Bay that appeared to be very clean. Said to be in "100% working order" and advertised as very clean (and the pics backed it up), I decided to bid on it.

The Corsair II had (as an additional accessory), a remote stand-alone VFO, and also (as an additional accessory), a stand-alone power supply. This auction was just for the rig and manual itself. I kept a diligent watch on it; the bidding price up until the end of the auction seemed to be pretty reasonable, so I said to myself "Self, throw a bid in on that baby." So, I put a bid in of \$400.00 in the very last minute of the auction listing. **YE OLDE EDITOR MISSED THIS ONE BY 5 LOUSY BUCKS IN THE LAST 7 SECONDS (that's right, 7seconds) OF THE AUCTION!! OUCH!!** Final selling price: \$405.00. I've seen these go for as much as \$850.00 complete with the VFO. Not bad for a rig that sold for around \$1000.00 new back in the mid 80's.

The Corsair II I just missed out on. That piece of paper on the knob at bottom indicated that it was broken/cracked. It was guaranteed to be replaced before the radio shipped out.



And now onto the R-390A Military tube-type receiver.

This rig was originally designed by The Collins Corporation, and entered service in February of 1954. It was considered by those in-the-know to be the finest HF receiver ever built. Capable of tuning from 500KHz to 31.999MHz, this remains a highly sought-after receiver, as you will see in the listings below.

First up, a late model R-390A/URR receiver manufactured by EAC (Electronic Assistance Corp.). This one was listed as 'The perfect, original Collins R-390A/URR', complete with 2 original manuals. As you will see in the picture, it was pretty clean. Complete with all tubes, including the ballast tubes, it was described to be very clean and dust-free. Near as I can tell, this looks like a late-model production, probably from the late 60's. This one seemed to be the bargain in the bunch, (as you will see) as it sold with a buy-it-now price of \$1595.00. Another of the big heavy boat anchor type rigs weighing in at 100lbs, this one must be a pure delight to listen to.



The R-390A/URR receiver offered on E-Bay described above

Next up, another one of EAC (Electronic Assistance Corp.) manufactured R-390A's. This also appears to be a late production run version, probably from the late 60's. It was reported to have been received by the auctioneer in a never-opened condition. How would you like to find a classic like this, UNOPENED?? I'd love to!! This rig was also listed as very clean, complete with manual and spare tubes. No mods were done to it; it was listed as being 100% original.

(continued on page 8)

Memory Lane Revisited

(Editor's note: Many thanks to Bob, WB3HDI for continuing his insight into SCARC's past history.)

Forward into The Past 1977

OK! OK!....Stop twisting my arm already hihi! Well, not really but I was asked by a few of our merry band if I was going to highlight the entire year of 1977 or continue with anything from the past. I thought it over and I am going to try and fit the rest of 1977 highlights into the remaining 2007 newsletter issues.

January 1977

Our treasurer Joe W3ZDW (SK) reported a balance of \$678. Len W3IOH (SK) has 11 membership applications and also re-read the membership limit proposals required by the By-Laws.

Elliot K3ZVB reported that he could obtain a used facsimile machine for the club and it was agreed that this could be a useful addition to the club.

A coat rack was donated by Bill WB3BOV (SK? -hdi)

From the Pres Ken WA3TSI (SK): I have selected the following four objectives for 1977. (not necessarily in order of importance)

- 1) Improve, even further, the antennas @ KWH. In particular we need directivity on 40m (I favor phased verticals), a better 20m beam and an improved repeater antenna.
- 2) Obtain improved CW capabilities. We need a keyer and a CW receiver.
- 3) Increase KWH activities in various contests
- 4) Remodel the HF studio. A new console, antenna patch boards and operating conveniences are needed.

As of this instant there are two intrepid SCARC members on the hill undaunted by the predicted 10 inch snow fall. Dave K3YV and Mack WB3BRY are putting KWH on in the middle of the UHF sweepstakes contest. Bob WA3FYJ operated through Sat. night.

Question of the month.. Who was the SCARC Pres in 1948?

Burke W3SDV's (SK) XYL recently was hospitalized and is doing fine.

Bill K3RYA obtained the WASCARCM!

Answer of the month: Pres. of SCARC in 1948 was Gibby W3LBE (SK)

Dave, K3YVN and Mack, WB3BRY and Bob, WA3FYJ scored 11,117 points in the VHF contest!

Question for next month: Who, now active in SCARC, was very active with the Wilkinsburg Civic Symphony Orchestra during the winter of 1953?

February 1977

Next Meeting Feb 15, 1977 at the Wallace Memorial Church at 7:30 p.m. sharp.

Ways & Means Chairman Mack, WB3BRY is ready for any suggestions. (hmm...)

It was decided that SCARC should investigate the possibility of installing another fuel tank.

The program was an ARRL slide presentation on linear amplifiers.

QSL cards with the night scene of PGH (taken by Jack W3UUH) were discussed by Jack and Dave, WA3YAL. (I think I still have a stack of these cards -hdi)

Arnie, WA3BOH (SK) is A.O.K. after his operation and Joe W3NSX (SK) is progressing rapidly.

(continued on page 10)

A New Extra In The Family!!

Congratulations to member/SCARC Chef Rich Danko, N3SBF who recently passed his Extra exam!! All that hard work finally paid off!!

OK, Carol, now it's YOUR turn!! When are you gonna upgrade??

Congratulations Richie, on the upgrade to Extra!!

The E-Bay Report (continued)

The only thing missing was the bottom panel. The spare tubes that came with it in the spares kit weren't even opened. According to the seller, the only thing it needed was a little front panel cleaning, and a tweaking of the unit, due to it's age: 30 years. A real find for a R-390A/URR collector, and the price reflected it. Final price: \$3450.00!!



The R-390A/URR on E-Bay as described above. Clean, clean, clean!! The selling price will give you sticker-shock: \$3450.00.

The R-390A/URR is a highly sought after piece in this condition, as the military destroyed thousands of these after they became obsolete.

Last up in our report this month is the granddaddy of the listings I saw. This particular rig was built by Fowler Industries in 1984. That's right; a high quality tube rig built in 1984!! This was one of 5 built for a Navy contract, this one being #2. #'s 1 & 3 were found in Virginia, stored OUTSIDE, and rusted to death. #4 was never accounted for, and #5 was never proven to have actually existed. Believe it or not, the Navy paid \$38,000.00 for each of these babies!! That's right, 38 large!! Hey, what's 38 grand to the government, when they're paying \$500.00 for a toilet seat, or \$250.00 for a hammer. Complete with manuals, (but not the spares kit, as far as I know) this radio looked absolutely stunning from the pictures. Final bid: **\$7877.00**. But, since it did not meet the reserve price, it went unsold. Heaven only knows what THAT was. (For more on the interesting history of this particular radio, check out the article on [page 11](#).) That's it for now. CU next month w/more goodies from E-Bay!! Thanks/73 de KQ3DX



The Fowler Industries S/N #2
R-390A listed on E-Bay



The Steel City Swap 'n Shop (continued)

Dynavox AC adapter

Mag mount antenna, may be a Larsen MM-2, 2MTR/440

Triplett #630 VOM w/leads

Morse Code Practice unit, Key and sounding coils make unknown

Miniature Morse Key, mounted on aluminum box

Coax RG-213 50feet approx.

Commercially made, Dipole with center feed and traps or loading coils

May have a balun, a center feed

Amcon Speaker

Redball 23ch CB

Frank (N3FK) became a silent key 2 years ago and now his wife is ready to clear out the shack. I inventoried the gear but did not test anything or look inside to see if there were extra features like filters or such. All the equipment looks very good, some in like new condition. Have manuals for most of the Heathkit items but some of the others have not been located

73, Dave, K3SI

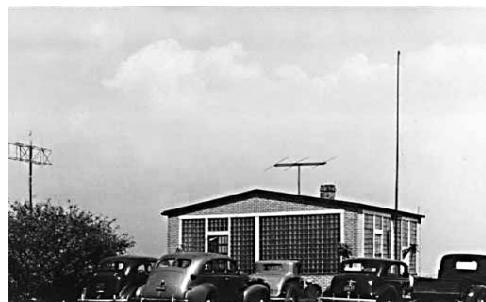
Contact: Barbara Kelley

1975 Stetler Dr.

Coal Township, Pa. 17866

Phone: 570-648-3138

e-mail N3FK@verizon.net



For Sale:

Radio Shack model HTX-10.

10 Meter AM, FM, SSB 25 watts with ASTRON 25 amp supply

\$100.00

K3RYA, 412 563 7403



Club Stuff/Local News (continued)

- ◆ Forest County ARC will be holding their 1st annual flea market on September 22. Talk-in will be on 146.580MHz simplex. For more info, check out their website at: www.forestcountyarcc.com. You can also shoot an E-Mail to rwkeith1@verizon.net if you have any questions.
- ◆ WACOM's HamFest will be held on November 4 at the Washington County Fairgrounds, 2151 North Main Street, Washington, PA. Talk-in will be on 145.490MHz (No PL tone). For more info, check out their website at: www.wacomarc.org. You can also shoot Jacque, N3ZEL an E-Mail at: N3ZEL@arrl.net
- ◆ Also coming up in October is our very own PA QSO Party. It'll be held the weekend of October 13-14. Lots of fun, lots of ops going portable and mobile activating PA counties. Every county should be on the air for this one too, for you county hunters out there. It's popular outside the state too. So mark your calendars for this one. BTW: This year marks 50 years of the PA QSO Party.
- ◆ AMSAT will be holding their 2007 AMSAT-NA Space Symposium here in Pittsburgh Oct 26-28 at the Pittsburgh Airport Marriott Hotel. It's being sponsored locally by the Wireless Association of South Hills. Keynote speaker this year will be Sy Liebergott, a NASA EECOM controller, who was part of the team that brought the crippled Apollo 13 spacecraft back to Earth in 1970. www.amsat.org/amsat-new/index.php has all the details. Check out the Brochure in the back of the Newsletter, too.
- ◆ **VE Test at the SCARC Clubhouse 9/17. Contact Mark @ 412-833-6049 for the details.**



Memory Lane Revisited (con't)

Mild mannered Jack, W3UUH had a vitriolic letter published in the Jan. QST. Was that the Jack we know and revere????

Answer for last month's puzzler: Nat W3SVJ was very active with the Wilkesburg Civic Symphony Orchestra during 1953. (at least that is what was reported in an old K-W-H).

Puzzler: Who fabricated, welded, painted, delivered and donated a 35 foot tower to W3KWH in the early fall of 1954? Stay tuned....

Your Dues are DUE...a mere 15 dollars.

Nat W3SVJ reported by landline (ain't that a crime) that he has hopes for completion of the following projects this year. The items are not in order - just ideas on his scrap paper at the time:

- 1) A 2 element 40 meter quad (does anyone have a control scheme for our existing prop pitch motor?)
- 2) Stacked 3 el beams for 20m.
- 3) Repair 10 and 15 meter beams and rotors.
- 4) Install antenna patch board in HF room.
- 5) Get a CW rig going.
- 6) Get on OSCAR with the SB300/400 and transverter. (I still have that old SB-300 -hdi)
- 7) Install a windmill for auxiliary heating of the clubhouse.

(Hmm...that quad sounds like a good idea. Materials for quads are MUCH better than years ago and lots of bands can be had on a single boom! -hdi)

The 2 Rivers Novice class, which was advertised on local AM stations, had a registration of 230!!

Tom W3YD (SK) got DXCC at 101 in 1950.

Ask Nat W3SVJ about his power supply capacitor blowing up. Beware!

DUES ARE DUE

Did you send that check yet? What took you so long???????

Now back to the present.... Who among us, that can remember, knows WHAT instrument Nat W3SVJ played? I think I remember what it is but I'm not telling. You will have to catch Nat on the hill and ask him hisself !! So c'mon...get up on the hill and ask him about his instrument!

That's all folks...73, Bob, WB3HDI



Website Of The Month

Another monthly feature where I highlight a website I hope will be of interest to our members. **Ye Olde Editor's disclaimer:** I have no interest, pecuniary or monetary in the sites listed herein. I'm just trying to add some zip to the newsletter, and make for interesting reading. Thanks/73 de KQ3DX.

Our website for this month: www.amsat.org

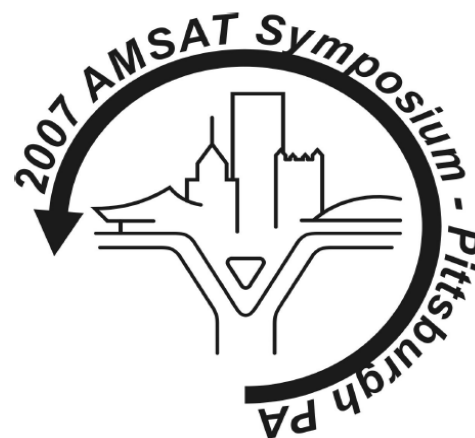
With the AMSAT Symposium coming to Pittsburgh in October. I figured this would be a good time to highlight this fine website.

If you are interested in satellites and their potential, check out this site. They've got all kinds of info to help you out, whether you are an experienced satellite chaser, or just getting started. There are links to help you calculate passes based on your longitude/latitude, which satellites are operational, Keplerian Elements which you can download and use in your tracking software, and a news site kept current with all the news from AMSAT & NASA too.

If you're looking to set up some tracking software, they've got an excellent selection of software available to help you in your quest to track/work satellites. You can also link to articles that are geared to newbies to the satellite end of the hobby, not to mention video clips of what is going on at AMSAT. So check it out; it is quite an informative site.

Also, check out the AMSAT NA site too. It's got news about ARISS (Amateur Radio onboard the International Space Station), and lots of other links too!! www.amsat.org/amsat/amsathomeold.html

(**Ye Olde Editor's note:** Check out the brochure on [pages 18 & 19](#) for more info on the AMSAT Symposium.)



The Story Of The Fowler R-390A S/N #2

Editor's Note: This story is from the E-Bay auction listing, described on [page 8](#). It is an interesting history of this particular radio. Enjoy!! Thanks/73 de KQ3DX

As far as the legendary R-390A receiver goes, this is the rarest of the entire production run of these units. The last of the breed, of these classic radios, never, ever, to be produced again!

We all know the R-390A was one of the finest general coverage receivers ever engineered (even by today's standards)! Similar to the very successful, Lockheed SR-71 and Douglas DC-3 aircraft, the R-390A was designed by small groups of highly dedicated engineers who were allowed to think outside the box. Hence, it was unique, and a great design from day one! The R-390A, for many decades, served as the backbone of US intelligence radio monitoring. Because of its superior design, and especially its quiet platform, it enabled us to monitor the "bad guys", thus enabling us to prevent many potentially disastrous events.

This is the story of one of the world's rarest, Collins designed, R-390A General Coverage Military Receiver, the Fowler Industries R-390A Receiver, serial #2.

Type: Receiver, Radio R390A/URR

Power: 115/230 VAC, 48-62~ , 220W

Serial number: #2 (1 of only 5 built)

Manufactured for: Avondale Shipyards, Inc.

Contractor: Fowler Industries, Inc.

Contract number: # N00024-84-C-2027

Mechanical filters: Dittmore-Freimuth

Year manufactured: 1984.

Yes, that's right, built in 1984!

A total of **only five**, yes five, of these Fowler Industries receivers were ever built. Each one was specially built in 1984 to satisfy a Navy contract. Only three of the five units built, have ever surfaced. Serial #1 and #3, were found at a Portsmouth, VA. annex. They were left outside for a long period under harsh conditions, among hundreds of other rusted hulks. As for radio #5, no information can be found to validate its true existence! And, serial #4, most likely, ended up in the radio graveyard, for it has never surfaced since being decommissioned in 1994.

And, so, this brings us to Serial #2, it being the finest, and only true example worthy of being classified as **"historic/collectable status!"**

The fine condition of Fowler #2 is attributed to the following:

This R-390A, proceeded from the U.S. Navy vessel's radio rack, its only home since production, directly into private hands, those private hands belonging to the technician who was employed by the Navy at their San Diego shipyard. Fortunately, it bypassed the brutal military disposal methods which, as we all know, shows little or no mercy, when it comes to decommissioned equipment (i.e. St. Juliens Creek Annex). Very few pieces of military equipment of this rarity and stature, survives the disposal process. This Fowler #2, gracefully, bypassed the system, and lived to see a better day! A day, that would certainly respect its unique **historical significance**.

So, unlike, most other R-390A's which have unknown traveling histories this, Fowler #2, in a practical sense, only had one user, the US Navy. The original owner only kept it for a few months, after its release from the ship in 1994.

Here then, is the known history of the five Fowler R-390A Receivers:

It started with Avondale Shipyards of New Orleans. They were issued a contract by the United States Navy for the production of five, Whidbey Island Class LSDs (Dock Landing Ship). The first being the USS Gunston Hall, then the USS Comstock, USS Tortuga, USS Rushmore, and finally, the USS Ashland.

Pictured below is the Whidbey Island Class LSD



(continued on next page)

The Fowler R-390A Receiver (continued)

These LSD ships were originally built by Lockheed Shipyards of Seattle, WA. starting in 1981. At the time, the Navy contract for Lockheed called for R-390A radios to be installed on each ship.

Lockheed did comply by obtaining either new-old stock or surplus refurbished units. Keep in mind that the very last production run of these radios officially concluded in 1968 with the Dittmore-Freimuth units! And even these, by some valid estimates, were just rebadged EAC units.

Now, fast forward, to 1984. As part of the Navy's fleet expansion plans, a call goes out for the construction of five new LSD ships. Avondale Shipyards of New Orleans is awarded the contract for five vessels. The Avondale blueprints still specified the installation of one new R-390A receiver in the radio room of each ship.

Avondale Shipyards, without questioning, and to adhere to the strict Navy specifications, receives bids from manufacturers within the Federally approved vendor list for five brand new, R-390A receivers. Fowler Industries of Port Jervis, NY wins the contract for the production of five new R-390A radios, at a staggering cost of **\$38,000 USD each in 1984, making them the most expensive, and very last US Military all tube (hollow state) receivers ever produced under a military contract!**

These five units were painstakingly hand built one by one to Mil-Spec standards. And contrary to popular rumors, these radios were **newly built** from the ground (bench) up! They were not rebadged units from another contract. This is evidenced by various components having manufacturing years of 1983 and beyond. The Fowler Industries, name imprint/tags can be seen on the various components and modules. The Fowler rigs had hand welded frames with rounded corners. All the other R-390A's had machine stamped frames.

Sometime during 1994, these R-390A's were removed from their respective ships.

This rig, the Fowler serial #2 receiver, was released from either the USS Comstock or the USS Rushmore. These two Avondale built ships were/are home ported in San Diego, California. This receiver was, very briefly, in the possession of the technician who obtained it, and who worked for the US Navy at their San Diego shipyard.

This was the first Fowler receiver to surface, and validated the theories of R-390A's being manufactured in the 1980's. It was the discovery of this Fowler #2 back in 1994 that provided the impetus to compile a more complete R-390A contract/serial number list.

Fowler Industries was a relatively small military defense supplier. They manufactured panel mounted aircraft components,

among other products for the US Military. They had experience in the R-390A field through their heritage connection to the Clavier and Capehart Corporations. The amalgamation of these two companies resulted in the formation of Fowler Industries. Fowler became non-existent in the early 1990's.

It is interesting to imagine what a monumental task it must have been to produce just five R-390A's back in 1984. The act of procuring components, manufacturing others, fabricating the metal chassis parts, hand welding, imprinting and tagging the proper nomenclature on all areas that required it was indeed an arduous undertaking. Producing five units of anything, is not a worthwhile endeavor for any contractor unless, of course, a hefty price tag is attached to each radio. This definitely was the case with the five Fowler R-390A's. Fowler Industries, like all other R-390A contractors had to comply with strict Mil-Spec standards. The beauty of this US Military system is that, regardless of the manufacturer or when it's built, the quality and fundamental operating parameters of the receiver is always maintained.

Editor's note: This is considered by many in the know, to be the finest receiver ever manufactured. There is a rumor floating about that the Senior Analysts at the NSA actually prefer these rigs to the more expensive Watkins-Johnson and Harris receivers because of their sensitivity and quiet noise-floor. Also, since this radio was so important to our country's defense, it was classified as top-secret during the Cold War in the 60's. It was originally designed by Collins in the 50's and was put into service in February, 1954. Consisting of 21 tubes and a set of 4 Military-Grade Collins Mechanical Filters, the set could easily copy AM and CW signals down to it's -143db noise floor. Try that with your Icom IC-7800 or your Yaesu FT-9000DX!!

For more on the history/restoration of these fine receivers, check out the following website: www.r390a.com



R-390A's slated for disposal at the St. Juliens Creek DRMO Annex

Photo courtesy & ©1996-2002, Chuck Rippel



These rigs are stacked 6 high, 200' wide x 70' deep

W3SVJ's Goodies

A long time ago, when I lit up my first “real” PC, it was at the same desk position that it is today. Although I had put together a “Sinclair” pc that ran an 8080 and was loaded via a tape recorder, my first *real* pc was a Tandy TRS-80 II, affectionately known as a ‘*Trash 80*’.

The software was “WordPerfect “ and “Lotus 123” was the spreadsheet. I think you had to boot those up from a disk every time you started the machine. It had 8k of RAM? Does anybody remember? As I recall, that was a product of the late 1970’s and with a printer and some other peripherals priced out at close to three grand. Can that possibly be right?

Dear friend Ellis, W3PDK (SK), put another floppy drive onboard as well as more RAM and I thought this has to be the ultimate in a modern day PC for the home office. Somewhere along the way I purchased (maybe it was part of the original 3 grand package) a modem. No ordinary wire coupled modem this, it was an audio-coupled modem. All you had to do, after you made the dial up connection, was to place the telephone handset into the modem cradle and you where “ON LINE” to another PC. The only thing that I remember about that lash up was exchanging some text with Bill Kristoff, N3BPB. When we finally got the connection going and as I looked at the text scrolling up on the screen I thought to myself “What the heck is this?” My army RTTY rig that I used in Germany in 1958/9 ran as fast as this thing is going, 60 words per minute!” ‘Hardly an improvement.’ 300 baud seems to be the number that made 60 wpm on the old Kleinschmit or Teletype Corp. printer. I’m not sure I used that audio-coupled modem very much if at all after that experiment.

Even now with my “old” *E Machine*, and it’s 45 kb connection to Verizon on a dial up (pulse yet, am I a dinosaur or what?) floods the screen with text in a heart beat. My five year old pc is a magnitude above what I had in 1977. And a couple magnitudes better than the old RTTY stuff of the late ‘50s. Besides the speed, the mechanical racket isn’t there nor the ozone smell coming from the arcing brushes on the teletype machine drive motors. Oh yeah, it’s better. What brings this to mind is an article in one of the trade magazines that included the chart below. Isn’t it just incredible what is available now? The speed of light takes on a new meaning.

56 Kbps (dial-up)	426 hours (17. 7 days)
1.5 Mbps (DSL, cable, T-1)	15.91 hours
10 Mbps (wireless)	2.39 hours
1 Gbps (fiber to the curb)	8.59 seconds
10 Gbps (fiber to the house)	0.86 second

Wowee! .86 seconds compared to my ratty old 45k dial up of 426 hours. It’s staggering.

Maybe I’ll get fiber optic to the house when the service is offered in my neighborhood.

I can’t wait to get SPAM at the speed of light. Kidding aside, even a dinosaur like me would love the speed of a fiber connection. Some of the material that I use, charts, graphs, tables etc, take a bit of time to get to me. Not seventeen days but my “mother’s oats” does cool down a bit until the data is all in the machine.

73 de svj, still an old guy and still enjoyin’ the good life on the right side of the grass .. so far!

(Ye Olde Editor’s note: Yep Nat, you’re right; 3 grand for a computer!! Check out my ‘Blast From The Past’ pictures on [pages 16 & 17](#) gang, and you’ll see for yourself!!)

(Thanks Nat, for the history lesson!)



FCC/Regulatory News



The Federal Communication Commission's Dallas Field Office issued Citations on July 25 to two utilities in a longstanding power line noise case in Lubbock, Texas. Bryan Edwards, W5KFT, of Lubbock, first reported the interference concerning the two involved utilities, Lubbock Power & Light (LP&L) and Xcel Energy, as early as 1994. The record shows that the FCC Dallas Field Office clarified the FCC rules with regard to power line noise for LP&L as early as 1998, and issued three letters to LP&L in 2003 and 2004. Xcel Energy was first issued an FCC letter in 2004.

The Citations to the Lubbock utilities said that due to an investigation conducted by the FCC's Dallas office on May 22-25, 2007, they found that both LP&L and Xcel "caused harmful interference to the reception of amateur communications to amateur licensee W5KFT in Lubbock, Texas." The FCC directed both LP&L and Xcel, pursuant to the Commission's Rules, to provide documents and information within 10 days of their respective Citations.

In its undated response to the FCC's Citation, LP&L stated that it "does not admit to and specifically denies any violation of the [Communications] Act [of 1934] or any rule pertaining thereto," but "in order to comply with the...Citation, the City of Lubbock files this response." As a result of the Citations issued by the FCC, LP&L's Response stated that representatives from "Lubbock Power & Light met with Paul Leonard, P.E., Area Engineer with Xcel Energy to discuss the alleged findings regarding harmful interference to the reception of amateur communications by amateur licensee W5KFT in Lubbock, Texas."

Xcel's Response, submitted via their attorney, pointed out that the Citation acknowledges "that the source of harmful interference to amateur licensee W5KFT is emanating from more than one power company." Xcel also alleges that it "has been working with amateur W5KFT for a number of years in an effort to identify the source of, and a possible resolution for, the harmful interference he is experiencing. Xcel Energy has a good working relationship with the licensee and has coordinated with him on numerous occasions in attempting to resolve his interference problems."

Xcel goes on to assure the FCC that it will "retain an outside technical consultant to provide an unbiased assessment of whether the harmful interference to W5KFT is attributable to Xcel Energy's power system and if so, what corrective measures would be required."

Edwards reported that on Thursday, August 30, he received a phone call from Paul Leonard, head of Xcel Energy in West Texas. Edwards said he was told that Xcel has contracted with Mike Martin, K3RFI, to come out to Lubbock in October to work on the line noise. "Leonard said they tried to get LP&L to partici-

pate with them and Mike, but they refused to do so," Edwards said. Martin owns and operates RFI Services, a firm dedicated exclusively to RFI locating and training. He has been locating interference sources for more than 25 years, solving an average of 500 complaints a year, according to the ARRL Lab. Martin has also given power line interference workshops at ARRL Headquarters.

ARRL Lab Manager Ed Hare, W1RFI, said, "I am pleased to see the FCC taking a strong enforcement step in this case. It has gone on for a long time, and this Citation should serve to finally get things resolved. It is unfortunate that some of the power line cases the ARRL is handling can't be resolved without the FCC taking formal action, but I expect that electric utilities across the country will now take notice of this case."

ARRL Continues Efforts On Interference To PAVE PAWS Radar Sites

On August 13, the ARRL began sending "specific mitigation reduction numbers" to 122 repeater owners, recommending that they reduce their signal anywhere from 7 dB to 56 dB, according to ARRL Regulatory Information Branch Manager Dan Henderson, N1ND. These reductions, requested by the US Air Force and the Department of Defense, only concern those repeaters identified by the DoD as affecting the PAVE PAWS radar system.

"Some reductions are going to be attainable," Henderson said. "You can do 7 db, but 56?" He said such a reduction would "not be realistic to achieve. While many of the affected repeater owners may not be able to achieve the required reductions, but that doesn't mean they shouldn't try to meet the goal. Everyone involved needs to continue trying to meet the DoD's requirements. This gives us the best chance to keep as many of these machines as possible on the air."

Henderson stressed that any order to shut down a repeater will come from the Federal Communications Commission, at the request of the DoD. "This situation only affects those repeaters on the DoD's list in Massachusetts and California. It does not affect the everyday, casual user of 70 cm. This is not a wide-spread threat to the 70 cm band."

Citing an increasing number of interference complaints, the US Air Force has asked the FCC to order dozens of repeater systems to either mitigate interference to the PAVE PAWS radars or shut down. The ARRL has been working with the DoD to develop a plan to mitigate alleged interference from 70 cm ham radio repeaters to this military radar system on both coasts. (continued on next page)

FCC/Regulatory News (continued)

According to the DoD, the in-band interference from Amateur Radio fixed FM voice repeaters has increased to an unacceptable level. PAVE PAWS radars are used for national security functions, including early detection of water-launched missiles. They are critical to our national defense and are in use 24 hours per day, seven days per week.

(From The ARRL Letter, August 31 edition)

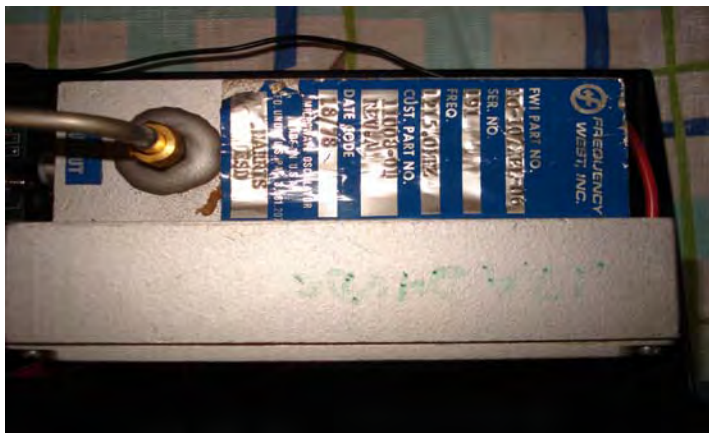


Propagation Report

Sunspot numbers pulled up from zero this week, but barely. Average daily sunspot numbers rose more than nine points to 12.9. Geomagnetic conditions were quiet. Conditions have been quiet for so long that we may not appreciate this, as many of us wish for more solar activity and sunspots. Geophysical Institute Prague predicted earlier that August 31 would be quiet to unsettled, September 1 unsettled to active, unsettled conditions September 2-3, quiet September 4-5 and unsettled to active again on September 6. Over the same period, the US Air Force predicts a planetary A index of 15, 25, 12, 12, 8, 5 and 15 for August 31-September 6. From the same prediction, it looks like September 8-17 may see a return of zero sunspot days. Sunspot numbers for August 23 through 29 were 12, 12, 14, 13, 12, 14 and 13 with a mean of 12.9. The 10.7 cm flux was 70.8, 71.6, 71.5, 70.1, 69.2, 70.1 and 69.6 with a mean of 70.4. Estimated planetary A indices were 2, 2, 8, 10, 12, 11 and 4 with a mean of 7. Estimated mid-latitude A indices were 1, 1, 6, 10, 10, 9 and 4 with a mean of 5.9. For more information concerning radio propagation, visit the ARRL Technical Information Service Propagation page

<<http://www.arrl.org/tis/info/propagation.html>>.

(From The ARRL Letter, August 31 edition)



The Frequency West PLL Unit for the 1296 Beacon

More Pics & Info From The 1296MHz Beacon Project

Behind the black box power supply is a Frequency West PLL unit. This makes the 1296.269 at 100mw from a 72.015 Mhz oscillator which is the gold box in the left rear. The XT-4B beacon keyer is between the PLL and oscillator. There is an SMA cable from the PLL unit to an isolator feeding an RF pin switch that keys the RF on/off. The output of the RF pin switch goes through an 8db pad and then through a 3 pole bandpass filter to the input of the 1 watt amplifier. The amplifier output exits via a bulkhead N connector on the front panel. 50 feet or so of LMR600 cable feed the RF output to the slot antenna with about 1.5 db of cable loss and 5 dbi omni horizontal antenna gain. There is an extra voltage regulator on the amplifier for safety purposes, some bypass capacitors, rf chokes, etc. to keep RF out of the keyer circuit. Everything runs off a 1 ampere bench supply that provides +5VDC for the keyer, +20VDC for the PLL block, and +12VDC for the 72 Mhz oscillator and 1 watt amplifier. The amplifier is Class A and draws 360ma on key down and 400ma at idle. Yes, Class A amps run cooler at full drive power than at idle. That is the nature of the beast. The rack shelf provides plenty of heat sink and everything that consumes moderate power runs just above skin temp in the 100~110F range. The total hardware cost from the AC plug to the antenna is in the \$500~\$600 range. W3KWH is one of only 30 or so 1296Mhz beacons in the United States. I'd like to thank the club for funding the amplifier; the other hardware is a personal donation for the good of amateur radio. 73, Mike, WA3TTS



I went out listening for the beacon on 1296 and it was S8 near the North Park observatory hilltop at 1265' ASL with a 6dbi PC card log Yagi and S8 in West View with a clear 1220' ASL. A 1225' hill ASL near my house was S4 and a tree covered 1285' ASL hill near my house was S6. I'm going to W3PIE and will check some of those hill tops-WA3TTS

A Blast From The Past

Now get \$490 of software, at no additional charge, with Z-89 Desktop Genius!

ZENITH
data systems

Assembled commercial computer products for business applications

Get the CP/M Operating System and the new SuperCalc Spreadsheet Program when you buy the Desktop Genius from Zenith Data Systems!

Two Z-80 microprocessors – today's industry standard – control computing and terminal functions. Up to 64K bytes of RAM can be addressed by the operator.

Two Z-89 models come with convenient built-in floppy disk storage. External disk storage can increase on-line storage capacity to over 12 megabytes.

High-resolution video display, using a standard white CRT, can show up to 2,000 characters. Typewriter-style keyboard has 33 graphics characters for business presentations. RS-232 Serial I/O Ports for printer/telecommunications extendability. 120/240 VAC. 13" H x 17" W x 20" D.

Choose from three assembled Desktop Genius models. One configuration has 48K bytes of RAM and 100,000 bytes of built-in disk storage; a second configuration has 64K bytes of RAM and the Z-89-37 Double-Density Disk Controller Board to accommodate the Z-37 Floppy Disk System; and a third, more capable configuration has 64K bytes of RAM, the Z-89-37 Double-Density Disk Controller Board and 160,000 bytes of built-in disk storage.

Z-89-81, Assembled with 48K bytes of RAM, built-in floppy disk drive (100,000 bytes of storage) and three serial I/O ports, 55 lbs. **2895.00**

Z-90-80, Assembled with 64K bytes of RAM, Z-89-37 Double-Density Disk Controller Board, no internal disk storage (for disk storage, the Z-37 (below, right) is required) and three serial I/O ports, 52 lbs. **2895.00**

Z-90-82, Assembled with 64K bytes of RAM, Z-89-37 Controller Board, built-in floppy disk drive (160,000 bytes of storage) and three serial I/O ports, Shpg. wt. 56 lbs. **3195.00**



1 Z-19 Video Terminal has extra-value features

\$995⁰⁰

- Terminal interfaces with most standard systems
- ANSI and DEC VT-52 compatible

The low-priced Z-19's Z-80 microprocessor allows complete screen control for easier data entry and faster word processing. Its high-resolution video display shows twenty-five 80-character lines (2,000 characters) at any one time.

The high-performance typewriter-style keyboard has 72 keys and 12 special user-function keys (8 of which are user-programmable). A separate 12-key numeric pad is laid out like a calculator, providing excellent data entry and word processing capabilities in the same unit. Audible key click signaling confirms character or numerical entries. 33 graphics characters are also included.

Edit or erase by character or line. Address cursor from keyboard or host computer. Reverse video by character enables operator to view editing changes or corrections – before the change is transmitted to the host computer.

Compatible with most standard systems, the Z-19 Professional Video Terminal uses an EIA Standard RS-232C Serial Interface to communicate with the host computer at 110 to 9600 baud. Configure from keyboard, computer or interior switches. 120/240 VAC. The Z-19 measures 13" H x 17" W x 20" D.

Z-19, Assembled with std. white CRT, 43 lbs. **995.00**



2 Add up to 1.28 MB of disk storage with Z-37

\$1995⁰⁰

- Features two disk drives as standard equipment
- Plug-in adaptability to Z-89 Computer
- Easy-to-use read/write protection

The reliable Z-37's 5.25-inch floppy disk drives are mounted vertically to take up less space. Read/write gap-type recording heads. Photosensor in each drive detects presence or absence of notch in diskette, assuring proper read/write protection. 120/240 VAC, 50/60 Hz. 8.625" H x 8.875" W x 15" D.

Z-37 Dual-Sided Floppy Disk System. Provides 1,280,000 bytes of data storage. For use with Z-89 Computer. Z-89-37 Dual-Density Disk Controller Board must be installed in Z-89. Not compatible with H-88-1 Single-Density Disk Controller Board or H-17-1 Single-Sided Disk Drive.

Z-37, Assembled, with 2 drives, Shpg. wt. 28 lbs. **1995.00**

Z-89-37, Assembled Double-Density Disk Controller Board, 4 lbs. **295.00**

Z-87 Single-Sided Floppy Disk System. Provides 400,000 bytes of data storage when used with Z-89-37 Dual-Density Controller; 200,000 bytes when used with H-88-1 Single-Density Controller. Uses H-17-1 48 TPI Disk Drives. Not compatible with H-17-4 96 TPI Disk Drives.

Z-87, Assembled, with 2 drives, Shpg. wt. 28 lbs. **1195.00**

Zenith Data Systems Computers, which are factory assembled and tested, are designed for commercial use. Operation of these models in residential areas may cause unacceptable interference to radio and TV reception – requiring the operator, pursuant to FCC regulations, to take whatever steps are necessary to correct the interference.

The Zenith line of commercial computer products includes the Z-89 Desktop Genius All-In-One Computer, the Z-19 Professional Video Terminal and disk systems which store up to nearly 11 megabytes – as well as letter-quality and dot matrix printers.



Alaska, Hawaii and Michigan Residents: Call 616-982-3411

COMPUTERS/77

Remember this electronic marvel?? (Well, at least at the time it was.) It's from the 1981 Heathkit Catalog. **\$3195.00** for a computer with 64K RAM!! How much would you pay for this system today?? Maybe 5 or 10 bucks?? It's not worth much more than that. We all know how much 3 grand will buy in computer equipment today!! We've come a long way since 1981. Photo ©1981 Heath/Zenith Corp. (Yes, they're STILL in business!!)

Another Blast From The Past



TRS-80 moves into the '80s with a completely new personal computer that's packed with advanced features — upper/lower case character set, real-time clock, sharper CRT images, and a cassette interface that loads three times faster than Model I. Future expansion is a snap! There's room inside for a full 48K 2-disk system! Best news of all is that the Model III is directly software compatible with the vast library of Model I BASIC Programs. This means that software for Model III is available today, including general ledger, payroll, inventory, payables, receivables, advanced statistics, and a host of other applications. Complete with manual. See it at Radio Shack — your computer store! U.L. listed.

The New Model III Another Milestone in the TRS-80 Tradition of More Computer for Your Money!

- Functionally Styled Desk-Top Unit
- Upper and Lower Case Characters
- Fast Cassette Loading (1500 Baud)
- Software Compatibility with Model I
- Easy Internal Expansion Capability
- Choose popular Level I BASIC for simplicity, or powerful Model III BASIC language
- Supports Double-Density Disks, 175K Characters Per Data Disk

Model III BASIC 16K **999⁰⁰**

Expansion covers simulate disk drives

Pick the Model III That Meets Your Needs

Description	Cat. No.	Price
4K RAM, Level I	26-1061	699.00
16K RAM, Model III BASIC	26-1062	999.00
2-Disk, 32K RS-232	26-1063	2495.00
System Cover	26-0506	7.95

CTR-80A Cassette Recorder



Ideal for loading and recording cassette programs and data. U.L. listed.
26-1206 59.95
Certified Digital Tape, C-20.
26-0301 3.49

Model III Mini-Disk Drives

Internal Kits. Vastly increase storage capability.

Disk Drive 1. 26-1162 849.00
Disk Drive 2. 26-1163 399.00

External Drives. For even more capacity.

Disk Drive 3. 26-1164 499.00
Disk Drive 4. 26-1161 499.00

5 1/4" Mini-Diskettes. Individually tested against defects.

Single Diskette. 26-0305 5.95
Diskette 3-Pack. 26-0405 16.95



Model III ROM, 16K RAM

Model III BASIC ROM and RAM Kit. Upgrade 4K Level I to 16K RAM plus Model III BASIC. Your local Radio Shack will arrange for the change. Price includes installation.
26-1121 299.00

16K RAM Kit. It's easy to add more memory to your Model III.
26-1102 119.00

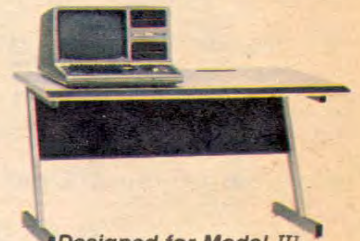
RS-232 Serial Interface Kit

Communications interface lets you add our Telephone Interface II — your Model III can then "talk" to other computers — anywhere!
26-1148 99.00

Model III Reference Books

Model III Book: Getting Started With BASIC. (Includes Model I.)
26-2107 6.95
Model III BASIC Reference Manual.
26-2112 5.95
Model III DOS Manual.
26-2111 6.95

Attractive System Desk



Designed for Model III
Model III System Desk. A functional place for your system. 27x48x27"
26-1305 179.00
Disk Bay for above. Handy disk storage.
26-1306 29.00

Space-Saver Desk



This convenient, inexpensive desk holds a Model III, cassette recorder and printer.
37 1/2 x 29 1/2 x 23 1/2"
26-1307 65.00

How's about this gem?? I remember wowing my friends in High School with my knowledge of computers when I was able to make my name scroll across the screen without stopping. Good for a packet terminal today, but not much else.

That is assuming you can still find the software capable of running on it. Photo ©1980 Radio Shack/Tandy Corp.

Where can I get more information?

For general club information about the 2007 AMSAT Space Symposium, visit our web site at <http://www.amsat.org>

Or contact:

Kevin Smith **N3HKQ**

or

Pat Sanford **KC4WTT**

at

symposium@amsat.org

Support Eagle Today!



2007

AMSAT Space Symposium

October 26—28, 2007
Airport Marriott Hotel
777 Aten Road
(Moon Run exit of PA 60)
Coraopolis, PA 15108



- Meet a number of key engineers and spacecraft designers who have put amateur radio in space.
- Are you new to amateur satellites? Learn how to make and participate in satellite contacts.
- Learn about the latest Eagle innovations.
- See how you can contribute your talents to the Amateur Satellite Service.



Who Is AMSAT?

AMSAT is a non-profit volunteer organization which designs, builds and operates experimental satellites and promotes space education. We work in partnership with government, industry, educational institutions and fellow amateur radio societies. We encourage technical and scientific innovation, and promote the training and development of skilled satellite and ground system designers and operators.

Our Vision is to deploy high earth orbit satellite systems that offer daily coverage by 2009 and continuous coverage by 2012. AMSAT will continue active participation in human space missions and support a stream of LEO satellites developed in cooperation with the educational community and other amateur satellite groups.

Who Are Your Hosts?

- The Wireless Association of South Hills Amateur Radio Club is a non-profit organization, affiliated with the American Radio Relay League (ARRL) and dedicated to advancing the principles of amateur radio while making it fun for all who participate.
- We also have the active support of many local amateur radio clubs and AMSAT members.
- WASH co-sponsored an ARISS contact for Upper St. Clair HS in August 2004.
- Routinely make satellite contacts for Field Day.
- Visit us at <http://www.n3sh.org>



Why Pittsburgh?

- A friendlier place you will never find
- An easy 5-hour automobile commute for half of the US population.
- World class International Airport.
- Served by most major Airlines including American, Continental, United, Southwest, USAirways/Southwest, Delta, Air Canada and economy airlines including Jet Blue, ATA, Air Tran Airways, Midwest, Comair, etc.



Preliminary Agenda:

Thursday, October 25 through Friday noon, October 26, 2007 BOD meeting

Friday, October 26, 2007

Symposium First Session; 1:00 to 5:00 PM

Annual meeting; 5:00 to 6:00 PM

Introduction to Amateur Satellites by Gould Smith; 7:30 - 9:00 PM

Saturday, October 27, 2007

Symposium Second Session; 8:00 AM to 12:00 Noon

Symposium Third Session; 1:30 PM to 5:00 PM

Cocktails & Hors D'oeuvres; 6:30 PM to 7:30 PM

Banquet (Keynote Speaker Mr. Sy Liebergot); 7:30 PM till ?

Sunday, October 28, 2007

Area Coordinators meeting; 8:00 AM - 9:00 AM

Tour (details to be announced); 9:00 AM to ?

**About Our Keynote Speaker
Sy Liebergot
Apollo Electrical, Environmental,
Consumables Flight Controller**

Sy Liebergot: Flight... I recommend we shut down reactant valves to the fuel cells.

Gene Kranz: What the hell good is that gonna do?

Sy Liebergot: If that's where the leak is, we can isolate it. We can save what's left in the tanks and we can run on the good cell.

Gene Kranz: You close 'em, you can't open 'em again! You can't land on the moon with one healthy fuel cell!

Sy Liebergot: Gene, the Odyssey is *dying*. From my chair here, this is the last option.

Sy Liebergot was the Apollo EECOM and part of the team that guided Apollo 13 back to Earth following the explosion which crippled the spacecraft.

Author of "Apollo EECOM: Journey Of A Lifetime"

Web site: <http://www.apolloeeecom.com/>

August 2007

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September, 2007

October 2007

S	M	T	W	T	F	S
1	2	3	4	5	6	
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 <i>All Asian SSB DX Contest</i> <i>Russian RTTY Contest</i>
2 <i>WASH Sun Eve. Net</i> <i>All Asian SSB DX Contest</i>	3 <i>Labor Day</i> <i>Breezeshooters Net</i>	4 <i>SkyView Business Meeting</i> <i>WACOM 2M Net</i>	5 <i>SCARC Social Nite</i> <i>Alleg. Co. ARES Net</i>	6 <i>WACOM Meeting</i> <i>SkyView 2M Net</i>	7 <i>NCCC CW Sprint</i>	8 <i>ARRL Sept VHF QSO Party</i> <i>WAE DX SSB Contest</i> <i>ARK QSO Party</i> <i>NCCC CW Sprint</i>
9 <i>ARRL Sept VHF QSO Party</i> <i>WAE DX SSB Contest</i> <i>NA CW Sprint</i> <i>ARK QSO Party</i> <i>TN QSO Party</i> <i>WASH Sun. Net</i>	10 <i>Breezeshooters Net</i> <i>TN QSO Party</i>	11 <i>WACOM 2M Net</i> <i>WACOM 10M Net</i>	12 <i>SCARC SPECIAL MEETING!!</i> <i>NHARC Business Meeting</i> <i>Alleg Co. ARES Net</i>	13 <i>WASH Business Meeting</i> <i>SkyView 2M Net</i>	14 <i>NCCC CW Sprint</i>	15 <i>ARRL 10GHz & Up Contest</i> <i>QCWA Fall QSO Party</i> <i>SC QSO Party</i> <i>NCCC CW Sprint</i>
16 <i>ARRL 10GHz & Up Contest</i> <i>QCWA Fall QSO Party</i> <i>WASH Sun Eve. Net</i> <i>SC QSO Party</i> <i>NA SSB Sprint</i>	17 <i>Breezeshooters Net</i> <i>VE Exams @ SCARC Clubhouse</i>	18 <i>SCARC Meeting & Corn Roast 8PM</i> <i>2 Rivers Meeting</i> <i>WACOM 2M Net</i> <i>WACOM 10M Net</i>	19 <i>Alleg. Co. ARES Net</i>	20 <i>SkyView 2M Net</i>	21 <i>NCCC CW Sprint</i>	22 <i>Autumn Begins</i> <i>Forest Co. ARC Flea Market</i>
23 <i>WASH Sun Eve. Net</i>	24 <i>Breezeshooters Net</i>	25 <i>WACOM 2M Net</i> <i>WACOM 10M Net</i>	26 <i>SCARC Social Nite</i> <i>WACOM YL Net</i> <i>Alleg Co. ARES Net</i>	27 <i>SkyView 2M Net</i>	28 <i>NCCC CW Sprint</i>	29 <i>NY3EC SE USS Requin</i> <i>WASH Club Breakfast</i> <i>CQ WW RTTY Contest</i> <i>ARRL EME Contest</i> <i>TX QSO Party</i>
30 <i>NY3EC SE USS Requin</i> <i>CQ WW RTTY Contest</i> <i>ARRL EME Contest</i> <i>WASH Sun Eve. Net</i> <i>TX QSO Party</i>						

September 2007

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2 3 4 5 6 7 8
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23 24 25 26 27 28 29
30

October, 2007

November 2007

S M T W T F S
1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 <i>Breezeshooters Net</i>	2 <i>WACOM 2M Net WACOM 10M Net SkyView Business Meeting YLRL Anniv. Party CW</i>	3 <i>SCARC Social Nite WACOM YL Net Alleg Co. ARES Net YLRL Anniv. Party CW</i>	4 <i>WACOM Meeting SkyView 2M Net YLRL Anniv. Party CW</i>	5 <i>NCCC CW Sprint</i>	6 <i>Oceania DX Contest SSB CA QSO Party EU Autumn Sprint NCCC CW Sprint</i>
7 <i>WASH Sun. Eve. Net Oceania DX Contest SSB CA QSO Party RSGB 21/28MHz Contest</i>	8 <i>Columbus Day Breezeshooters Net</i>	9 <i>WACOM 2M Net WACOM 10M Net YLRL Anniv. Party SSB</i>	10 <i>SCARC Social Nite WACOM YL Net Alleg Co. ARES Net NHARC Business Meeting 10-10 Day Sprint YLRL Anniv. Party SSB</i>	11 <i>WASH Business Meeting SkyView 2M Net YLRL Anniv. Party SSB</i>	12 <i>NCCC CW Sprint</i>	13 <i>PA QSO Party Oceania DX Contest CW EU Autumn Sprint CW</i>
14 <i>PA QSO Party WASH Sun. Eve. Net Oceania DX Contest CW NA RTTY Sprint</i>	15 <i>Breezeshooters Net</i>	16 <i>SCARC Business Meeting WACOM 2M Net WACOM 10M Net 2 Rivers ARC Meeting</i>	17 <i>WACOM YL Net Alleg Co. ARES Net</i>	18 <i>SkyView 2M Net</i>	19 <i>NCCC CW Sprint</i>	20 <i>JARTS WW RTTY Contest 50MHz Fall Sprint W/VE Islands Q Party</i>
ARRL School Club Roundup						
21 <i>WASH Sun. Eve. Net IL QSO Party JARTS WW RTTY Contest 50MHz Fall Sprint W/VE Islands Q Party</i>	22 <i>Breezeshooters Net IL QSO Party</i>	23 <i>WACOM 2M Net WACOM 10M Net</i>	24 <i>United Nations Day SCARC Social Nite WACOM YL Net Alleg Co. ARES Net</i>	25 <i>SkyView 2M Net</i>	26 <i>NCCC CW Sprint</i>	27 <i>CQ WW SSB DX Contest WASH Club Breakfast ARRL EME Contest 10-10 Int. Fall Contest</i>
28 <i>CQ WW SSB DX Contest WASH Sun. Eve. Net ARRL EME Contest 10-10 Int. Fall Contest</i>	29 <i>Breezeshooters Net</i>	30 <i>WACOM 2M Net WACOM 10M Net</i>	31 <i>Halloween SCARC Social Nite WACOM YL Net Alleg Co. ARES Net</i>			

**The Steel City Amateur Radio Club
(412) 787-0777**

**2M Repeater:
147.030/147.630MHz (PL 123.0)**

**70cm Repeater:
444.450/449.450MHz (PL 103.5)**

**WA3TTS Beacon: 144.300MHz
(CW)**

**ATV Repeater: 426.250MHz
(Currently off-line. Contact AA3EE
for more info.)**

**1296MHz Beacon: 1296.269MHz
(CW) 1W**

We're on the web!

www.w3kwh.com

**The Steel City Amateur Radio
Club is an ARRL-Affiliated
organization**



**Lots of important stuff going on in the club
this month!! Read all about it inside. Plus, all
kinds of other goodies, too! Check it out!!**



**The antenna for the Club's 1296MHz Beacon.
Read all about it on pages 2 & 15**



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