



The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

December 2008

Volume 14 Issue 12



Reported by Marv Beeferman

THE ON-LINE BROADCASTER

The New Jersey Broadcaster is now on-line. To date, 93 of your fellow NJARC members have subscribed, saving the club over \$1600 a year. Interested? Send your e-mail address to:

mbeeferman@cs.com

Be sure to include your **full name**.

Hopefully, by now, you've made your reservations for our annual holiday party scheduled for Saturday evening, December 13th. We'll keep a standby list if total seating exceeds 80, but don't expect many cancellations. Festivities take place at the David Sarnoff Library, with a cocktail hour (non-alcohol) at 5:00 and dinner at 6:15. Don't forget a radio-related gift (about \$20 value) for our Mystery Grab Bag; contest rules are posted on the NJARC web site.

Chef Brisindi has finalized an inviting menu for the evening:

- Stuffed Shells
- Meatballs in Marinara Sauce
- Chicken Marsala
- Sausage, Peppers and Onions
- Oven Roasted Potatoes
- Broccoli Sautéed in Garlic
- Spiral Ham
- Salad and Bread

Last month's DXpedition at InfoAge was a huge success and you can read all about it in this issue. It may have even inspired a few members to pursue an aspect of the hobby known as ultralight Dxing. In its basic form, ultralighting is done with a pocket radio similar to the classic transistor radios that many collectors are fond of. But nothing remains "basic" with NJARC members as you read how Walt Heskes puts a new face on his Sony SRF-59 AM/FM Walkman.

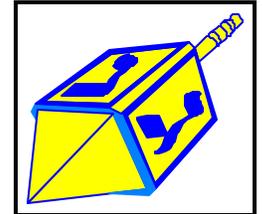


MEETING NOTICE

NJARC HOLIDAY PARTY

DAVID SARNOFF LIBRARY

SATURDAY, DECEMBER 13th



Your editor's SONY SRF-59; so what's all the fuss about?

Pettit is an "elegiac love poem" to the vanishing independent record shops in the United States and Britain which are being killed off by the Internet and one of its demon spawn, the MP3. The book is stuffed with photographs, interviews and images of weird old album covers, and it captures "the madness that oozes" out of a record store owner's skin and "perfumes their shops."

Here's a quote by one store owner as he talks about today's iPod generation, creating an image that only a vinyl lover could picture and understand:

"They will never know the joy of flicking through a rack of records, being captivated by cover artwork and reading the sleeve notes. Of getting the record home, sliding it reverentially out of its cover and then out of its inner sleeve, marveling at the luster of the grooves. The sacrificial offering onto the altar of the turntable, the gentle penetration of the spindle, the lowering of the arm and the total bliss of being part of an actual performance that you have helped to complete. This baptismal immersion into sonic joy will never leave you. The day you bought the record, where you were, what you were wearing and who was in your heart, will be etched into your soul, as well defined as the grooves that are pressed into your record."

Ray Chase reminds us that December brings the Holiday Train Show to InfoAge. It runs on the three weekends between December 5th and December 21st. Times are 7-10 PM on Friday and 1-5 PM on Saturday and Sunday. This event usually brings good crowds and Ray suggests that it would be nice if we could open the museum on some of these days and advertise it in the lobby of the hotel or outside the building. Volunteers would be appreciated so, if you're available, please contact Ray at enrpnr@erols.com.

I usually don't recommend gifts for the holidays, but I couldn't let this one pass by. Each year, the *New York Times* lists books "worth buying a coffee table for." **OLD RARE NEW: THE INDEPENDENT RECORD SHOP** (Black Dog Publishing, \$29.95) edited by Emma

HAPPY HOLIDAYS,
Marv

THE JERSEY BROADCASTER is the newsletter of the New Jersey Antique Radio Club (NJARC) which is dedicated to preserving the history and enhancing the knowledge of radio and related disciplines. Dues are \$20 per year and meetings are held the second Friday of each month.

The Editor or NJARC is not liable for any other use of the contents of this publication.

PRESIDENT:

Richard Lee
(914)-589-3751

VICE PRESIDENT:

Harry Klancer
(732)-238-1083

SECRETARY/EDITOR:

Marv Beeferman
(609)-693-9430

TREASURER:

Sal Brisindi
(732)-308-1748

SERGEANT-AT-ARMS (WEST):

Rotating

SERGEANT-AT-ARMS (EAST):

Rick Weingarten
(732)-370-8206

TRUSTEES:

Ray Chase (908)-757-9741
Phil Vourtsis (732)-446-2427
Tom Provost (609)-259-7634

TECHNICAL COORDINATOR:

Al Klase
(908)-782-4829

TUBE PROGRAM:

Gary D'Amico
(732)-271-0421

SCHEMATIC PROGRAM:

Aaron Hunter
(609)-267-3065

CAPACITOR PROGRAM:

John Ruccolo
(609)-426-4568

RESISTOR PROGRAM:

Walt Heskes
(732)-205-9143

WEB COORDINATOR:

Dave Sica
(732)-382-0618
<http://www.njarc.org>

MEMBERSHIP SECRETARY:

Marsha Simkin
33 Lakeland Drive
Barnegat, N.J. 08005
(609)-660-8160

DXPEDITION 2008

By
Dave Sica

Here's a confession; although I try to attend all NJARC meetings, I actually considered not going to the November "DXpedition." First of all, it's a long trip to InfoAge. Second, I'm hardly a rabid short wave listener. Finally, I just couldn't quite see the charm in a meeting consisting mostly of a room full of guys with headphones clamped to their ears. Was I wrong!

The November NJARC meeting was one of the most successful meetings ever hosted by the club. We had a large group of interesting radios to put through their paces and a big crowd of enthusiastic radio aficionados to run them. We were also operating in a great receiving environment with extraordinarily good antenna systems and we were doing all this at InfoAge, the home of one of the first transatlantic receiving stations operated by Marconi himself. What more could a radio collector want?

My contribution was a Hallicrafters SX-110 that I had never used before; I actually gave it the "smoke test" at the meeting! No smoke escaped and it proved to be a decent performer, picking up stations across each band. I was set up next to a very unusual Marconi (British) receiver that was such a strong performer it rattled the windows on the weakest signals. Further down the line was a Hammarlund Super Pro that a lot of folks seemed to want to stop by and take for a spin. It was a really nice performer, the likes of which I never before had the chance to appreciate. Further down the line was a VLF receiver bringing in a station on the very low frequency of just 60 kHz.

Both rooms of the Telephone Exchange Building were surrounded by a dizzying array of almost every type of radio from nearly every era of broadcasting. It was not so surprising that the Trans Oceanics performed rather well, but it was a bit of a surprise to me that thirties-vintage tombstones brought in such good DX.

Pocket transistor radios? Who would

have thought it? There were numerous transistor sets pulling in far away stations all evening.

Club President Richard Lee brought in an article about DXing with shirt-pocket transistor radios ("ultralighting"). A Sony "Walkman" SRF-59 was described as a fairly "hot" performer and the radio was offered as part of the 50-50 prize.

Making even the little transistor sets look overpowered, several crystal sets took advantage of the optimal receiving conditions to pull in some distant stations. For me, the real value of the evening was in being able to actually operate vintage radios that I have never owned, some of which I had never even seen in person before. Hearing a station on an RA/DA was an experience not to be missed.

Although I own an RCA Radiola III, it is with most of my other sets in the large "to be restored" pile. In addition to his RA/DA, Neville Greenough set up a working Radiola III. Although not really not one of the top performers, the radio did pick up a few stations.

Operating these radios allowed those of us who may have never tuned a regenerative set, or perhaps hadn't done so for decades, to experience the quirks of using such early receivers. Not to be outdone in the quirks department, Marv Beeferman brought in a Cutting & Washington model 11-A "three dialer" with enough controls to confound an octopus. I discovered that it was true; you had to really want to listen to radio back in the early days. Tuning in a station on this set was no walk in the park!

Perhaps the star attraction of the event was Rob Flory's Navy RBB. I had heard of, but never seen an RBB before, and frankly had little appreciation for this exquisite machine. Tipping the scales at 87 pounds, this behemoth seemed to bend the table it sat on. I'd give it an award for "most likely to give its owner a hernia." Portable it's not, but Rob was gracious enough to drag it to the DXpedition and we're sure glad he did! I could never have imagined an old radio with such sensitivity, or an analog radio with such spot-on accuracy. Tuning across the broadcast band, there was a station every 10 kHz on the dial and I mean at exactly every 10 kHz. Right on the line! It was really an eye-opener to experience the precision of this machine in operation. If there was a station out there to be heard, the RBB

pulled it in. I think that this set is now on everyone's wish list!

We had a large, enthusiastic crowd with a good number of attendees staying all night, bunking in the Chief Engineer's cottage. A near-record number of online viewers attended the meeting via our webcast. We owe a special "thank you" to Al Klase for orchestrating this meeting and for the considerable amount of work it took to get all the radios, antennas and signal distribution lines in place. Special thanks also goes out to Fred Carl of InfoAge for hosting us and for bringing in a big box of doughnuts on Saturday morning!

One thing's for certain; we've got one happenin' club here! Based on comments from our members, it may be unanimous:

"I have been an NJARC member for over 1-1/2 years and, over that time, I have been consistently impressed at the interesting and educational discussions at the meetings. I must say, however, that Friday's DXpedition was special; the presentation was great and it was nice to finally see and hear those wonderful old radios operating in all their glory! I submit my vote for this to become a regular club event." Paul Rutkowski (KC2SPS)

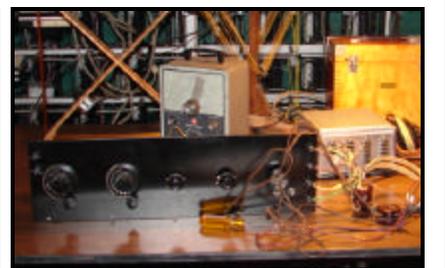
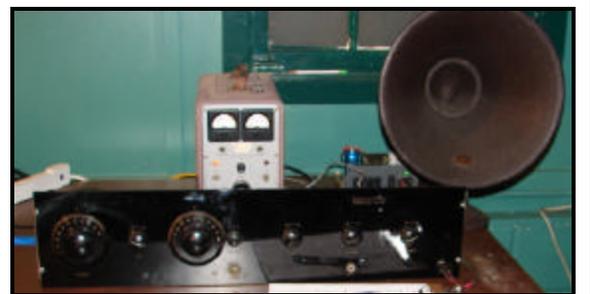
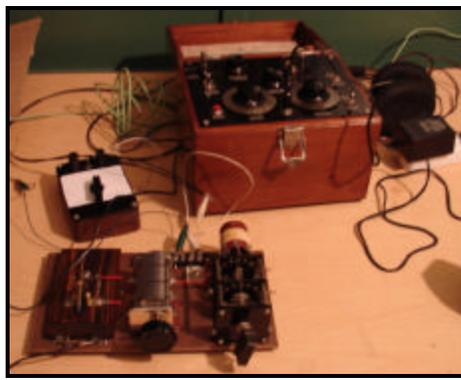
"I have to second Paul's suggestion; perhaps in the Summer. This was a good event; the noise floor was much lower than the hash infested area I live in. Also, having access to some very fine equipment I had not previously used was a perk. Kudos to all involved and a tip of the hat to Neville and Louis for having some tools handy." Rich Skoba

"I was watching the DXpedition meeting on the website (my thanks to Dave Sica for making this possible for folks who couldn't make it) and found the discussion about "ultralighting" very interesting. I picked up a Sony SRF-59 at KMart for \$14.99. I haven't tried it yet but I have always found Sony radios to have excellent reception. I also want to thank Al Klase for his very thorough and interesting discussion on antennas and the art of DXing." Nick Senker

(Your editor also picked up an SRF-59 the next day. I wonder if KMart was wondering about the sudden interest in this radio?)

"NJARC TV is great! Enjoyed watching until 9:15." John Dilks





RESTORING A STEWART WARNER 03-5E1

By Angelo Napoli

The club receives many donated radios on a regular basis that are in need of repair and restoration. During the August 2008 club meeting, it was mentioned that volunteers were needed to clean and/or restore radios. I volunteered to help and

was assigned a Stewart Warner 03-5E1. The radio is a 1939, Bakelite 5-tube (12SA7, 12SK7, 12SQ7, 35L6GT and 35Z5GT octal) AC/DC radio with an "Airplane" tuning dial. It covers the AM broadcast band and "POLICE" band in KHz and Meters. The radio is provided with 7 pushbuttons; 5 buttons for fixed, tuned stations, one for AM and one for POLICE.

The radio was quite dirty, with missing or damaged pushbutton labels and a fragile cardboard back. The ac cord was present but the plug was cut off. There was also a vintage cloth wire antenna



connected to the antenna terminals.

If a radio is going to be used regularly and be dependable for many years in the future, it needs to operate safely and function reliably. This is the approach I took

when restoring this radio. Therefore, the first step was to test all the tubes in a tube tester and all the tubes tested "good."

The radio was carefully disassembled by removing the chassis and speaker, including the wire harness and plug for the speaker from the back of the chassis (the impedance matching audio transformer is built into the speaker for this set). Upon inspection, it was immediately apparent that the underside of the metal chassis had been subject to moisture damage.



As with most radio sets, it is important to replace all the wax-paper capacitors and perform other electrical repairs before even attempting to apply power to the set. These repairs help ensure that other parts of the receiver that may difficult or even impossible to replace are not damaged. The capacitors in these radios are usually housed in cylindrical or square cardboard containers, but can also be encased in bakelite or plastic of the same shape. Both types of capacitors were found in this radio. Additionally, most of the cloth wire in this set was also moisture-damaged and required replacement. Typically, cloth wire does not need to be replaced and replacement should be avoided unless absolutely necessary.

I began by working on segments of the chassis, replacing the moisture-damaged and leaking capacitors with Sprague "Orange Drops", polypropylene capacitors, silver mica capacitors and high voltage electrolytic capacitors with equal or higher working voltages and values. In many cases, the rewiring of the radio was done at the same time since some of the wiring could be accessed more easily with the capacitors removed. Like-colored cloth wire was used to replace the damaged wire where possible.

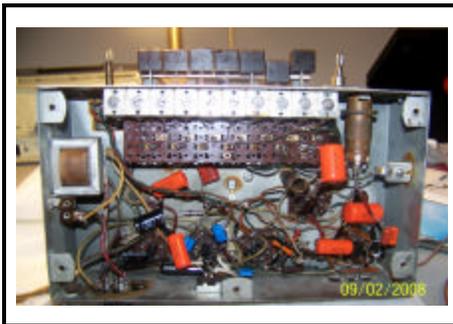
During the electrical repair process, resistor values were checked with an ohmmeter to ensure that their value was still within tolerance.

Once the electrical repair was com-

plete, the top of the chassis was dusted off using a paint brush and cleaned using Brasso. It is important to check a chassis for markings and cover them up with tape before cleaning to avoid removing them. (Note: Painted or chrome-plated chassis should not be cleaned with a metal polish.)

After cleaning the chassis, the tubes were dusted off with a paint brush; water or cleaners were avoided to preserve the tube markings. The tuning dial lights were also replaced.

The following photo shows the underside of the electrically repaired chassis:



The following photo shows the top of the chassis after cleaning.



Contact cleaner was sprayed into the potentiometer and pushbuttons to clear out any dirt. The potentiometer was then rotated back and forth to help the cleaner remove dirt; the pushbuttons were depressed repeatedly to obtain the same result. An AC plug was attached to the power cord.

When the radio was first powered up, the dial lights came on and the volume was very faint. (It is recommended to use a variac or isolation transformer when first powering up a vintage receiver after repair.) A signal generator set to a modulated midpoint broadcast frequency of 1100KHz was connected to the antenna terminals using a 200pF capacitor. Another 0.25 mfd capacitor was grounded to the B(-) terminal under the

chassis to serve as a designated test point.

The pushbuttons were depressed in and out to reveal a dirty connection; it was worked free to allow normal operation of the receiver. A partial alignment was then performed on the antenna tuning capacitor and oscillator trimmer capacitor using a signal generator set at 1500 KHz. The modulated test signal was applied to the antenna terminals through a 200pF capacitor. Measurements were taken with an analog voltmeter; a digital voltmeter is not recommended since a peak is hard to discern across the speaker output. (An IF alignment was unnecessary, but would be performed in a very similar manner using a modulated signal of 455 KHz and adjustment of the two IF transformers for a peak.)

Each pair of trimmer capacitors on the underside of the chassis that correspond to each pushbutton was adjusted with an alignment tool to the desired local AM broadcast station. A signal generator, tuned to the same frequency as the desired station, could have also been used.

The radio performed very well, receiving stations in New York, Philadelphia, Canada and other distant locations. The receiver was left running for several hours each day for several days to ensure it was functioning properly.

If the radio had not functioned properly at this point, a signal tracer and signal generator or injector would be employed, in conjunction with the radio's schematic, to assess the functionality and quality of the output of each stage. Service diagrams such as those found in Riders indicate the proper voltage ratings at various test points, and these voltages can be measured for the radio set under test to determine its operation.

The author recommends three books for further reading that detail radio restoration techniques:

- 1) Joseph J. Carr, "Old Time Radios - Restoration and Repair", TAB Books, Blue Ridge Summit, PA, 1991 ISBN 0-8306-3342-1
- 2) David Johnson, "Antique Radio Restoration Guide", Second Edition, Wallace-Homestead Book Company Radnor, PA, 1992, ISBN 0-87069-638-6
- 3) Louis E. Garner, Jr., "Pinpoint Transistor Troubles in 12 Minutes", TAB Books, Thurmont MD, 1967.

In preparation for reassembly, the Bakelite case was cleaned with mild soap and water to remove dirt. Plastic polish

was not used on the finished surface of this particular radio to avoid scratches. *(Editors Note: This may have been a personal preference of the restorer. Normally, a fine plastic polish such as Novus-1 will not scratch a plastic or Bakelite finish. Remember also that the "shine" of a Bakelite radio is part of the molding process and "polishing" will not restore an already dull finish.)* A fine plastic polish was used to clean and polish the airplane dial cover since there was some sort of deep stain on the cover. New felt feet were installed on the bottom of the radio since the original feet were missing.

Using PowerPoint, a template was created for replacement pushbutton labels to match the color and font of the lettering of the original labels. These were printed on photo paper. The labels were carefully cut to size and inserted into the front of the pushbuttons.



The fully restored radio is pictured below:



The radio is currently displayed in the club museum at InfoAge. I would like to also mention I spoke to the descendant of the original owner of this radio who donated it to the club. It was owned by his grandfather in Tennessee and the original pushbutton labels reflected stations WSM, WAPO and WDOD.

If you are interested, the schematic for this radio can be found in Rider Volume 11, Stewart Warner 11-35. Rider, as well as Beitman technical manuals, can be found at <http://hertzmail.com/Riders-vols/> and at <http://techpreservation.dyndns.org/schematics/>.

THE RALPH LIDDLE ESTATE

By
Ray Chase

Some months ago, NJARC member John Dilks gave me a lead for an estate in Medford Lakes, NJ that included some radios, books and a large assortment of test equipment. I took a ride and met Mary Liddle whose husband, Ralph Liddle, had passed away about a year before. Ralph had worked at RCA for a long time and apparently ran a small calibration business in his home (or at least liked to collect test equipment).

Mary was interested in seeing the estate go to a good home and, after researching InfoAge, found it to be the appropriate "residence." Arrangements were made to move the estate to InfoAge for disposition but, unfortunately, we were all very involved with the Haunted Hotel

and other NJARC activities. We finally scheduled a pickup for the 15th of November.

Luckily, we were able to obtain the free use of a large box truck from InfoAge member Mike Golub. So, Harry Klancer, Steve Goulart, Mike and myself headed for Medford Lakes with a mini-van and the box truck to make the pickup. We found two full rooms of equipment including a dozen or more 500-series Tektronix scopes, most with carts and scores of plug-ins. We did not quite get all of the equipment, but expect to return sometime soon with a van to get the remainder.

We anticipate that a large NJARC auction will be scheduled in the spring at InfoAge, so this will be your chance to get one of these cherished (or not) scopes. Many of the books will go to the InfoAge library, but we will also be sorting out duplicates which may appear in the auction as well. There were some radios and other general electronic "stuff" included along with thousands of tubes so we look forward to a grand house cleaning in the spring.



Mary Liddle and her daughter, Susan Liddle, with Steve Goulart.



REDISCOVERING BC BAND DX... THE SONY SRF-59 "SAFARI"

By
Walt Heskes (KC2KML)



The November 2008 NJARC meeting at Camp Evans offered attendees a rare opportunity to ply their radio operational skills against their favorite radios. The NJARC broadcast band "DXpedition" promised to span the evening and into the wee hours of the following morning. A host of large and capable antennas were erected about the cottage and radios of all shapes, types, and sizes were available. An anxious group gathered inside the facility and there was much commotion and excitement as the meeting drew to order.

At one point, during the preliminaries leading up to the DX party, NJARC President, Richard "Radio" Lee, gently inquired if everyone in the assembled group was familiar with the new class of Ultralites. Ultralites? Yes. If you were already addicted to "Kool" brand cigarettes but longed for a slightly milder-tasting tobacco to satisfy your craving for nicotine, Ultralites were the remedy. Indeed, fine coffee, sweet cigarettes, and late night DXing with vintage radios merged to make those fleeting hours apart from the confines and conflicts of family all seem worthwhile, perhaps even fun.

Ultralites? Richard asked once more, jogging us back into the classroom setting. Ultralites are radios the size of cigarette packs (or no larger than a ham and Swiss on rye) that offer the convenience of portability with the promise of big-rig DX performance.

Ha!! No pint-sized rig sold since men bounced around on the moon could promise anything more than pocket-sized performance. Why, even the most primitive AA5 was superior to the best of the current crop of oriental offerings...or was it? What did "Radio" Lee have up his sleeve or, more accurately, clipped to his belt?

Radio Lee read from a copy of Popular Communications magazine. An avid AM DXer, Gary DeBock, was sharing the joys of his discovery of the Sony SRF-39 and its siblings (including its younger brother, the SRF-59). Apparently, there is something very special about these radios that makes them superior DX chasers. Sony's radio engineers have conjured up an IC with performance characteristics rivaling those of better quality receivers: high sensitivity with high selectivity and exceptional nulling capabilities in a somewhat conventional (e.g., the IF is only 57 kHz) superheterodyne circuit.

Incredibly, this marvelous bit of cutting edge technology could be had in a lightweight package featuring both the FM stereo and AM broadcast bands at a bargain basement price of under \$15 including a pair of lightweight, headband style, stereo headphones. At that price, it was not entirely certain whether this was being marketed as a child's toy or a simple ploy to clean out a surplus inventory of retro-style stereo phones.

Radio Lee's sincerity impressed us and we were curious; but when he produced a coveted NIB SRF-59 and offered it to the winner of the night's 50-50 contest, we were smitten. We had to have one of these delicious little tasty DX machines. Of course, we didn't win the prize (our treasurer, Sal Brisindi, got it) but that served to whet our appetite still further.

The following day, we researched the web for stories and information about the SRF-59. The facts were quite convincing and we traded our credit card data with Amazon for a pair of these critters.

Delivery was promised within three days and, on the third day, as the UPS delivery deadline of 7 P.M. approached and passed, we grew from hopeful to hopelessly disappointed. Suddenly, the doorbell rang and we ran to the front door, yanking it open in time to see the trailing mist of the UPS truck as it sped away. At our feet, we saw a small, bat-

tered corrugated cardboard box on the ground. We picked it up and brought it inside.

Son Aaron took his penknife and sliced through the delivery carton. Then, he removed one of the two items inside and started carving through the thick, clear plastic packaging. Finally, he sliced enough of an opening to squeeze the contents out of the clamshell shaped package.

"Get some double A batteries," I told him. He fished around in the butter keeper of the refrigerator where we often store batteries and produced a Wegman's double A. He put it in the radio and powered it on. It was dead. Bad battery? Could be. I fished around in my desk drawer and found another double A and plugged it into the rig. It came alive. Great! But, there was something wrong with the phones. They didn't seem to work on both right and left channels. Darn! Our first Sony SRF-59 out of the box is defective.

The phones did work only if the plug was pressed firmly against the left side of the jack. It seemed clear that the ear-phone jack needed some repairs and adjustments. At that point, it had not yet occurred to us to try a different pair of phones. Instead, we quickly removed the two screws that fastened the two halves of the plastic cabinet. In a few seconds, we had the radio apart.

We began carving divers of plastic from the outer end of the jack. Then, we pressed the plug deeper into the jack but this did not cure the problem; one channel remained dead. We used a pick to gently pry out the electrodes inside the jack thinking that the problem was due to loss of contact. These "modifications" did not resolve the problem either. Finally, in desperation, we pulled out our Bose quiet comfort 3 headphones and inserted the plug into the violated jack. Eureka! Good clean stereo. The problem with the radio was that the phones had a defective stereo plug.

Now, we set about DXing the AM band.

For openers, the tiny thumbwheel that drives the tuning cap was far too small to allow fine adjustments with our clumsy mitts. In addition, the tuning indicator seemed far too fat for the length of its travel. We decided to trim the tuning indicator using Aaron's penknife.

Then, we found that the AM tracking indicated slightly higher than the actual

received frequency. That is, WABC at 770 appeared between 8 and 9 on the dial. Otherwise, the radio was, indeed quite hot and a peppy little performer. It was clear that we needed a better tuning system with more granularity.

The next day, we returned to the left coast-based website http://www.dxe.ca/index2.php?option=com_docman&task=doc_view&gid=100&Itemid=77 where we found that another DXer, John Bryant, had solved his tuning problems. He attached a National Velvet Vernier dial via a series of drive shafts to the tuning wheel of an SRF-39 that was mounted to the opposite wall of a homebrewed cabinet.

That night, Thanksgiving eve, we scrounged our junk box and found a NIB vintage 1922 vernier dial. For years, we'd been waiting for an opportunity to put this ancient device into service. Now, it seemed the perfect complement to the state-of-the-art SRF-59 circuit.

We quickly drilled mounting holes in our favorite construction medium: double sided, copper-cladded, plastic board. The 4.5 by 6-inch sheet we used came off the rack at Radio Shack. We also made holes for a DPDT power on-off slide switch, a pair of stereo phone jacks, a volume control, and a pair of LEDs: one for power-on indication and another for backlighting the vernier dial.

A pack of four D-cell batteries would supply power. Two D-cells wired in se-



ries would run the LEDs. Two more D-cells wired in parallel would supply power to the radio circuit. We quickly made the appropriate modifications to a standard Radio Shack D cell quad-pack, cutting the stiff wiring between the cells to create the separate circuits.

The base of the cabinet was an 8-inch by 4.5-inch chunk of salvaged Formica-covered shelving scrounged from the wood pile.

The volume control was a minor chal-

lenge. To preserve the stereo circuitry, we scrounged the junk box for a piggy-backed pair of pots. We hoped to find something on the order of 10K, 50K, or even 100K but we had to settle for a pair of 1 meg controls. The wipers of the pots are connected to the left (tip) and right (ring) outputs of the SRF-59's onboard earphone jack. The ground leg of the earphone jack is connected directly to the ground legs of the two panel-mounted earphone jacks.

During operation, with the SRF-59's onboard volume control set to slightly less than its maximum position, the front panel mounted controls do a fine job of modulating the output to a comfortable level. As luck would have it, the central recess of the SRF-59's nylon tuning wheel was a perfectly snug fit for a 1/2-inch diameter bushing scrounged from the junk box. A snip of the side cutters was all that was needed to remove a small bit of intruding plastic from the central recess. Then, we measured and cut a suitable length of 1/4-inch solid aluminum tubing for the drive shaft.

One end of the drive shaft would nest into the vernier dial. The other end would secure the half-inch diameter steel bushing.



We wrapped the aluminum tubing with several layers of metal tape and a thin film of liquid nails as we pressed the bushing onto the aluminum tubing. Using a blend of Duco cement and service cement, we secured the steel bushing to the SRF-59's tuning wheel.

The location of the SRF-59 circuit card could not be determined until the drive shaft was installed. At that instant, we used a string level gauge to set the drive shaft at the correct horizontal angle while also maintaining a perpendicular angle to the front panel. This actually was easier to do than it sounds. Within a few minutes, the circuit card was secured via two 4-40 machine thread screws to the

inside rear face of the cabinet and the radio was ready for operation.

Results? In a word: astounding. Using only the internal 1.75-inch ferrite antenna and without taxing our fingers, we DX'd KMOX from St. Louis as well as stations from Chicago, Canada, and Radio Reloj from down south.

The following day, we added the masonite side and top panels. The nifty cotton handle came from a discarded belt. All panels are secured into a solid assembly using 8-32 machine screws and associated hardware. Corners and seams are covered with brown cloth duct tape.

The finished radio nicknamed "Safari" is a joy to behold and be holding.



**IT'S THE
ECONOMY
STUPID!**

The following was posted on WJACTV.com...Ed

Police in Windber, Pa. are trying to figure out how a radio tower went missing. They say a group of people had to have a very thorough plan to get all 120 feet of steel and copper down. It's believed that the thieves threw cables over the guidelines of the tower and yanked it down with a truck. Cut bolts and torch marks on nearby grass pointed to the fact that the tower was cut into small pieces in order to get it out of the wooded area. The thieves also got away with a 300-pound Penelec transformer full of copper.

The radio tower hadn't been used for years, but it was destined to bring wireless Internet to Windber. As far as I'm concerned, no great loss!