SCANNERS

SHORTWAVE

The Urban DXer

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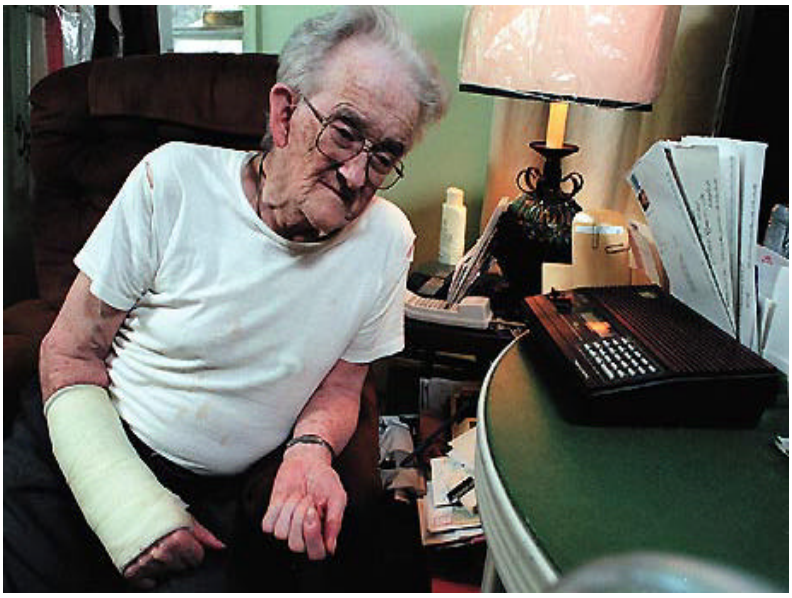
SOME OPENING COMMENTS

I've been doing a lot of searching to see what the average person perceives a scanner enthusiast as. It didn't take me to long to dig up these two articles from Cedar Rapids, IA and Tampa, FL. These are the type of articles that can kill our hobby when combined with legislation like that which is being debated in our government. We really need to polish our image and remember that we are and we will be judged by what we are perceived to be! This issue of The Urban DXer will also shift somewhat lower in the radio spectrum and feature some info on the medium wave bands. The summer is drawing to a close and the AM Broadcast band conditions will start improving as the days draw shorter and cooler.



ARE WE WHAT WE ARE PERCEIVED TO BE?

Al Dewees was stationed in his easy chair Tuesday afternoon as the animated voices of police officers on the chase filled his small living room and his long life.

To his left, a small police scanner was chatting about a shoplifter and a 200-channel blaster across the room was giving the blow-by-blow of a "berserk" boyfriend speeding away on a motorcycle.

"I like to listen to them. It gets a little interesting," said Dewees, of 1131 31st St. NE., Cedar Rapids.

Then the 83-year-old retired Cedar Rapids school janitor limped across the room, on two replacement knees and with a broken wrist, and downed a lunchtime pill.

A significant part of Dewees' life will come to a close next month as the Cedar Rapids police and fire departments and the Linn County Sheriff's Department switch to high-tech digital radio systems that the public won't be able to hear.

The change is from an analog system that transfers voices over radio waves to a system that changes voice to digits and back again.

Keeping police business to the police, the police have said, will keep it out of the hands of criminals, long fans of police scanners.

But the average neighborhood scanner aficionado like Dewees will lose out in the process.

"I don't like it," he said.

An agreement negotiated between the local news media and the city will allow the media to listen to the main dispatch traffic of police and fire

The Urban DX'er

The Urban DX'er is published monthly through the cooperative efforts of Bob Kozlarek, WA2SQQ and Charlie Hargrove, N2NOV

Contributions of information for future issues is always welcomed and greatly appreciated. Please send your E mail to wa2sqq@hili.com..

departments on specially programmed radios at a cost to the media of more than $3,000 per radio. Sheriff Don Zeller has extended a similar offer for news access to the county's radio system. It will require a different, $3,000 radio for each news operation.

Neither radio arrangement will help Dewees.

"I don't know what I'll do yet," he said.

He does know this: He'll have less to say a couple of times a day when he talks on the phone to a retired friend, who doesn't have a scanner. Dewees always sprinkles in highlights from the police and fire traffic.

He had much to relay, for instance, of what he heard of the bank robbery and short police chase last month that left a teenager dead.

He's heard a thousand things, he said, since he got his first police scanner too long ago to remember.

A life without live law officers and firefighters is not going to leave Dewees with nothing. He has his CB radio, TV and a stack of books on tape.

And he still has hope: He imagines a day when Radio Shack, where he bought his two police scanners, will come up with a reasonably priced radio so he can keep pace with the digital era.

Radio Shack spokesman Tony Magoulas said on Tuesday that such a product is under development, but not available.

"Not yet. That's to come," he said from Fort Worth, Texas.

Dennis Warren, joint communications manager for the city of Cedar Rapids, said he knew of nothing that will help citizen listeners like Dewees.

"As it stands right now, when the city switches over, they'll be out of luck," Warren said.

Things vital to an aging man often can be found by the easy chair. That's where one of Al Dewees' two police scanners is. Next month, the scanners no longer will pick up police, fire and sheriff's traffic when the city and county switch to more sophisticated radio systems.

TRUNK TRACKER V 31

For those of you who have been playing with Trunk Tracker, here a URL that you can download the latest version. From what I've heard, the author who chooses to remain anonymous has added a lot of new features.

http://www.geocities.com/CapeCanaveral/Lab/1060/trnk31.html

WIRELESS CALLS EASY FOR EAVESDROPPERS

By DOUG STANLEY, *The Tampa Tribune*

TAMPA - Every time you talk on a cordless or cellular telephone, more people may be listening than you think. Although it's illegal to eavesdrop intentionally, some people make a hobby of using radio scanners to listen to wireless calls.

``A lot of people say, `I must have no life and no decency for listening in,' '' says one, who calls himself Poster Child. ``Well, it is usually better than TV. ``If you're in the right place, on the right frequency, you can hear things ranging from laughable phone sex to corporate bank and credit card accounts.''

Poster Child is 17. He says he has been eavesdropping on telephone conversations for a year and a half. He learned most of what he knows from another ``radio freak'' and from reading. He eavesdrops for profit, snatching credit card numbers from the airwaves and using them to buy electronic goodies such as CD players and video cameras. Police call that credit card fraud. He says he has never been caught.

He eavesdrops for fun, listening in on his neighbors.

``I think everyone should have the right to listen to any signal not encoded that passes freely through their homes and through their bodies,'' he says.

Cordless telephones work like miniradio stations, sending radio signals from the base unit to the handset and back. The signal usually can be intercepted up to a quarter mile away and sometimes up to two miles.

``Someone with a scanner will typically look for a conversation transmitted by the base unit because it transmits both sides of the conversation - you and

the person you're talking to," Poster Child says.

Some cordless telephones scramble the signals, but the signal can be recorded and later descrambled. ``Most radio freaks won't bother with a scrambled signal, though,'' Poster Child says. Cellular telephones send radio signals to low-power transmitters to ``cells'' within a several-mile radius. As you travel from cell to cell, the signal carrying your voice is transferred to the nearest transmitter.

``Some of the conversations are dull,'' Poster Child says. ``With cellular, you pick up people calling home to find out what their family wants for dinner, grocery lists, and people calling tow truck drivers.''

Cellular conversations are more difficult to monitor than cordless calls, but far from secure.

A 1994 federal rule forbids the manufacture or importation of scanners that can pick up cellular calls. But units sold before then remain plentiful, and hobbyists have learned how to alter some newer models to pick up the calls.

``The new digital cellular phones are making it harder to pick up on conversations, but not many people have digital service,'' he says. ``And although more difficult, it is possible to listen in on these phones, too.

``Your best defense against people listening to your conversations,'' he says, ``is to use your regular corded phone for all important calls.''

ENCRYPTION / VOICE INVERSION SOFTWARE

Check out this URL where you'll find an extensive collection of voice inversion and voice encryption software. Many only require the use of your PC with a sound card. At the surface this page doesn't offer much, but devote a little time and investigate all the links.

http://www.geocities.com/CapeCanaveral/Lab/1060/hdwsftw.htm

THE ULTIMATE SEARCH ENGINE!

Rod, N2RVM passes along this neat search site that allows you to search the usual Internet resources plus AM/FM radio data, US patent search, US aircraft tail registrations, Internet domains and a people finder - all on one page!

http://www.geocities.com/CapeCanaveral/Lab/1060/srch.htm#ntail

COMMENTS FROM OUR LISTENERS!

De Joe, N2OAD

NBC Today Show IFB 450.750 (PL 82.5)
ABC Good Morning America IFB 450.1125 (PL ???)
Local ABC Chan 7 455.6125 (PL 156.7)

BCB SEASON IS ALMOST HERE!

If you look carefully you can see the start of autumn! Yes, the trees are starting to shed their green and the smallest tinges of red / yellow can be seen. Before we know it the Broadcast Band DX'ing season will be upon us. Now would be a good time to start planning your season. I came across an interesting article on phasing antenna tuners. For those of you who are members of the National Radio Club, you probably have seen the countless articles that WA1ION has written on the variety of tuners he has designed and tested. Basically, you erect two long wire antennas, opposed 90 degrees apart. Through the use of regenerative amplifiers and LC phase shift networks we are able to steer the receiving pattern and actually tune one station out while bringing a new one in. Up until now these tuners had to be built or bought from the few who upgraded and sold theirs off. MFJ recently announced a tuner of this type that can be easily modified to work well below the AM broadcast band. The article is lengthy, so I apologize to those who aren't into BCB DX'ing - but to those of us who are, this is a real breakthrough at a very reasonable price!

By Mark Connelly - wa1ion@ix.netcom.com

A recently-released product has been getting quite a bit of attention in radio-related E-mails, Internet bulletin boards, Web pages, magazines, and personal correspondence. The device is the MFJ-1026, described as a "Deluxe Noise Canceling Signal Enhancer" by its manufacturer MFJ Enterprises, Inc. DXers will recognize the MFJ-1026 as a "phasing unit". The list price is US $ 139.95; outlets such as R & L Electronics of Ohio are selling it at prices as low as $ 115. It offers the ability to null interference, whether from electrical noise sources or actual transmitters. This is accomplished by creating a 180 degree phase shift between two antennas that are presenting equal-amplitude "pest" signals that cover desired DX. There is a

similar model, MFJ-1025, which does not have the built-in whip / preamplifier option. The '1025 sells for about $ 20 less. A little bit of phasing unit history is in order here. Phasing units have been around for a long time, but most of these have been homebrew models built by a few dedicated DXers. In the 1960's, I built some hit-or-miss L-C-R tuners / combiners to use at my Menotomy Rocks Park antenna farm and by the early '70s I had one of Gordon Nelson's boxes up and running ahead of my R-390A. Master Trans-Atlantic DXer Bill Bailey was also using a Nelson- built box at the time. 160-m hams such as Victor Misek were also experimenting with phasing circuits for steerable nulls. Producing a null in the opposite direction of a peak turned out to be a big advantage over loops, especially in hearing European stations here in the Boston area with the New York City (and other) "pests" off the back of the beam. In the early '80s, moving onward from the L-C-R units, Gerry Thomas took a bold step into broadband phasing with his delay-line-based Phase One. His research led to my DL-1, DL-2, and DCP-2 models. In the U.K., Graham Maynard became well known for the units he built. As the 1990's opened, there was still very little in the way of commercially-available hardware despite the fact that many of the serious international DXers were using the homebrew units both at home and on Beverage DXpeditions to hear exotic stations that could not have been logged any other way. A device called the S.E.M. QRM Eliminator had minimal promotion and little market penetration. It used a tapped delay-line in a circuit similar to Gerry Thomas's Phase One. By 1993 (I think), the JPS ANC-4 model came onto the scene. In a trend that has followed all of the commercial units, advertising pointed out that elimination of local electrical noise was the primary use. One channel of the ANC-4, therefore, was a very-high- gain stage driven by a short "noise gathering" whip. This arrangement didn't seem particularly well suited to the DXer's more common objective of using two similar fairly-low-noise good-gain outdoor antennas to phase in order to remove co-channel (or adjacent channel) interfering STATIONS rather than NOISE. Noise was often easily discarded by using noise-reducing balun transformers with "quiet grounds". This idea - promoted by Dallas Lankford, Nick Hall-Patch, and others - can get electrical noise out of the equation even ahead of the phaser, leaving it with the considerably more interesting job of removing dominant stations. A few DXers got ANC-4's, but the unit was prone to overload on its so-called "noise" channel and nulls seemed to be hit-or-miss because of sometimes-inadequate level-balancing and phase-adjusting range. Demand for homebrew units continued unabated as Al Merriman and I can testify.

In 1997, the MFJ-1026 has made a big "splash" because it is likely the first widely-available commercially-produced antenna phasing unit that can be made to work for medium-wave DXers. I say "can be made to work" because some modifications must be made to the stock version unit available at the time of this writing.

The "long and the short of it" is that the brochure advertising the unit claims performance "down to VLF", customarily taken to be 10 kHz or so, when several E-mail communications with MFJ personnel indicated that the unit comes equipped with high-pass input filtering designed to attenuate frequencies below the 160-m ham band. Indeed the lower one goes below 1.8 MHz with the stock unit, the worse the insertion loss gets. Measurements taken here indicate losses of 8 dB at 1600 kHz, 16 dB at 1000 kHz, and 27 dB at 530 kHz. By the time you get down to the 153 - 279 kHz European long wave broadcast band, the thing has so much loss (over 35 dB) that it might as well be a dummy load.

Aside from the insertion loss, inadequate phase shifting range on lower frequencies was encountered in some situations. Oscilloscope testing showed approximate phase shift ranges as follow: 200 kHz = 65 deg., 400 kHz = 94 deg., 600 kHz = 113 deg., 800 kHz = 125 deg., 1100 kHz = 150 deg., 1500 kHz = 156 deg., and 2000 kHz = 169 deg. With the SW3 Phase Normal / Invert switch of the MFJ-1026, dependable nulls could be produced if the R16 phase range control gave 180 degrees of adjustment. It turns out that if you can easily swap the two inputs, a phase shift adjustment range of as little as 90 degrees will produce nulls.

Fortunately the modifications that have to be made to give the MFJ-1026 competent performance from 300 to 1800 kHz are quite simple. The MFJ-1026 schematic is shown on page 12 of the instruction manual supplied with the unit. The circuit board is well marked with the component designators.

Modification 1 will increase sensitivity below 2 MHz:
* Remove L3, L4, R26 (main input channel); L5, L6, R27 (auxiliary input channel)

* Change C8 and C16 from 680 pF to .01 uF

Modification 2 (swap switch) will ensure adequate phase shifting range above 300 kHz (these instructions may differ from prior E-mail postings):
* A double-pole / double-throw (DPDT) "swap switch" (Radio Shack 275-614, or equivalent) is added in available space near the upper right hand corner of front panel.
* Separate the middle pin (wiper arm) of each antenna gain pot from the circuit board: these are R20 (Auxiliary Antenna Gain) and R9 (Main Antenna Gain).
* Install a wire from the R20 middle pin to swap switch section #1 arm.
* Install a wire from the R9 middle pin to swap switch section #2 arm.
* Install a short wire from swap switch section #1 "normal" contact to swap switch section #2 "swapped" contact.
* Install a short wire from swap switch section #2 "normal" contact to swap switch section #1 "swapped" contact.
* Locate the Q5 and Q8 transistors. Each of these transistors has one side having two leads (these are the drain and source leads). The other side of each transistor has a single lead (the gate lead). Solder pads are located on plated-through holes immediately adjacent to the Q5 and Q8 gate leads. These pads will be wired to the swap switch in the next two steps.
* Install a short wire from swap switch section #1 "normal" contact to the plated-through hole solder pad that connects through the circuit trace to the Q8 gate lead. Alternately, instead of going to that point, you could wire to the circuit board pad which had previously been wired to the now-cut R20 arm pin.
* Install a short wire from swap switch section #2 "normal" contact to the plated-through hole solder pad that connects through the circuit trace to the Q5 gate lead. Alternately, instead of going to that point, you could wire to the circuit board pad which had previously been wired to the now-cut R9 arm pin.

With the DPDT switch set to "normal", the switch completes the previously-wired paths: R20 arm to Q8 gate; R9 arm to Q5 gate. In its "swapped" position, the R20 arm gets connected to the Q5 gate and the R9 arm gets connected to the Q8 gate.

A couple of minutes spent studying the schematic and board layout should make it obvious how to install these modifications. An additional modification suggested by Al Merriman is to remove the existing two Antenna Gain knobs and the one Phase Control knob and substitute larger knobs, such as Radio Shack part number 274-416 (diameter = 1" = 2.54 cm).

So now you've got the modifications installed and it's time to put the unit into use. If you're using two relatively short antennas, these should be run out at a right angle to each other to prevent collateral nulling of both desired DX stations and "pests". With two wires at a right angle, the best null / peak axis will be along the bisector (the line that divides the angle in half). Longer antennas (over 150 m / 500 ft.) can be run closer to parallel and still produce good nulls, especially if there is some separation (1/8 wavelength or so) between them or if they are of somewhat different lengths or if one is terminated and the other is not. E-mail correspondence with Tom Rauch (W8JI) brought up another interesting possibility. If two similar small active broadband antennas (e.g. MFJ-1024 whips) are separated by 1/16 to 1/4 wavelength, good nulling performance can be expected. The line drawn between the two antennas would describe the best peak / null axis of cardioid patterns to be produced. One-sixteenth wavelength at 500 kHz (or 1/4 wavelength at 2000 kHz) turns out to be 600/16 = 37.5 m = 123 ft. Using two broadband active whips (with coaxial feedlines of about 19 m each) wouldn't be a difficult experiment to try. The Robbins Road DXpedition site in Plymouth, MA would be ideal because the road has no power lines along it and its orientation is on an approximate 70 deg. / 250 deg. bearing axis (degrees clockwise from due north). One whip 19 m along the road ahead of the car could be phased against the other one 19 m behind it.This should be quite effective for nulling out NY/NJ/PA/OH domestics (at about 250 deg.) to clean up Europeans coming in on bearings of about 70 deg. Tom Rauch also mentioned using broadband loops instead of broadband whips, but I haven't had much experience with untuned loops that have both high sensitivity (low noise floor) and good strong signal handling characteristics (minimal intermodulation products). Two broadband loops could be spaced 1/16 to 1/4 wavelength and oriented the same way, or they could be located closer to each other and pointed at a right angle to each other as in the old "goniometers". Also, a co-located active whip / broadband loop could be used for loop- sense cardioid array (LSCA) operation

(a la Ron Schatz).

The MFJ-1026 can be operated with a ham transceiver as it has built-in transmit / receive (T/R) switching on its main antenna input. I suspect that the reviews of the unit in amateur magazines such as QST and CQ will cover this aspect of operation. The auxiliary channel input can be from the built-in whip antenna (that goes through an internal preamplifier) if the front panel Pre-Amp switch is set to ON. Otherwise, whatever antenna you've connected to the rear panel auxiliary antenna jack will be fed to the Auxiliary Antenna Gain pot. I have phased the whip against Main antenna inputs ranging from tuned loops to untuned random wires. The internal whip on a modified MFJ-1026 has reasonably good sensitivity, especially above 800 kHz. Even at 530 kHz, the internal whip was able to discern Turks & Caicos at threshold level (about S2 to S3) on groundwave from a receiving site in Harwich, MA on Cape Cod.

This is on par with the sensitivity of the Quantum and Kiwa loops. For comparison, an outdoor sloper to the top of a 20 m pitch pine tree at the Harwich site gives a Drake R8A S-meter reading of about S6 on Turks & Caicos 530 groundwave.

There are four potentiometers (pots) on the front panel of the MFJ-1026 and there are four switches (five when you consider the user-added Swap Switch). The potentiometers are T/R delay (R3), Auxiliary Antenna Gain (R20), Phase (R16), and Main Antenna Gain (R19). Switches (besides the Swap Switch) are Power On / Off (SW1), Pre-Amp On / Off (SW4), Freq. High / Low (SW2), and Phase Normal / Invert (SW3).

The T/R Delay control is only of concern if you will be transmitting as well as receiving. The Power On / Off switch sends the Main antenna straight through to the receiver if set to OFF. The Freq. High / Low switch is usually set LOW for frequencies from 300 kHz to 7 MHz, either LOW or HIGH for 7 to 12 MHz, and HIGH for 12 to 30 MHz.

The instructions in the MFJ-1026 manual are clear and will get the first-time user into the nulling "game" without much trouble. This is an easy-to-use unit compared to the L-C-R and delay-line phasers which preceeded it. I would summarize operation as follows:

* Set the (SW2) Frequency switch to LOW for medium-wave use. Set the
Auxiliary Gain (R20) fully clockwise and the Main Gain (R9) fully counterclockwise (anticlockwise) and take note of the strength of the station to be nulled.
* Then set the Auxiliary Gain fully counterclockwise and the Main Gain fully clockwise and take note of the strength of the station to be nulled.
* If the reading was lower with Main Gain fully clockwise, temporarily set it counterclockwise and set Auxiliary Gain to get the reading that you had with maximum Main Gain. Then put Main Gain back to fully clockwise.
* On the other hand, if the S-meter reading had been lower with Auxiliary Gain fully clockwise (rather than with Main Gain that way), set Auxiliary Gain fully counterclockwise and set the Main Gain to get the reading you had with maximum Auxiliary Gain. Then put the Auxiliary Gain back to fully clockwise.
* Rotate the Phase control (R16) to look for a null. If the null isn't obvious, or if it tends to be at either end of the Phase control's range, try the opposite position of the Phase Normal / Invert switch (SW3) and rotate the Phase control again to search for a null.
* If a satisfactory null still hasn't been achieved, try the opposite position of the added Swap Switch and repeat the previous step.
* Once the correct combination of Phase control, Normal / Invert, and Swap Switch position has been arrived-at, make small interactive adjustments of the non-fully-clockwise Gain control and the Phase control until the deepest possible null has been acquired. Subdominant signals, if present, should be evident.

If the active circuits in the MFJ-1026 get overloaded by strong local stations, use moderate-Q tuned inputs such as loops or L-C tuned whips/wires - or, in cases of untuned wire inputs, just use less gain (as selected by the two 250-ohm Gain pots).
"Real life DXing" MFJ-1026 field tests were done on Saturday, 26 JUL (local) from the Robbins Road - Holmes Field beach-DXpedition site located off Route 3A in Plymouth, MA (approx. GC= 70.68 W / 41.98 N). I used the Drake R8A receiver. Both the R8A and the MFJ-1026 were powered from the car battery. Two 90 ft. / 27 m wires lying on the ground were used. This (admittedly less-than- ideal) set-up had been used with delay-line and other phasing unit designs previously, so I had a feel for what to expect. The "main" antenna for the MFJ-1026 ran on a slight downslope along the side

of Robbins Road straight towards the sea at a bearing of about 70 degrees. The "auxiliary" wire ran out at a right angle into an open field of grass at an approximate 160 degree bearing. I was on site at about 7 p.m. local / 2300 UTC. This is about an hour before sunset. I felt that one of the big challenges would be to null WPLM-1390, located less than 2 miles / 3 km from the site. Luckily, its very large signal did less overloading damage than WRKO-680 does back at home near the Shawsheen River marsh. Nulling WPLM a good 50 dB was easy ! It wasn't too long before evidence of co-channel skip stations from ME, NY, and VT started bubbling in behind the nulled WPLM audio. Better yet was rather good audio from Netherlands on 1395 heard somewhat later ! The stations that the MFJ-1026 had the most trouble nulling were those with high-angle skip, especially if some groundwave was blended in. The stations on the top end of the dial, such as WNRB-1510, were particularly troublesome in this regard. Null control settings required constant adjustment, especially in the period from an hour before sunset to an hour after. The best sustained null depth I could manage on stations such as WNRB, WDCD, and WQEW was about 15 dB (although momentarily-deeper nulls popped in and out). Shortwave DXers will probably experience similarly "jumpy" results above 2 MHz. Pure "groundwavers" like WPLM and longer-skip / lower-frequency stations such as WLW-700 nulled more deeply and for greater time intervals between required control re-adjustments. These results are consistent with those found for any previous-used phasing scheme, whether delay-line, tuned L-C, or other.

As the evening progressed, the MFJ-1026 / phased wires set-up proved its value as numerous Trans-Atlantic stations were logged. Some of these came in fine on the 70-degree "Euro-wire" without the need for phasing, but, in a number of instances, phasing the two wires made the difference between a slop-plagued DX signal and crystal clarity. The two Croatia stations (1125 and 1134) come to mind. WBBR-1130 New York has a VERY strong signal at night here in eastern Massachusetts. Indeed, outside the immediate groundwave zones of locals, it's one of the five strongest stations night after night. When I was tuned to 1134, Croatia was running a good S9+20, but it was still trashed by WBBR slop at times - even on the "Euro-wire". With a few quick twists of the controls on the MFJ-1026, WBBR was reduced by better than 20 dB and Croatia-1134 roared in with absolutely beautiful audio. On peaks, it was stronger than what was left of WBBR. Not only did the phasing accomplish a nice clean-up on 1134, but also the much-weaker Croatian on 1125 was brought into the clear with just a bit of co-channel flak from Spain. Prior to phasing, it didn't have a ghost of a chance against the barrage of WBBR slop.

Earlier on 26 JUL, I had done a few daytime DX tests of the MFJ-1026 from Harwich, MA on Cape Cod. The first battery of tests involved feeding a Quantum Loop into the MFJ-1026 "main" input and using the 1026's built-in broadband active whip as the "auxiliary". With the loop at normal (i.e.high) Q, audio null depths only reached about 20 dB (versus better than 40 dB for carrier). This is consistent with previous nulling scenarios where a high-Q tuned source is phased against a broadband one. You get what sounds like a double-sideband suppressed carrier signal. If the desired DX is more than 20 dB below the dominant, you probably won't hear it even during stable midday conditions. Q-spoiling the Quantum Loop (15K resistor shunting the L-C tank) increases nullability of "pests" maybe to 30 dB, but the loop's usable sensitivity is compromised. At night, this is probably a non-issue (except in aurora), but during the day you need every bit of signal you can squeeze out of the small loop.

A second battery of tests at Harwich used two wires at a right angle (similar to the set-up employed at Plymouth). Daytime nulls were smooth ("like butter" some would say). WGAN-560 was easily dumped to reveal WHYN, near-equal WPRO and CFCY on 630 could each be brought up alone, much the same on 740 with WJIB and WGSM, WJTO on 730 was nulled a good 30 dB to pull out WACE over CKAC, strong WCLZ-900 was phased under the co-channel CKDH/WMVU mix, WZNN-930 easily surrendered to CFBC, and so forth. Nulling with two wires was decidedly better than any loop-versus-whip or loop-versus-wire scheme.

Once the MFJ-1026 is modified, it makes a very competent phasing unit that will undoubtedly bring the technology into the hands of many DXers who have not previously experienced its value in bringing new stations out of "the mud".

Mark, WA1ION

NEW LW STATION ON 189 KHZ

By Mark Connely, WA1ION

I got a bit of listening done last weekend from the Cape Cod area. After reading the Iceland-189 reports, I figured I should look for it. On Saturday night (16 AUG local; 17 AUG UTC), I received a signal on 189 with non-stop mellow pop music. It was one of the stronger longwave Trans-Atlantics, along with France-162, UK-198, Luxembourg-234, and Ireland-252. There were thunderstorms in New Jersey and Long Island (about 300 km / 180 miles to the southwest), so static levels on longwave were fairly high. Has anyone received positive ID material from the new 189 kHz station yet ?

NEW WLW PAGE

I invite you to take a look at my new WLW Transmitter page showing the historic WLW 500KW superpower transmitter along with 4 other 50KW transmitters of various vintages at the WLW transmitter plant in Mason, Ohio.

http://www.exit109.com/~jimh/wlw.shtml

Regards,
Jim Hawkins

SHORTWAVE SPY NUMBERS STATIONS

http://www.access.digex.net/~cps/numberTypes.html

We've all heard of the mysterious stations that recite random numbers in a variety of languages. Check out this page - you'll find it interesting and informative. Several of the stations mentioned offer recent schedules and audio WAV files of them in action.

Russian Merchant Ship Database

http://www.gem.net/~berri/jvpub/rmsd/toc.html

Utility monitors will enjoy this site where you can search Russian vessel registrations.

METRO FIRE RADIO SYSTEM

I came across this on USENET and thought that some of our listeners might be interested, especially so in light of the recent happenings of Ft Lee, NJ based "Breaking News Network." Breaking news on this follows later in the newsletter.

Hello all. I am a supervisor for Metro Fire Radio system. We are currently looking for new members to support our fire notification radio network. Our membership consists of fire/ems/law enforcement/ and other disaster related personnel. We all have a common interest in emergency services and like to know what's happening at all times. We currently operate on 4 repeaters in the business band 450-460's. Our primary notifications consist of working fires in the Bergen / Passaic / N.Hudson / Rockland / Essex / Union areas as well as multiple alarms in greater NYC. We also alert members of serious motor vehicle accidents and helicopter medevac jobs for photo opportunities.

We have a few news media agencies as members who rely on our info for their publications. The system is currently owned by the American Red Cross of Hackensack,NJ. The cost is $40 a year and this money goes to the maintenance of the repeaters which is costly to operate. You need to own your own UHF radio whether it be a portable or mobile. Anyone who's interested in radios and the emergency services or you're a news photographer / reporter, this is a radio system that will greatly benefit your hobby/profession.

Interested parties can either e-mail me at "fp351k@aol.com or fp351k@juno.com". Also, you can contact the American Red Cross at (201) 487-7470 and ask for Disaster Services and speak to either Mark or Jeff. Thank you and we look forward to hearing some new voices over the air.

Anthony, Metro 751/FPNJ351
FP351K@AOL.COM

KRACARS - THE FREEWARE ACARS DECODER

http://www.tardis.ed.ac.uk/~kr/

I would like to announce KRACARS, a FREEWARE ACARS decoder for the PC. Decoding is performed by connecting your scanner to the PC via the sound card. You will require a Sound Blaster Pro or Sound Blaster 16 (or compatible) sound card and a machine with at least a 486 (I haven't tested slower CPUs). KRACARS works under DOS and also under Win95 as a DOS application.

NEW TRUNK INFO SITE

http://web2.airmail.net/lblant1/trunked.htm

Hello everyone!!
I am planning on creating and maintaining a trunked

radio information homepage starting this week. With the recent advent of trunked radio and trunk tracking scanners, there does not seem to be a centralized location of information for trunked radio systems for the entire nation.

I'd like to ask (very nicely ;-) that everyone who has information for their local area -- could you forward me a copy for the creation of this page? I am looking for the following to add to this page for everyone's benefit.

1. Trunktracker talk group, fleet maps, and information for locations all over the U.S.

2. Trunktracker tips and techniques you would like to share.

3. Trunked system motorola system ID's, motorola talk groups, fleet maps, connect tones and other information. Motorola RSS code plugs (just for the information - the code plug itself wont be posted) Also GE EDACS related information.

I'll take any type of attachments (WP, Winword etc) including Web links. If you give me a http link ,please include permission for me to copy your information to this new page.

The new URL for this page will be (In service after Labor day or just before) :

http://web2.airmail.net/lblant1/trunked.htm

Keep in mind, this is not a commercial operation, there will be no advertising, nor will I be creating any sellable services. Contributors of information WILL be recognized for their work (unless you want to stay anonymous.) I just want to gather all this useful information for the benefit of the group and the hobby.

Send all contributions to:
lblant1@airmail.net -or- blantonl@hotmail.com

BREAKING NEWS NETWORK BUSTED!

As the newsletter was going to press, WCBS-TV announced the following story....

NEW YORK (AP) -- Three people and a company were charged with illegally intercepting pager messages to the mayor's office and to senior police and fire officials and relaying them to news organizations, prosecutors said today.

Breaking News Network of Fort Lee, N.J., was among those named in a federal complaint alleging mail fraud, conspiracy and violating the Electronic Communications Privacy Act.

U.S. Attorney Mary Jo White said the case represented the first prosecution of unlawful interceptions of messages sent to pagers. Such cases have led to increased concerns over the security of cellular telephones.

``Protect yourself and your privacy by avoiding the use of pagers and cellular phones for sensitive information,'' she said at a news conference.

The police department uses pagers to distribute information considered too sensitive to broadcast on police radios.

According to prosecutors, the sensitive information distributed by the company included the location of high-level officials, police department mobilizations, crime witnesses and injuries to law enforcement officers.

Investigators were tipped to the alleged scheme by an anonymous letter received in May.

Pager information has become valuable in the last few years since beepers began carrying word messages instead of just phone numbers, said Marvin Smilon, a spokesman for the U.S. Attorney's office. ``It's a wake-up call,'' Smilon said. Charges were filed against Jeffrey R. Moss of New York and Steven Gessman and Vinnie Martin, owners of Breaking News Network. If convicted, each could face five years in prison and a $250,000 fine per charge.

It was not immediately known what news organizations received the pager information.

The Associated Press uses BNN as a tip service.

``They beep us with things like traffic accidents, fires and police calls -- the type of information that usually comes off police radio,'' said Sam Boyle, chief of the AP's New York City bureau. ``It all had to be checked out before it could be used.''

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