

DX News

Serving DX'ers since 1933

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From the Publisher ... Lotsa good stuff in this summertime DXN ... in fact, you antenna enthusiasts are probably thinking that you're hallucinating! Have fun with your construction projects, and stay away from overhead wires that could light you up.

The NRC AM Log is sold out, but the *Night Pattern Book* is almost ready for publication; see p. 36 for more details.

Perhaps it's not a complete coincidence that the following two accounts almost coincide in time ... see p. 38 for an account of what it's like for one almost-legally-blind radio aficionado. And from Duane Fischer: "Today I received something I have never ever received in forty years of sending QSL reports to AM and SW stations. I got an audio cassette letter recorded by one of the station announcers (the report mentioned I am totally blind). Additionally, there was a printed copy of said letter verifying the reception of WLW. What a thoughtful surprise!"

Paul Kallinger ... From Steve Francis: "According to a posting on the alt.obituaries newsgroup, legendary XERF announcer Paul Kallinger died on Wednesday, May 30. He had been in failing health for some time.

"Many many many thanks for listening to powerful X-E-R-F in Ciudad Acuna, Coa-hueela, Mexxxxico; this is your good neighbor along the way, Paul Kallinger, saying thanks!"

Bandscan Web Page ... Mark Connelly has set up a new Web page with bandscan report information for a variety of locations: <<<http://members.aol.com/RockportMWDX/index.html>>>. The page includes AM, FM, and longwave scans, and Mark adds, "DXers are welcomed to send me their contributions for inclusion, or to start their own pages to which I can link.

GTG's ... See page 45 for information on the

August 31-September 3 NRC/DXAS convention in Pittsburgh. The IRCA/DecalcoMania convention will be in St. Louis August 24-26 at the Best Western Airport Inn; send an inquiry to host Mike Sanburn (mikesanburn@hotmail.com) for more info, or see the #24 DXN. WTFDA's convention will be in Boise July 27-29 at the Super Eight; for more information, contact Frank Aden at (WTFDA2001@aol.com) or check out page 23 in the #25 DXN. And Phil Bytheway will be hosting a DX Get-Together on June 30 from 2-10 pm at 9705 Mary Ave NW, Seattle WA 98117-2334. Bring radios, antennas, QSLs, etc., as well as your favorite junk food/beverage. You can warn Phil that you're on the way by calling 206-784-5145.

Loops ... The Minnesota DX club has set up an interesting page on loop antennas, including a chronology of loop history and even some construction details. Check it out at <<<http://www.frontiernet.net/~jadale/Loop.htm>>>.

DXN Publishing Schedule, Volume 68

Iss.	Deadline	Pub. Date	Iss.	Deadline	Pub. Date
28.	July 6	July 16	30.	Sept. 7	Sept. 17
29.	Aug. 3	Aug. 13			

DX Time Machine

From the pages of DX News:

50 years ago ... from the June 15, 1951 DXN: Cpl. Jack Rhea, Corpus Christi, TX relayed a request from KWBU-1030 for information from club members on the nighttime signal of WBZ at their locations; daytimer KWBU was planning on nighttime operation with 1000w.

25 years ago ... from the June 21, 1976 DXN: A number of DX'ers reported hearing R. Jumbo-545, Dominica, including Linda Brodsky and Mark Connelly.

10 years ago ... from the June 3, 1991 DXN: Dallas Lankford's article "High-Performance One-Foot Air Core Loop" was published in this issue, along with first impressions of the new Drake R8 receiver.

AM Switch

Jerry Starr w8jv@yahoo.com
 c/o WHOT Radio
 4040 Simon Road
 Youngstown, OH 44512-1320

Status changes in AM stations, supplied by the FCC and listeners

CALL LETTER CHANGES

	<u>Old call</u>		<u>New call</u>
550	WICE	RI Pawtucket	WDDZ
570	WWRC	MD Bethesda	WTNT*
620	KSTR	CO Grand Junction	KJOL
870	WLAM	ME Gorham	WMTW
880	WVLR	VA Moneta	WCQV
890	*New	CA Arroyo Grande	KLFF
970	KZPM	CA Bakersfield	KZTK
1000	WDBE	FL Jupiter	WDBF
1050	KBBV	CA Loma Linda	KCAA
1110	WKEP	GA Calhoun	WEBS*
1230	KREZ	NM Alamogordo	KRSY*
1260	KTTS	MO Springfield	KTTF
1270	CHWK	BC Chilliwack	CFSR
1320	KNRQ	OR Eugene	KSCR
1350	KCKC	CA San Bernardino	KEWS
1420	WALQ	NC Wilson	WVOT
1430	WWLO	FL Gainesville	WTMN
1450	KSPA	CA Escondido	KFSD
1470	WZOU	ME Lewiston	WLAM
1500	WDDZ	IL Zion	WPJX
1510	WNNN	NJ Salem	WFAI

*Notes: WWRC/WTNT change was incorrectly shown last issue as Washington, DC. WKEP/WEBS we believe to be a set-aside with WKEP not being used on the air. KREZ/KRSY change occurred last year but as shown in V-67 I-27 the FCC released this call change with the calls reversed. Thanks to sharp-eyed member Art Blair for finding this.

APPLICATIONS FOR NEW STATIONS

540 WY Pine Bluffs: 800/500 U4 (existing application, change in powers)

GRANTS FOR NEW STATIONS

890 TX Frankston: 400/250 U4
 1090 FL Alachua: 3000/250 (1000 CH) U7
 1440 NY Gloversville: 800/500 U4
 1450 CA Blue Lake: 250/250 U1
 1480 VA Glen Allen: 5000/1700 U4

APPLICATIONS FROM EXISTING FACILITIES

550 WSAU WI Wausau: 15000/20000 U4
 850 KJON OK Anadarko: 5000 D3
 980 WHSR FL Pompano Beach: 5000/2200 U4
 1020 KOTD NE Plattsmouth: 50000/1400 U4
 1130 WRKY KY Murray: 2500/1500 U4
 1150 WGBR NC Goldsboro: 5000/800 U4
 1170 WKPA VA Lynchburg: 4700/34 U1
 1190 WXBH NY Cobleskill: 1000/20 (1000 CH) U1
 1270 WXYT MI Detroit: 5000/48000 (5000 CH) U2 (would use 9 towers at night)
 1350 CKCI BC Parksville: to 88.5 FM
 1520 WCHE PA West Chester: 1000 (500 CH) D1 (re-application)
 1580 WKUN GA Monroe: 1000/17 U1
 1590 WOKX NC High Point: 1300/26 U1



GRANTS TO EXISTING FACILITIES

700 KMJY WA Newport: 10000/600 U2
 890 WBAJ SC Blythewood: 40000 (14000CH) D1
 900 WCOR TN Lebanon: 5000/136 U1, relocate transmitter site
 910 WHSM WI Hayward: 5000/70 U1
 1120 WKQW PA Oil City: 930 D1
 1220 KCCS OR Salem: relocate transmitter site
 1260 KJAZ CA Beverly Hills: 25000/750 U4
 1320 WLEE VA Richmond: 5000/1500 U4
 1340 CJAN PQ Asbestos: to 99.3 FM
 1360 WWLG MD Baltimore: to 1370 kHz with 21000/6000 U4
 1430 WGFS GA Covington: 3900/212 U1
 1450 WBHF GA Cartersville: relocate transmitter site
 1470 WLCR KY Shepherdsville: 1500 D1
 1490 KWAB CO Boulder: 870/870 U1
 1490 KQDS MN Duluth: relocate transmitter site
 1510 KJQI CA San Rafael: 8000/200 U4, city of license to Piedmont, CA

OTHERNESS

580 KSAZ AZ Marana: CP for 5000/390 U2 is on
 620 WKHB PA Greensburg: CP for 5500/50, relocate transmitter, city of license to Irwin, PA - is on
 660 KGDP CA Orcutt: application for 50000/7000 U4 is DISMISSED
 710 *App MI Deep River Township: application for new station DISMISSED
 760 WCHP NY Champlain: CP for 35000/11 U4 is on
 780 WZZX AL Lineville: CP to relocate transmitter, taller tower is on
 840 CJXX AB Grande Prairie: CP to move to 93.1 FM is on
 950 WAKM TN Franklin: CP for 5000/80 U1 is on
 990 *App MI Lake Township: application for new station DISMISSED
 1010 CKXD NF Gander: CP to move to 98.7 FM is on
 1080 WMVR OH Sidney: station is SILENT
 1120 *App MI Reed City: application for new station DIMISSED
 1170 CKGY AB Red Deer: CP to move to 95.5 FM is on
 1190 WECC GA St. Marys: CP for 1800 D1 is on
 1190 KRFT MO Desoto: silent station is ON THE AIR
 1220 CJOC AB Lethbridge: CP to move to 106.7 FM is on
 1250 KDEI TX Port Arthur: silent station is ON THE AIR
 1310 KOCR MO Joplin: station is SILENT
 1310 KTCK TX Dallas: CP for 9000/5000 U4 is on
 1340 WTYS FL Marianna: CP for 540/540 U1, relocate transmitter is on
 1340 WCMI KY Ashland: CP for 700/700 U1, relocate transmitter is on
 1340 KXEO MO Mexico: CP for 960/960 U1 is on
 1390 KKSO IA Des Moines: station is SILENT
 1400 KVLA LA Vidalia: station is SILENT
 1430 *App MI Mackinaw City: application for new station DISMISSED
 1450 WTAL FL Talahassee: silent station is ON THE AIR
 1470 *App MI Saint Ignace: application for new station DISMISSED
 1510 KSSP AR Greenwood: license CANCELLED, call DELETED
 1550 WMRE WV Charles Town: silent station returned to the air for several days and then fell silent again; rumored to have had a transmitter fire too severe to repair
 1580 WNTF FL Bithlo: CP for 2100 D1 from this city of license is on
 1580 KFQC IA Davenport: license CANCELLED, call DELETED
 1590 WABV SC Abbeville: station is SILENT for "major technical upgrade"
 1600 WAIA KY Beaver Dam: station is SILENT, will return in June
 1600 KOKE TX Pflugerville: CP for 5000/700 U4 is on

THANKS: Bill Hale, Ed Krejny, Shawn Axelrod, Dave Braun, Les Johnson, and MSJ

73 and Good DX, Jerry Starr & Buffalo K. Foonman

Jerry & BK

Domestic DX Digest

West: Bill Hale phantom 2@eaze.net

6124 Roaring Springs Drive - North Richland Hills, TX 76180-5552

East: Michael Shaw mshaw002@tampabay.rr.com

455 Alt. 19 S., Apt. 176 - Palm Harbor, FL 34683-5931

(Division line is between East and Central time zones)



DX Catches in the U. S. and Canada, with 24-hr. ELT

DDXD-West

MEDIUM WAVE RAMBLINGS

- Welcome to DDXD-West. We have a treat for you TIS fan-atics this issue. And a little side order of DX, too.
- Apologies to Russ Edmunds for mis-computing a Graveyard DX mileage. Correct data appears later on . . . plus another new GY record from Russ.
- Brother Steve Francis queries the status of silent periods: "WOAI-1200 San Antonio was on during their former silent period (0400-0600 Sundays) with back-to-back Roy Masters broadcasts, so the last known surviving SP east of the Pacific time zone is gone. Westerners, does KDWN-720 still go off every Monday morning? Ditto KCBS-740 on Sunday morning? They may be the only ones left." If anyone knows about KDWN and/or KCBS . . . let us know?!? Tim Hall, fresh back from a trip to the desert, says: "DX-wise, this was a much better trip than most of my recent business trips and vacations. My new Quantum QX Loop performed very well in isolated locations without too many locals (it doesn't work that so well in locations like San Diego or Tucson where there are lots of high-powered local stations, as it is prone to smearing false signals across the dial in those congested markets). Conditions in Page, AZ were fantastic. Signal quality was reminiscent of the 70s or 80s. Even on the car radio at sunset, signals were livelier than I have heard in years. I was in a basement hotel room but had some of the best reception I have had in years. It's sad to see so many TIS stations disappearing each year, but I was happy to discover 4 or 5 new ones this time. If you have any fresh TIS info that you haven't seen published, please get it to a club editor or list server! The FCC web site is missing tons of stations, and most other lists and web sites are getting very stale. We TIS hunters need your help!"; Gary Jackson sends word that he "Talked to head of Cal Trans today (5/23/01). They have a new Super TIS/HAR going on the air in Oakland on 840 kHz and another in Yreka, CA on 1610 kHz. Oakland due this week! Yreka soon."
- Next deadline for DDXD-West is July 3rd at 1800 CDT. Thanks for listening!!

REPORTERS

- SA-MB Shawn Axelrod Winnipeg Icom ICR-70 & Drake R8 + 4 Foot Unamplified Box Loop / Quantum Loop / 145 Foot Outdoor Wire / 100 Foot Indoor Wire, MIJ 1026 Phasing Unit <saxelrod@mb.sympatico.ca>
- CD-TX Chuck Dobbins Alpine DX-160 + Palomar Amplified Loop or Sony ICF-7600 barefoot
- PG-CO Pat Griffith Denver Drake R-8 and Kiwa Loop <AM-DXer@webtv.net>
- TRH-CA Tim Hall Chula Vista ICF-2010, KIWA Loop <halls@inetworld.net>
- TRH-CA1 Tim Hall on the road in CA Toyota car radio
- TRH-AZ1 Tim Hall on the road in AZ Toyota car radio
- TRH-AZ2 Tim Hall Ajo ICF-2010, Quantum QX Loop
- TRH-AZ3 Tim Hall Tucson ICF-2010, Quantum QX Loop
- TRH-AZ4 Tim Hall Tombstone ICF-2010, Quantum QX Loop, Toyota car radio
- TRH-AZ5 Tim Hall Chinle ICF-2010, Quantum QX Loop
- TRH-AZ6 Tim Hall Page ICF-2010, Quantum QX Loop, Toyota car radio
- TRH-AZ7 Tim Hall Grand Canyon North Rim ICF-2010, Quantum QX Loop, Toyota car radio
- TRH-AZ8 Tim Hall Kaibab Lodge, AZ ICF-2010, Quantum QX Loop, Toyota car radio
- TRH-AZ9 Tim Hall Grand Canyon South Rim ICF-2010, Quantum QX Loop, Toyota car radio
- TRH-AZ10 Tim Hall Flagstaff, AZ ICF-2010, Quantum QX Loop, Toyota car radio
- TRH-NM1 Tim Hall on the road in NM Toyota car radio
- TRH-NM2 Tim Hall Bear Mountain Lodge (3 mi NNW of Silver City), ICF-2010, Quantum QX Loop



960 Kc.

- TRH-UT1 Tim Hall on the road in UT Toyota car radio
- GJ-CA Gary Jackson Sacramento FRG-8800 + Kiwa Loop
- CR-IL Christos Rigas Wood Dale Sony ICF-2010 <crigas@birinc.com>
- JJR-WI John J. Rieger South Milwaukee GE Superadio III w/Terk AM1000 loop <johnjrieger@webtv.net>
- JTR-OK John Reed Ponca City Sylvania R1414/URR with 100' wire, modified KIWA loop, MFJ phaser <jreed@ponca.net>
- KR-AZ Kevin Redding Mesa CCRadio, barefoot <amfntvdx@qwest.net>
- KR-AZ1 Kevin Redding Tonto Forest just east of Mesa Kenwood R-1000 with a Signal Magnet 2 antenna <lwdxer@juno.com>
- Ed.-TX Editor North Richland Hills

STATION NEWS & NOTES

- 560 KLZ CO Denver - 5/21 0650 - Format swap with KLVZ took place this morning. Changed to 50s & 60s oldies. Slogans are Fabulous and K-Love. ID at 0652: Fabulous Five-Sixty, K-Love". (PG-CO)
- 960 KOVO UT Provo - 5/22 2355 - Fox Sports programming, KOVO Provo, Sports 9-60. Format change; ex: Spanish. (TRH-AZ8)
- 1180 (KYET) AZ Williams - 5/24 1500 - Off the air as we drove down US 180. 5/25 1400 Still off as we drove through Williams. (TRH-AZ1)
- 1220 KLVZ CO Denver - 5/21 0650 - Format swap with KLZ took place this morning. Changed to 40s, 50s, and 60s oldies. Slogan is Legends. ID at 0733: Your Legends station, Legends Twelve-Twenty, KLVZ. (PG-CO)
- 1240 KRAL WY Rawlins - 5/12 1137 - Heard KIQZ-KRAL dual ID on FM 92.7 - but format on this simulcast has changed to CHR. (DS-TN)
- 1450 WDXR KY Paducah - 5/12 1247 - Noted ad for St. Louis Cardinals on ESPN Radio AM 1450 while listening to WCBF-FM 102.1. (DS-TN)
- 1660 KWSJ KS Kansas City - QSL address is: Doris Newman, GM 1734 East 63rd Street, Suite 600 Kansas City, MO 64110. Hope they got my tape. (GJ-CA)

UNIDs and UNID HELP

- 620 UNID ?? - 5/25 0035 - Jingle: The best music . . . 92.3 into 70s oldies. (TRH-AZ10)
- 1230 UNID ?? - 5/14 2218 - San Antonio Spurs basketball play-by-play, faded before I could get an ID. (TRH-AZ4) [I think KERV-Kerrville is on that net - Ed.]
- 1230 UNID ?? - 5/19 2255 - Weather, then 12-30 KCVN?. (TRH-AZ5)
- 1230 UNID ?? - 5/23 0916 - Ad for American Tile on Grand(?) Ave. (TRH-AZ8)
- 1240 UNID ?? - 5/14 2233 - Right here on KSLX(?). Probably KSOX-TX, which gets out well and would be a GYDXA record from this distance. Sure wish I'd had the tape recorder running at this moment! (TRH-AZ4)
- 1240 UNID ?? - 5/14 2253 - ID sounded like KPLX. Soon faded. (TRH-AZ4)
- 1240 UNID ?? - 5/17 2230 - Spanish promotional announcement gave phone number 842-1240. Can't find a match in newest NRC log or on the web. (TRH-NM2)
- 1400 UNID ?? - 5/14 2207 - Fox Sports Radio affiliate noted from Tombstone and from several other cities on our trip. (TRH-AZ4)
- 1450 UNID WY - 5/22 0830 - DJ mentioned Good morning, Wyoming. (TRH-AZ7); also 5/23 0859 - Local news about what the last census revealed about Wyoming residents. Let's look at the National Scene from ABC news. It's 7:00. After news, listed two sponsors including Subway (847-2353) and another business (847-3653). Suspect KVOW, but the phone prefixes don't match KVOW or KBBS. (TRH-AZ9)
- 1480 UNID ?? - 5/15 2356 - Fair, with Sporting News Network programming. Tried to get the station affiliate list from their web site, but it does not appear there. An e-mail netted me the response: We don't release the complete affiliate list to the public. Any idea who carries this network on 1480 kHz? (CR-IL)
- 1600 UNID TX - 5/15 2225 - Radio Romantica, tu música de hoy, PSAs in Spanish from the Texas Department of Health. Not sure which of the Texas stations this would be. (TRH-AZ4)
- 1610 UNID ?? - 4/15 2055 - Financial talk call in show Financial Focus under KALT. (JTR-OK) [Tough one. The only (regular) 1610 is KALT - Ed.]
- 1640 UNID ?? - 5/12 2340 - Radio Disney noted // 1580, 1680, 1690. Does KDIA include Disney in the random mess it calls a program schedule? (TRH-AZ2)



DX AND EQUIPMENT TESTS

930 KAPR AZ Douglas - 5/16 0926 - Noted running OC this morning and well into the afternoon. Back on the air by mid-afternoon; noted on car radio from Willcox with rock oldies and 9-30 AM *the Eagle*. (TRH-AZ4,AZ1)

TIS & OTHER STUFF

530 KOP737 AZ Grand Canyon South Rim - 5/21 2337 - Information on shuttle bus service for Hermits Rest and Yaki Point, lots of hype for new Canyon View Information Plaza near Mather Point. Easy to log from the other side of the canyon. If you have this station listed on 1610, scratch that listing, as the station moved to 530 about 5 years ago. (TRH-AZ7)

530 (KGD50) AZ Jacob Lake - 5/21 1700 - No station noted at Jacob Lake, and no signs posted. We were in the area for 2 days. Suspect this station has been defunct for many years. (TRH-AZ1)

530 (KNJX973) AZ Kingman - 5/25 2030 - We drove from one end of Kingman to the other, and no TIS noted this evening or the next morning. (TRH-AZ1)

530 (KIF794) AZ Show Low - 5/19 1100 - No sign of the TIS listed for Apache - Sitgreaves National Forest when we were in Show Low. (TRH-AZ1)

530 (TIS) AZ Tucson - 5/13 1800 - This is our second trip to Tucson with no TIS noted on 530. I suspect this one (listed as "Pima County Parks") is defunct. Can any AZ members confirm? (TRH-AZ3)

530 WNXE619NM Silver City (area) - 5/17 1715 - Message by Ricardo Montalban mentioned the mining history of this part of New Mexico, and was oriented toward Silver City. There are listings for stations in Central and Silver City which must refer to the same station. First noted weak signals on the car radio in San Lorenzo. As we returned to Silver City, signal strength increased but not as much as you'd expect for a 10-watt local station. May be operating at reduced power, or located significantly S/SE of town. (TRH-NM1) [Ricardo also does audio the 530 TIS at White Sands National Park - Ed.]

530 (TIS) NM Lordsburg - 5/16 1920 - Noted OC at the visitor information center in Lordsburg. (TRH-NM1)

530 UNID ?? - 5/20 1530 - From Mexican Water, AZ, and into Utah on US 191, we noted a seemingly low-power station running non-stop hymns. Possibly a local church broadcast? (TRH-AZ1/TRH-UT1)

870 WP1V413 IL Cary - 5/15 1015 - With fair signal while driving through Algonquin, Illinois. Municipal information repeated over and over along with the following ID: *You are listening to the Cary Radio Information System, CRIS AM 870, WP1V413, the Voice of Cary*. The phone number 639-0003 was given for additional information. (CR-IL)

1610 (TIS) AZ Cameron - 5/23 1530 - Noted signs along US 89 for a new Grand Canyon TIS near Cameron. Station is not on the air yet. A similar station has recently come on the air in Valle, AZ, for tourists approaching from the south. (TRH-AZ1)

1610 (KGD49) AZ Eldon - 5/24 1700 - No TIS noted as we headed north out of Flagstaff on US 89 past the Eldon area. It seems like all of these old Forest Service stations with "KGD—" calls are off the air, if they were ever on. (TRH-AZ10)

1610 KNNS750 AZ Flagstaff - 5/24 1545 - Great signal, already loud 10 miles northwest of Flagstaff. General info about how to enroll at Northern Arizona University, plus specific information for people attending the graduation ceremonies this weekend. (TRH-AZ10)

1610 KOP738 AZ Grand Canyon Desert View - 5/22 1212 - Female tape loop noted on car radio with information on the Desert View Watchtower area. (TRH-AZ7)

1610 (KOP737) AZ Katherine Landing - 5/26 1200 - Not noted from Oatman, AZ, in the mountains over Bullhead City, but there's no guarantee I could hear it from here it it were on. (TRH-AZ1)

1610 KOJ758 AZ Navajo National Monument - 5/20 1752 - New TIS noted for Navajo National Monument. Gets out well. Noted from Kayenta on US 160 with tape loop about emergency services, roadside services, and avoiding black bears. (TRH-AZ1)

1610 KOJ778 AZ Page - 5/13 0759 - TIS at Glen Canyon NRA really gets out. Noted from Ajo with man/woman tape loop on boating safety (later in the week, this mes-

sage was replaced by a more traditional TIS message with only a female voice). Note: Although this station has been reported as being in Utah, it is actually in Page, AZ. (TRH-AZ2); also on 5/15 0007 - logged from Tombstone, AZ; (TRH-AZ4) also on 5/17 0734 - Logged from New Mexico, over unID station mentioning US 89 visitor center. (TRH-NM2)

1610 (KOC734) AZ Painted Desert - 5/19 1830 - No TIS noted at the North entrance of Petrified Forest NP. No signs up. Presume this station is defunct. (TRH-AZ1)

1610 KOJ794 AZ Pipe Springs National Monument - 5/21 1600 - New TIS with tape loop by woman mentioning Kaibab Paiute Indians, the Arizona Strip, ranger guided tours of ranch house. Monument is administered by the Zion Natural History Association, so it would be very easy to confuse this station with one of the Zion National Park stations. First noted at Kanab, UT, good at Fredonia, and audible for a while on US 89A. (TRH-UT1/AZ1)

1610 (KOC733) AZ Rainbow Forest - 5/19 1430 - No TIS noted at the South entrance of Petrified Forest NP. No signs up. Presume this station is defunct. (TRH-AZ1)

1610 TIS AZ Valle - 5/24 1400 - New TIS: *Grand Canyon Radio* for visitors entering Grand Canyon National Park from the south. Located at the junction of US 180 and Arizona Highway 64 in Valle. Male voice on tape loop, advises people to book rooms and campsites early in the day as they will not last. (TRH-AZ1)

1610 KOJ793 AZ Why - 5/12 1920 - New TIS at Organ Pipe Cactus National Monument. Transmitter seems to be in Why, near the north end of the monument, as the signal gets out well from that point but is weaker at the visitor center near the south end of the monument. Mentions keeping your speed to 55 MPH on Highway 85, and talks about the two main dirt roads for viewing the cactus. I need to check my tapes, as there is a chance I may have logged this one from home and not known what it was. (TRH-AZ1)

1610 (KMC478) CA Imperial Sand Dunes - 5/26 1815 - No TIS noted at this location when we drove through the area, and no signs for one. I believe this station is defunct (in fact, from my travels in the last two years, I'd say the entire series of Department of the Interior stations with "KMC" calls are all gone). (TRH-CA1)

1610 (KMC483) CA Vidal - 5/26 1630 - No TIS station noted at Vidal Junction or the town of Vidal itself. I believe this station is long gone. (TRH-CA1)

1610 (KMC426) CA Yuha - 5/12 1250 - No TIS station active as we drove through the area, and no signs. I believe this station is defunct. (TRH-CA1)

1610 TIS CA South San Diego - 5/12 0830 and 5/26 2150 - The scratchy pest at the San Ysidro border crossing is moving to 1700 kHz, where they will do much less damage. Existing signs are being changed, and several new signs have been added along I-5, I-805, and CA-905. The new station will deliver traffic information when lights on the new signs are flashing. (This is odd, as there is never a wait to get into Mexico, but there is often a 2-hour wait to come back into the US; the main purpose of this station is to warn people not to bring guns into Mexico, as several dozen morons get imprisoned in Tijuana each year for doing this). For now, the station remains on 1610 even though the signs have changed. (TRH-CA1)

1610 KOJ786 UT Zion National Park - 5/22 2254 - Noted three stations from Zion National Park tonight. The first one, for visitors entering via Utah Highway 9, had a tape loop with a female announcer who talked about the new shuttle bus service and escorts for large vehicles. It mentioned to tune into 1610 again about 16 miles up the road. The second station, which was weaker, seemed to be that station. The third station was a tape loop with a male voice saying *This is a test broadcast for Zion National Park, 16-10 AM, 1-2-3*. At least one of these stations appeared to be running 100-200Hz high. (TRH-AZ8) also on 5/24 0107 - The first station was audible at the South Rim, despite the fact that several other stations are closer. (TRH-AZ9)

1680 "KJACK" AZ Flagstaff - 5/24 1550 - Student radio station for Northern Arizona University with mindless music. Slogan *K-Jack, the alternative and Student voice, student choice*. Gets out very well. Seems like 10 watts with very clean audio. Thanks Doug Martin for tip. (TRH-AZ10)



ckx
RADIO 1150



590 **KSZZ CA San Bernardino - 5/11 0758** - With ToH ID and into banda music. Another ID at 0803 as *Radio Tricolor, La Mexicanissima*. (KR-AZ)

620 **CKCK SK Regina - 5/21 0332** - Rock oldies; *More oldies and less talk. Very cool . . . 62 Cool*. (TRH-AZ6)

660 **KGDP CA Orcutt - 5/8 0500-0540** - Under KTNN in a tight null, with preaching program *Through the Bible* with J. Vernon McGee and then a program by Chuck Swindall. (KR-AZ)

770 **KKOB NM Albuquerque - 5/18 0811-0822** - Larry Ariens and the Morning Show, etc. IDs as *News Radio 770 KOB*. Morning twilight skip conditions at 0725 today). (CD-TX)

790 **KFYO TX Lubbock - 5/18 0822-0840** - Sports report, weather and CNN News. IDs as 790 *KFYO*. Another twilight skip reception. (CD-TX)

860 **KKOW KS Pittsburg - 5/18 0658** - ID: 86 *KKOW, Pittsburg-Joplin* into CBS News. (TRH-NM2)

900 **CKBI SK Prince Albert - 5/21 0322** - ID, ad for battle of the bands at a local nightclub. *Song after song after song, 900, CKBI*. (TRH-AZ6)

950 **KNFT NM Bayard - 5/14 0000** - Noted with Sports Byline USA, ID "The Sports Leader of the Southwest, AM 9-50, KNFT." Mixing with *KKFN-CO*. (TRH-AZ3)

960 **KNDN NM Farmington - 5/22 2259** - Sign off announcement. Station uses PSSA but not night power. They are not getting out well lately. (TRH-AZ8)

980 **CKRM SK Regina - 5/21 0023** - Good, with *American Country Countdown*, local ads, *Saskatchewan's home for country music, 9-80, CKRM*. (TRH-AZ6)

1020 **KINF NM Roswell - 5/17 0844-0903** - *America In The Morning* program, ABC News, and lots of local ads. Faded out at 0903. (CD-TX)

1090 **KKYN TX Plainview - 5/15 2256-2325** - Texas Rangers vs Cleveland Indians MLB. Good signal for reported 250 watts. Report sent, but past attempts have been futile! (CD-TX)

1100 **KNZZ CO Grand Junction - 5/26 2332-0015** - Junior College World Series game between Spartanburg, South Carolina and Dixie State, Utah. SS QRM and KFNZ (I think). (CD-TX)

1160 **KENS TX San Antonio - 5/17 0820** - Under KSL with *Kens Radio News*, stock prices, business news, etc. (TRH-NM2)

1190 **KTRA TX Dallas - 5/19 0822-0841** - Morning variety program with many promos. IDs as *Extra Sports 1190*. Fox Sports Network. Morning twilight fadeout at 0841 (CD-TX)

1230 **KRSY NM Alamogordo - 5/16 0857** - Listed as KREZ, but I heard at least two KRSY IDs. CNN News on the hour. (TRH-AZ4)

1230 **KOTS NM Deming - 5/16 0854** - C&W, Ap news, and station promos. Station really gets out well now, seems like they've improved their equipment. Afternoon drive DJ broadcasts in hilarious *Spanglish*, darting back and forth between English and Spanish several times in the same sentence. (TRH-AZ4)

1230 **KOTS NM Deming - 5/24 2222-2250** - C&W music, local announcements, *KOTS Weather*, and simply *KOTS* between records. Adjacent to local 1240-KVLF. Report sent. (CD-TX)

1230 **KPSA NM Roswell - 5/14 2250** - Music in Spanish, but some ads were in English, including one for *Roswell Recycling*. (TRH-AZ4)

1240 **KNRY CA Monterey - 5/21 0804** - GOS request program, *You're listening to the Early Morning Gospel Train on AM 12-40, KNRY*. I didn't realize they ran GOS in the early morning, but a quick visit to the station's web site confirmed it. (TRH-AZ6) also 5/24 0759 - *Broadcasting from Cannery Row, this is KNRY, Monterey*. (TRH-AZ9)

1240 **KRDO CO Colorado Springs - 5/14 2302** - Colorado Springs Sky Sox baseball vs. Omaha. (TRH-AZ4)

1240 **KSLV CO Monte Vista - 5/20 0830** - Long string of PSAs, Your hot country station, *KSLV*. (TRH-AZ5)

1240 **KMHI ID Mountain Home - 5/21 0237** - Faded up for quick ID. Outstanding conditions to the north tonight. (TRH-AZ6)

1240 **KWIK ID Pocatello - 5/20 0005** - Rush Limbaugh promos, News Radio 12-40 *KWIK*. (TRH-AZ5) and 5/21 0000 - On top of channel at Page, Arizona as well.

LA MAISON DE LA RADIO

6FGT 127

1411 Deseret Avenue
Albuquerque, NM 87107

(TRH-AZ6) and 5/22 0634 - Same at north rim of the Grand Canyon. (TRH-AZ7)

1240 **KEVA WY Evanston - 5/24 0920** - *Hot country and your all-time favorites, KEVA Evanston*. (TRH-AZ9)

1260 **KWYR SD Winner - 5/23 2358** - Ad for Winner Regional Nursing Home, *Country 12-60, KWYR, Winner*. (TRH-AZ9)

1260 **KPOW WY Powell - 5/21 0100** - *Your official station for today's new country and your all-time favorites, KPOW, Powell, Wyoming* into ABC News. (TRH-AZ6)

1270 **KDJI AZ Holbrook - 5/4 2342-2400** - ESPN Radio, IDs as *Sports Radio for Northeast Arizona, KDJI*. Another good signal for reported 130 watts. (CD-TX)

1290 **KWLS KS Pratt - 5/22 0716** - Ad for Cattleman's Bank in Pratt, C&W music, and IDs. (TRH-AZ7)

1290 **KWFS TX Wichita Falls - 5/2 2256-2319** - Texas Rangers vs Detroit Tigers MLB. Good signal for reported, and verified, 73 watts. (CD-TX)

1290 **KWFS TX Wichita Falls - 5/22 0654** - Ad for used car dealer in downtown Wichita Falls, into Texas State Network News. Would have been very hard to distinguish *KWFS-TX* from *KWLS-KS* without clear copy of those local ads. (TRH-AZ7)

1300 **CJME SK Regina - 5/21 0358** - *CJME, News talk 1300, the information station* into ad for Olympic curling trials. (TRH-AZ6) and 5/22 0046 - Signal was also good at the North Rim of the Grand Canyon the next night with promo for charity golf tournament. (TRH-AZ7)

1300 **KROP CA Brawley - 5/19 0747** - Classic C&W, playing George Jones *The Corvette*. ID as *When you want it real, real, bad, KROP 1300*. Probably one of the worst slogans I have heard. This one was possible because this morning *KXAM* was running OC. Wasn't this *KKSC* not too long ago? (KR-AZ)

1320 **KOLT NE Scottsbluff - 5/22 2240** - Minor league (maybe American Legion?) baseball or softball, *Zephyrs vs Cheyenne*. ID, ad for *Taco Town* in Scottsbluff. (TRH-AZ8)

1320 **KXYZ TX Houston - 5/20 0712** - (Spanish) Ad for prepaid phone card, *13-20 Houston* slogans, IDs. Noted on several nights around AZ and NM. Used to be a regular catch in CA in the 70s. (TRH-AZ5)

1350 **KABQ NM Albuquerque - 4/4 2300** - In SS, with ToH ID in EE and the slogan *La Nueva Mariachi*. (KR-AZ)

1360 **KBUY NM Ruidoso - 5/21 2205-2215** - Oldies tunes (I love 'em). IDs as *Oldies 1360 KBUY*. After 2015 (local) signal good; after that it was gone. Power/antenna change? (CD-TX) [There's no antenna change here, just a drop from 5000 to 199 watts - Ed.]

1400 **KRLN CO Canon City - 5/20 0821** - Local ads for Canon City businesses, ID. (TRH-AZ5)

1400 **KWUF CO Pagosa Springs - 5/22 0853** - C&W; 106.3 Country from beautiful Pagosa Springs, Colorado. (TRH-AZ7)

1400 **KKTL WY Casper - 5/21 0300** - You're listening to Coast-to-Coast AM on *KKTL AM 14* hundred, the talk station. (TRH-AZ6)

1400.3? **KCHS NM Truth or Consequences - 5/16 0912** - C&W, lots of local ads, Ap News. Station is in Sierra County, and many businesses had "Sierra" in their names. City is almost always referred to as "T or C" in ads and announcements. Someone recently reported that they were on 1400.28. My equipment is not as precise, but I'd have to agree as the -2010 had them on 1400.3. Causes a het all over this part of the country. (TRH-AZ4)

1420 **KULY KS Ulysses - 5/21 0309** - *Hometown Radio KULY, the best of the new and the old* into C&W. (TRH-AZ6)

1440 **WLXN NC Lexington - 5/26 0445** - With a talk program, not sure which one, under *Star14-40*, then clear *14-40 WLXN* ID. New!! (SA-MB)

1440 **KMED OR Medford - 5/21 0744** - This is the #1 place in Southern Oregon where the original hits are played. . . 14-40, *KMED*. (TRH-AZ6)

1440 **KDNT TX Denton - 5/25 0100** - ID in Spanish *Esta es KDNT, 1440 AM, Denton - Fort Worth*. (TRH-AZ10)

1440 **KELG TX Manor - 5/17 2224** - Spanish/English ad for Memorial Day Weekend events in downtown Round Rock. *Austin's #1 Tejano music station, KELG*. (TRH-NM2)



CKWA Radio
Box 2470
Slave Lake, Alberta
T0G 2A0

1450	KTIP	CA	Porterville - 5/22 0000 - Bakersfield minor league baseball, local ads including <u>Farmers Tractor & Equipment Company</u> . (TRH-AZ7)
1450	KVSI	ID	Montpelier - 5/21 0834 - Local ads, Idaho farm programming. (TRH-AZ6) also 5/22 0825 - Also on top at sunrise at the North Rim. (TRH-AZ7)
1460	KLTC	ND	Dickinson - 5/21 0007 - Promo for morning show . . . on KLTC, <i>Real Country</i> into C&W music. (TRH-AZ6)
1470	KUTY	CA	Palmdale - 5/22 2215 - <u>Lancaster Jethawks</u> baseball coverage in English. Format change from Spanish? Noted the next 2-3 nights from other AZ locations as well. (TRH-AZ8)
1470	KEAN	TX	Abilene - 5/17 2247 - Weather promo during K-105 simulcast. (TRH-NM2)
1490	KMET	CA	Banning - 5/20 0751 - C&W tunes from the 80s. <i>Classic Hit Country from 14-90 KMET</i> . (TRH-AZ5)
1490	KCID	ID	Caldwell - 5/21 0151 - Local ads, promo for job opportunities at <u>Journal Broadcasting</u> . (TRH-AZ6)
1490	KZZN	TX	Littlefield - 5/23 2239-2249 - Fade-in, with <i>Great American Music</i> , 1490 KZZN into <u>Don Gibson's Say It Again</u> . Tornado watch in effect tonight; severe weather report given. (CD-TX)
1490	KZZN	TX	Littlefield - 5/16 2207 - <i>You're listening to KZZN, AM 1490, the best in music, news . . . great American music station</i> . Noted often the two nights I was here. (TRH-NM2)
1510	KFNN	AZ	Mesa - 4/29 0900-0914 - National news and stock market report. Into call-in show. Morning twilight fade-out by 0914. Report sent; verie received in nine days. (CD-TX)
1510	KMND	TX	Midland - 5/3 2130 - Financial news, talk with call ID. New here. (JTR-OK)
1510	KMND	TX	Midland - 5/17 0825 - Community calendar for Odessa area. (TRH-NM2)
1540	KDYN	AR	Ozark - 4/12 2030 - Weak and fading. Arkansas news; new here. (JTR-OK)
1540	KZMPp	TX	University Park - 5/27 2318 - Under XEHOS <i>La Poderosa</i> . This station is apparently // to 101.7 in Ft. Worth (Azle) and going by <i>Radio Tricolor</i> and <i>La Mexicanissima</i> . They play mostly ranchera, some banda and little nortena. (KR-AZ)
1540	KEDA	TX	San Antonio - 5/27 2330 - Under XEHOS and KZMP with clear ID. (KR-AZ)
1550	KUAT	AZ	Tucson - 5/1 0900-0915 - NPR News, local and state news items. <i>I'm Robert Rathport for KUAT-KUAZ News into Morning Edition</i> . (CD-TX)
1570	KPRO	CA	Riverside - 5/24 0754 - <i>Inspiration Radio for the Inland Empire</i> . Their directional pattern is working; they are virtually inaudible at home, but blast into Northern Arizona. (TRH-AZ9)
1590	KGAS	TX	Carthage - 5/13 2120 - Ad for <u>Double D</u> auction, local news, call ID then into gospel music. Last heard in 1996. (JTR-OK)
1600	KIVA	NM	Albuquerque - [no date] 2310-2330 - CNN News and Sports, ID as <i>KIVA Radio 1600, Albuquerque's News station</i> and <i>KIVA CNN Radio 1600, Albuquerque</i> (CD-TX)

5000 Wcrtts **CFQC**

GRAVEYARD DX UPDATE SASKATOON, SASKATCHEWAN

indicates record held from Alaska or Hawaii

* indicates record held by DXer from North America (excluding Alaska)

1230 kHz:

WTSV	NH	Claremont	Russ Edmunds	Kinnelon, NJ	<u>Miles</u> 196
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1240 kHz:

KFLI	ID	Mountain Home	Tim Hall	Page, AZ	486
WRNC	NC	Raleigh	Russ Edmunds	Parsippany, NJ	419

1340 kHz:

1400 kHz:

WAJQ	GA	Alma	Don Trelford	Runaway Bay, Jamaica	962
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1450 kHz:

KTIP	CA	Porterville	Tim Hall	Grand Canyon North Rim, AZ	*428
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1490 kHz:

WANA	AL	Anniston	Don Trelford	Runaway Bay, Jamaica	1180
KMET	CA	Banning	Tim Hall	Chinle, AZ	444
XEAQ	Son	Agua Prieta	Tim Hall	Wilcox, AZ	69

DDXD-East

The column's a lot shorter this time around as DX conditions and other interests take their toll. Still, some nice catches here.

UNID, UNID HELP, PRESUMED AND CORRECTIONS					
540	CBEFp	ON	Windsor - 5/22 0100 - Fair; listed as CBC-French. Can pick out the word "Canada" in the French and more than likely Windsor and not the other Canadian-French on 540 as it is much further away. (SC-IN)		
960	UNID	—	_____ - 5/6 - Someone IDs here as "The Team 9-60, The Poconos' Sports Radio" and carries ESPN. Mixing with WELI-CT, WFIR-VA and the Canadians. (RWK-CT)		
1020	KOKPp	OK	Perry - 4/27 0533 - Weak; with motto "The greatest classic hits in the country, hour after hour, right here on OK Country". Phasing KDKA will bring this country station in almost every night but never are any call letters given. The assumption here is OK means Oklahoma. (SC-IN)		
1520	WCHEp	PA	West Chester - 4/25-26-27 0640 - 0700+ - Finally ID'ed my sunrise folk/country station as this, which seems to play segued music somewhere in these two areas then a quick ID and a local talk show with the host doing either phone calls or a rambling monologue. At various other times during the day heard all sorts of music programs from the previous to classical and religious, so the only description for this format is "VAR". (RJE-PA)		



STATION LOGGINGS

540	WWCS	PA	Canonsburg - 5/22 0300 - Weak; with ID "Radio Disney WWCS Canonsburg, Pennsylvania". Voiced by child-type announcer. (SC-IN)
560	CFOS	ON	Owen Sound - 5/25 0200 - Weak; with ID "This [is] 560 CFOS and 1490 CFPS news, information, and music". Story of new album release and North American tour by ELO [<i>Electric Light Orchestra -MS</i>]. (SC-IN)
570	WTNT	MD	Bethesda - 5/29 1544 - "The new WTNT ... AM 570"; into ads for Wellesley Inns and Suites, Sudafed, and GEICO. Last heard as WWRC; was WTEM before that, and WGMS for years and years. (PFC-VA)
580	CKAP	ON	Kapusking - 5/23 0400 - Weak; in weather report mentioned "High near 21". ID "The best of the 70's and 80's, weekdays at noon on AM 58 CKAP". Moving to FM 100.9. (SC-IN)
	WGAI	NC	Elizabeth City - 5/25 0300 - Very weak; with ID only "Your information station WGAI AM 560". (SC-IN)
620	WSNR	NJ	Newark - 5/09 0300 - Weak; with ID "This is New York's Sports News Radio 620 WSNR Newark/New York". (SC-IN)
	WTGH	SC	Cayce - 5/09 0400 - Very weak; heard ID only "WTGH AM 620 Cayce/Columbia" and then ID was repeated. (SC-IN)
640	WMFN	MI	Zeeland - 5/01 0600 - Very weak; ID "Simply the best talk on the radio AM 640 WMFN Zeeland/Grand Rapids". (SC-IN)
	WGOC	TN	Blountville - 4/26 0400 - Good at Top of Hour with spot for alcoholism help line and "640 WGOC, Blountville" ID by man. Never heard this before, and it was competing with dominant WWJZ-NJ all night. Day pattern? (RWK-CT)
770	WEW	MO	St. Louis - 5/09 2020 - Fair; with ID "Now you can hear more about your favorite music and the people who make that music with Gary Duncan on Variety 77 WEW". (SC-IN)
790	KFYO	TX	Lubbock - 4/17 0200 - Weak. Weather report; mentioned "Wednesday with a cool start, temperature in the 70's". ID "KFYO AM 790 Lubbock, news and information". Then CBS News. (SC-IN)
	KBME	TX	Houston - 4/17 0500 - Very weak. Heard ID only "KBME Houston". (SC-IN)
	WTSK	AL	Tuscaloosa - 4/17 0535 - Very weak; with ID "790 WTSK The Truth". Black Gospel station. (SC-IN)
830	WEEU	PA	Reading - 5/9 0058 - Haven't really DXed 830 for domestics since getting back into the hobby, so had a couple of easy catches here. WEEU shares domi-

- nance with WCRN. Heard this night with well-produced local news, then into ABC news. (RWK-CT)
- WCRN MA Worcester - 5/9 0200 - Well over WEEU with "New England's Swing 8-30, WCRN Worcester, Framingham, Boston". (RWK-CT)
- 850 WYLF NY Penn Yann - 4/15 0015 - Fair and in the clear. ID "We're AM 850 WYLF" and then into "My Heart Will Go On" by Celine Dion. (SC-IN)
- 920 WGNU IL Granite City - 5/02 0100 - Over/under KARN. Heard ID only "WGNU Granite City/St. Louis". (SC-IN)
- 960 CFFX ON Kingston - 5/6 0200 - Winning out briefly over WELI-CT with "Just an Old Fashioned Love Song" then recorded ID: "In Kingston, CFFX is Good Time Oldies", then into "If You Know What I Mean". (RWK-CT)
- 990 CKGM QC Montreal - 5/5 0600 - Three straight nights of just "Oldies 9-90" IDs finally paid off with a clear song ID "Oldies 9-90, CKGM" at 6 am, then into "Iko Iko" then a quick mention of Montreal by man. WLGZ-NY, WALE-RI and WZZD-PA usually dominant. (RWK-CT)
- 1020 WJPF IL Carbondale - 4/27 0600 - Weak; with ID "The morning news watch from 6 to 9 on News Radio WJPF", then signal smothered by WPEO sign-on. No SSB. (SC-IN)
- 1040 CJMS QC Saint-Constant - 4/30 2330 - WEVD-1050 off made 1040 more quiet. Heard FF talk show in WHO null. Male host taking callers, mentions of Quebec, then into country-sounding music in French after midnight. (RWK-CT)
- 1050 CHUM ON Toronto - 4/30 2315 - On e-mail tip from Dave Marthouse, found WEVD-NYC off and CHUM dominant. Usual oldies with many testimonials from former radio personalities about CHUM's history. They are doing several days of retrospective before going to sports on 5/7. It was fortuitous that WEVD went off during this programming. There was a station underneath playing nostalgia music at midnight, but nothing else heard. (RWK-CT)
- 1070 WINA VA Charlottesville - 5/03 0100 - WIBC phased; fair. ID "Proud to be locally owned and operated by?...? Communications, this is AM 1070 WINA Charlottesville". (SC-IN)
- 1110 WUNH MA Pittsfield - 5/15 0800 - Faint signal in late morning mixing with remnants of WBT. "Country 11-10, WUNH, Pittsfield, MA". 05/20 2100 Back again, but with monster signal and "Berkshire County's only country station - WUHN Pittsfield, Mass". (RWK-CT)
- 1200 CFGO ON Ottawa - 5/5 1100 - Heard weak "The Team" IDs at 4 am and 6 am under dominant WTLA-NY and WKOX-MA. Weak but in clear after sunrise with local Ottawa news by woman, then "Team Weather". (RWK-CT)
- 1230 WXNI RI Westerly - 5/14 0300 - Caught while digging for WLAT over mush with man: "WRNI-1290 Providence and WXNI 1230 Westerly, Rhode Island's NPR news station" then into BBC news (which gave GMT time, which was convenient as that is what I use in my log). (RWK-CT)
- WENY NY Elmira - 5/14 0300 - ID only heard under WRNI "12-30 WENY Elmira, and 14-50 WCLL (fade out)". (RWK-CT)
- WLAT CT Manchester - 5/16 1959 - Rose up out of mush in WFAS-NY null with up-tempo SS music and a beautiful ID in both English and Spanish. Gave City of License "Manchester/Hartford". (RWK-CT)
- 1260 WMKI MA Boston - 5/30 0100 - Dominant over local WSHU (on 9W night power) with Radio Disney programming and full IDs (from different kids) with city and calls at both 0100 and 0200. (RWK-CT)
- WWRC DC Washington - 5/30 0300 - Under an ID-free C&W crooner (CKHJ-NB?) and mixing with Disney with ID by woman: "The new 12-60 WWRC Washington" then into CNN news. Already had the station, but never recorded new calls. (RWK-CT)
- + - 5/29 1751 - "Welcome back to the final segment of Tuesday Money Talk with Carol Ann Brown...right here on the new WRC AM 12-60. New call; most recently WGAY, but originally logged as WWDC in 1990. I believe WOL may have been here a long time ago. (PFC-VA)
- 1290 WJBR DE Wilmington - 5/25 0640 - In very strong with end of NOS song, then "Delaware's AM 12-90" ID by male, then ad for Mailboxes Etc. (RWK-CT)
- 1310 WICH CT Norwich - 5/20 0000 - Over Spanish station (WXMC-NJ assumed) with ad for "Airport Auto Repair" then "You're listening to ????" radio, WICH Nor-



- wich" then coverage of local speedway racing, 3 to go to complete CT. (RWK-CT)
- WADB NJ Asbury Park - 5/20 0300 - Fair with recorded ID by man: "13-10 WADB Asbury Park, with the music you love and the information you need 24 hours a day". (RWK-CT)
- 1330 WSPQ NY Springville - 4/27 2200 - Heard Cleveland Indians baseball mixing with WWRV-NY for a couple of nights in a row. Finally ID'ed at Top of Hour break with "You're listening to your major league radio in the Tri-Counties for Cleveland Indians' baseball, all season long on 1330 WSPQ-Springville...". Two other towns were listed after Springville, but I didn't catch them. (RWK-CT)
- 1340 WYBC CT New Haven - 5/22 0600 - Audible during day; best in the evening/morning. Devo song, then their usual quick Top of Hour recorded ID by woman: "WYBC - New Haven". Needed the new call letters. (RWK-CT)
- 1350 WINY CT Putnam - 5/20 2350 - In null of local WNLK-CT with ad for Marines then recorded ID: "It's music, local information, weather, sports and good clean fun ??? weekdays from 6-9 - WINY 13-50 AM" then into generic pop song. 2 to go for CT. (RWK-CT)
- 1360 WNJC NJ Washington Township - 5/28 2200 - Fair under WDRC-CT with end of recorded REL program, then recorded ID by man: "Fast becoming the most listened-to station in the Delaware Valley, the newest 13-60 AM WNJC Washington Township/Philadelphia" then another, different recorded full ID, and finally a full ID in Spanish. (RWK-CT)
- 1380 WSCG MI Greenville - 5/4 2025 - Poor in mess with NOS music, "Beautiful memories 24 hours a day on WSCG, 1380". Ex-WPLB for me. (JF-ON)
- KCIM IA Carroll - 5/4 2307 - Faded up with start of Cubs baseball with "Cubs baseball is on the air with your station for the Cubs, KCIM". New. (JF-ON)
- 1390 WTJS TN Jackson - 4/20 0532 - Fair; with ID, "Sinatra, Cole, Streisand, The Platters, and plenty more here on 1390 WTJS 7-10 AM every morning". (SC-IN)
- 1410 KQV PA Pittsburgh - 5/26 0410 - Weak; with ID "KQV newstime 5:10". Mention of Pittsburgh Int'l Airport with weather report. (SC-IN)
- 1420 CKPT ON Peterborough - 5/4 0500 - Heard AdCon music in background all night behind the talkies on this frequency. Finally a solid "14-20 CKPT, Peterborough" ID at Top of Hour. WHK-OH and WCOJ-PA the other dominants. (RWK-CT)
- 1430 WENE NY Endicott - 5/27 0000 - Weak; with Imus promo. "The I-Man and sports all day, Sports Radio 1430 WENE Endicott". (SC-IN)
- WDIC VA Clincho - 5/27 0600 - Fair with ID "We're AM stereo 1430 WDIC Clincho". (SC-IN)
- 1440 WNFL WI Green Bay - 5/16 2250 - Fox Sports Radio, weather, several IDs. (SC*ON)
- 1470 WKAP PA Allentown - 5/6 0500 - Struggling under WMMW, rising up for quick ID by man: "WKAP Allentown". (RWK-CT)
- 1480 WKND CT Windsor - 5/27 2000 - Very weak, very noisy, with recorded ID by man: "WKND Windsor/Hartford". This was during a pause in WZRC-NYC's audio. One to go in Connecticut. (RWK-CT)
- 1530 WRTP NC Durham - 5/3 0100 - On web tip from Dave Braun (Thanks!), found WRTP on overnight coming in and out of WSAJ null. Caught fairly clear, recorded FM, AM and 2 other station IDs at Top of Hour then into canned REL program. (RWK-CT)
- 1570 WRJQ WI Appleton - 5/14 2350 - ID in mess, under CKMW-MB. (SC*ON)
- WFOG NY Riverhead - 05/19 2045 - Fair; "The only place for classic hits, 103-9 RCN" and classic rock music, over WBUG, WISP and UNID stations. (BC-NH)
- 1600 WUNR MA Brookline - May 15 2130 - African or Caribbean accented French and music, and legal ID on bottom of hour. (SC*ON)
- 1700 WAFN FL Miami Springs - 05/19 2245 - Fair; religion in Spanish, mentions of Voz Cristiana. (BC-NH)
- 1640 UNID NY New York City - 05/19 2225 - Poor; mentions of New York State Department of Transportation and I-95. (BC-NH)
- UNID NY Pomona - 05/19 2230 - Fair; woman announcing office hours and "You are tuned to Rockland County's residents' information station, 1640 AM. We aim

CK&B

TIS, HAR AND MISCELLANEOUS



to keep Rockland County residents informed." (BC-NH)
 + - 5/21 2030 - Briefly over HAR sub-audible heterodyne mush with
 "Rockland County Residents Information Radio Station". Didn't get call let-
 ters, and there's nothing in the FCC database for Rockland Co. City is as-
 sumed based on input from Bruce Conti. (RWK-CT)
 1700 UNID NY New York City - 05/19 2235 - Fair; run-down of road construction, "Thank
 you for choosing John F. Kennedy International Airport." (BC-NH)

REPORTERS

- SC-IN Steve Chappell McCordsville - Bearcat DX-1000; 3 terminated loops.
- SC*ON Saul Chernos Burnt River (roughly 75 air miles northeast of Toronto) - Radio Shack TRF655.
Grundig Yacht Boy 400; Radio Shack loop antenna.
- BC-NH Bruce Conti Nashua - Drake R8B, MWDX-5, 100-ft wire; 100-ft east sloping wire.
- PFC-VA Perry Crabill Winchester - Drake R8, 100-ft wire.
- RJE-PA Russ Edmunds Blue Bell - Car radio and whip.
- JF-ON Jeff Falconer Clinton - Drake R8B, pair of 135' noise-reduced/terminated wires (one pointed
east and one pointed west), modified MFJ-1026 phasing box; Timewave DSP-599zx audio
filter.
- RWK-CT Rick Kenneally Wilton - 2 Sony ICF-2010s, Sony ICF-7600G, Quantum QX Loop, SM-2,
RadioPlus QStick; Shotgun Loop.

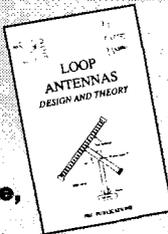
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International DX Digest Jim Renfrew renfrew@localnet.com
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Foreign DX Catches. Times are UTC; for ELT, subtract 5 hrs.

It looks Mike Tuggle is looking to win a "no prize. Mike remembers a quote from an old *Scientific American* article: "I admit, 'screched' must be the longest one-syllable word. I came to realize this the other day, as I was being broughammed to Heathrow airport. Well, of recent manufacture or not, "broughammed" is two letters longer than the word I presented as the correct answer in last month's quiz.

For the first time in all the years I have been doing this column, I now have ONE computer on which to receive your e-mail reports, compose the column and then send it to Paul and Fred. This should dramatically reduce the incidence of lost and delayed submissions. Thank you for your patience.

Jim



TRANS-ATLANTIC DX

- 531 MADEIRA Porto Santo, MAY 28 0130 - Weak signal. Soft pop music and seemed to be // to 1125. Couldn't get any kind of a log. [Dangerfield-PA]
- 549 ALGERIA Les Trembles, MAY 16 0403 - Weak signal. Man in AA. [Dangerfield-PA]
- 621 CANARY ISLANDS // SPAIN RNE R.1 synchros, Santa Cruz de Tenerife et al., APR 26 0014 - newstalk by woman in Spanish; good. [Connelly*rw-MA]
- 693.7 AZORES RDP, Santa Barbara APR 26 0038 - music; weak. [Connelly*rw-MA]
- 711.05 WESTERN SAHARA RTM, Laayoune, APR 26 0036 - bits of Arabic vocal; poor. [Connelly*rw-MA]
- 783 MAURITANIA ORTM, Nouakchott, APR 26 0034 - // 4845 with Koranic male vocal; good. [Connelly*rw-MA]
- 999 SPAIN COPE, Madrid, APR 26 0100 - bits of Spanish talk; poor. [Connelly*rw-MA]
- 1089 ENGLAND Talk Sport synchros MAY 20 0145 - Fair; talk about politics and prime minister, ID "1089 and 1053 AM, Talk Sport." [Conti-NH]
- 1125 LIBYA El Beida, MAY 16 0436 - Fair. Man in AA, Mid-East music. [Dangerfield-PA]
- 1125 MADEIRA Ponta do Pargo, MAY 28 0131 - Weak signal. Soft pop music and man in PP. Nothing I could use for a report. Good signal if only 1000 watts. [Dangerfield-PA]
- 1251 LIBYA Tripoli, MAY 16 0446 - Good. Man in AA at a time which was close to sunset in that area, when 1125 was also in briefly. [Dangerfield-PA] 1179 CANARY ISLANDS // SPAIN SER synchros, APR 25 2343 - vocal, then woman in Spanish. APR 26 0029 - teletalk; good. [Connelly*rw-MA]
- 1206 FRANCE France Bleu, Bordeaux, MAY 19 0341 - // 1557 with cover version of Ray Charles 1961 hit "Unchain My Heart"; good.. [Connelly*B-MA] MAY 19 0305 - Good; French pop/adult contemporary music, parallels also noted on 1377, 1404, 1494, and 1557 tonight. [Conti-NH] APR 16 0420 - Radio Bleu program, good with man and woman in FF betweten pop music and fem vocals. // to several others heard. [Dangerfield-PA] APR 17 0415 - great signal at times S8 - man in FF talking to another on phone. Bobby McFerrin's "Don't Worry, Be Happy" at 0418, then more talking and a recorded/produced announcement by woman (poss ID?). [Kenneally-CT]
- 1215 ENGLAND Virgin Radio synchros MAY 20 0200 - Fair; Virgin Radio News, "1215 AM Virgin Radio" ID and rock hits. [Conti-NH] APR 17 0440 - Great with "Stupid Girl" by Garbage, another UNID song, "Heroes" by Bowie, then DJ talking about www.virginradio website. [Kenneally-CT]
- 1242 FRANCE Marseille, APR 16 0431 - In well with man and woman in FF and various pop vocals, and // to several other Bleues. [Dangerfield-PA]
- 1287 SPAIN SER stations, APR 16 0434 - Fair but mixed with what may have been the Czech RFE/VOA stations. Had telephone talk. [Dangerfield-PA]
- 1296 SPAIN Valencia, APR 16 0417 - Good signal and all alone, COPE program with what else - man and woman in SS. [Dangerfield-PA] APR 17 0430 - fair to good - weak time pips at 0430 then got stronger. Children singing (commercial?) then "Ésta es la información de la M?, la ??? de copa (or COPE). [Kenneally-CT]
- 1332 ITALY Rome, APR 16 0402 - RAI Uno. Man, woman in Italian. News. [Dangerfield-PA]
- 1359 SPAIN Arganda, MAY 19 0344 - fast Spanish talk with musical interludes; to good peaks.

- [Connelly*B-MA]
- 1368 ITALY Synch. APR 16 0404 - RAI-Tres, Man in Italian, Classical Music. [Dangerfield-PA]
- 1377 FRANCE France Bleu, Lille, APR 30 0408 - man & woman in French; fair. MAY 20 0323 - "Monday, Monday" by the Mamas & Papas from '66; to good peaks. [Connelly*B-MA]
- 1404 FRANCE Synch. APR 16 0424 - Fair. Radio Bleue with fem pop vocal and // to 1206 and 1557, among others. I would like to think this was primarily coming from Ajaccio, Corsica, since it is the most powerful on this freq. and since both Nice and Monte Carlo were being heard with such strength at this particular time. No proof, though. [Dangerfield-PA]
- 1431 ITALY Synch. APR 16 0406 - Weak but probable RAI-Due. [Dangerfield-PA]
- 1449 ITALY Synch. APR 16 0407 - In but hard to read. Probable RAI-Due. [Dangerfield-PA]
- 1467 FRANCE TWR, Roumoules, MAY 1 0358 - German talk by woman, then female medieval-sounding folk vocal with flute accompaniment; good, best TA at the time. MAY 19 0348 - religious music; fair / jumpy. [Connelly*B-MA]
- 1485 SPAIN SER synchros, MAY 19 0349 - // 1575 with Spanish news interview; to fair peak. [Connelly*B-MA]
- 1494 FRANCE Synch. APR 16 0425 - Fair. Man, woman in FF and // to other Radio Bleue stations such as 1557 and 1206. Maybe Bastia, Corsica [20 KW], but how to tell? [Dangerfield-PA]
- 1512 CRETE, GREECE, Chania, APR 14 0203 - Romantic vocals by man and woman, just as heard a year ago at this time [4-13-00] and subsequently varified, so believe it to be one and the same. Didn't hear it in last night's TA opening. [Dangerfield-PA]
- 1521 SPAIN Castellon, APR 16 0400 - Man, woman in SS. SER Net. Saudi Arabia by this time was out of the picture. [Dangerfield-PA] MAY 19 0356 - // 1485 with Spanish talk; to good peak with WWKB nulled. [Connelly*B-MA]
- 1530 SÃO TOME E PRINCIPE VOA Relay, Pinheira, MAY 19 0354 - VOA newsmagazine type program in US English; through nulled WSAI. [Connelly*B-MA]
- 1539 SPAIN SER stations, APR 0440 - Good. Man and woman, // to 1575. [Dangerfield-PA]
- 1557 FRANCE R. Bleu, Nice, MAY 19 0341 - // 1206 with cover version of Ray Charles song "Unchain My Heart"; to fair peak through WQEW splash. [Connelly*B-MA] APR 16 0356 - Armchair. Radio Bleue, FF pop vocals. [Dangerfield-PA]
- 1575 SPAIN SER synchros, APR 25 2356 - fast Spanish talk; poor. [Connelly*rw-MA] MAY 19 0340 - news interview // 1485; fair with jumpy fades. [Connelly*B-MA] MAY 19 0345 - Fair; telephone talk in Spanish, Spain also noted on 1296, 1305, 1314, 1359, 1413, and 1485 tonight. [Conti-NH] APR 17 0450 - Presumed, fast Spanish by man briefly, but not strong for long. [Kenneally-CT]
- 1575 ITALY Synch. APR 16 0400 - Very strong at sign-on. RAI-Uno with man and woman in Italian and News. // 1332. Gave way shortly to Spain SER stations. [Dangerfield-PA]
- 1583.64 CEUTA RadiOle, APR 25 2355 - Spanish talk by man; hetting SER-1584.0. [Connelly*rw-MA]
- 1584 SPAIN SER synchros, MAY 19 0350 - Spanish talk & teletalk // 1575; poor over Ceuta-1583.64 het. [Connelly*B-MA] APR 17 0446 - At times very good. "Raining Men", but didn't sound like Weathergirls version, then Spanish talk by man. At 0514 spots or commercials, one commercial with 3 pips, then 2 men and 1 woman trading off reading what sounded like news stories. [Kenneally-CT]
- 1602 SPAIN Vitoria, APR 16 0439 - Way up, with man and woman in SS, but separable from the SER stations below it that were // to 1575 and others. [Dangerfield-PA]
- 1611 VATICAN APR 16 0019 - Strong at sign-on with Vatican IS and announcements by woman in Italian. Then man in another language, and fadeout shortly thereafter. [Dangerfield-PA]

Ben speaks: On the night of 4-15 I found a TA opening that began around 0330 on 4-16 and extended from 1206 kc to the 1600's, and I am sure Mark and others found it too. Below 1206, though, the band had only a few weak TA signals, mostly LA's. The first to break through were Nice-1557 and a little later, Monte Carlo-1467. At 0400 the Italians came on with a bang, especially 1575 and 1332, and soon after, Vatican-1611 and the France Radio Bleues along with a bunch of Spains. The Italians seemed to be gone just after 0430 wwhen the sun came up over there, but the French and Spanish stations were still hanging in when I quite at 0045. All previous nights wee poor except 4-13/14 when I did log - tentatively -Crete, Greece on 1512, a station I verified a year ago. Otherwise reception has been so-so lately, just as it is tonight - so far."

Rick speaks: "Great night. Based on tips on web from Connelly and Dangerfield, I thought I would just give a quick listen to 1206. Expecting nothing since I've yet to have a TA reception from here, I was stunned. It was a complete feeding frenzy. Spain was everywhere. Virgin Radio was the most fun-foreign DX is more entertaining in English. The TA receptions really displayed the difference that the Kiwa filter modification makes to the Sony 2010. I have one modified 2010 and one unmodified. Au-

dio on the splits was MUCH clearer on the modified 2010. Also, Gerry Thomas's Quantum QX loop with its sharper Q brought out more audio than the Space Magnet loop. The Quantum loop also picked up less static than the SM-2. Also, had strong "syncable" hets on 1035, 1314 and 1548.

Ben speaks again: "As in past years, TA and LA DX fell off in May here. Earlier in the month, around the 10th, I found some strong high end signals around 0330 to 0400 which would have been close to sunrise in TA-land, most of them gone shortly thereafter. They included loud signals from such as Nice-1557, Vatican-1530, Monte Carlo-1467, Spain-1359 and the Spanish on 1575 and 1602. Around the 15th of the month I ran into Libya on 1125 and 1251 during the same time period, though with much weaker signals. Also had Algiers-549 then. During the past few days had weak signals from Madeira on 531 and 1125, but not enough to report. Last night and recently, before and after 0400, there have been fair LW signals, the strongest being 162 and 183. I have had almost no sunset TA reception all month, but that doesn't surprise me at this inland location. LAs have been poor, even the pesky Cubans and Turks-530, with Colombia-760 the most often heard. But who knows, we might hear some lower South Americans when it becomes winter down there. Incidentally, I have found the "DX Edge" to be fairly useful in searching for sunrise enhancement of TAs."

PAN-AMERICAN DX



- 560 MEXICO XEGIK Monclova, COAH - Per a reliable source, the slogan for XEGIK is "La Acerera", not "La Serena," as I reported it. Reviewed my tape and heard a couple of what sounded like "Acerera" without the "La". Not sure what "Acerera" means. Might derive from the word "acero," which means steel. [Wilkins-CO] (But "acera" is sidewalk, or pavement, which doesn't make much sense for a slogan, either. -pls.)
- 650 MEXICO XETEX(?) Los Mochis, Sin. (pres.) APR 21 1200 This station heard several AM with unusual ID announcement "EPNC, Radio 65, La Ley del Norte. Radio de Servicios a la Camara a Radio y Television Industria con Responsabilidad Social." The male announcer gave the call letters twice and they are categorically not XETNT, though the "La Ley" and "Radio 65" match this listing in IRCA Log. The best translation that several native SS speakers can give is XETEX, though it might also be XETCX. There was no mention of the location of the station. [Bryant-OK]
- 660 MEXICO XEAR Tampico APR 9 1341 - deep fades with SS music, many SIDs "Radio Mexicana". [Loy-IL]
- 670 MEXICO UNID, MAY 17 1102 - XE anthem, sign-on garbled but mentioned 5 mil watts. [Hall-NM]
- 670 MEXICO (presumed) UNID APR 4, 0146 Male announcer heard with several IDs as "RADIO PERTICO." No other information and the signal faded down rapidly after resuming romantic Latin ballads. Ideas? Theories? [Bryant-OK]
- 690 ANGUILLA Caribbean Beacon, The Valley, APR 26 0040 - // 6090 with preaching about historical events involving the queen of Spain. [Connelly*rw-MA]
- 710 CUBA Radio Rebelde, APR 3 0305 - woman in SS // 5025. Fair but covered by WAQI Miami FL. APR 17 0043-0049+ - man in SS talk regarding profesoras y escuelas. Fair. // 670. Poor covered by WSCR. // 5025, SIO=2+33. [Frodge-MI]
- 730 MEXICO XEPQ Melchor Muzquiz, COAH, MAY 17 1105 - XE anthem, prayer by man, then "XEPQ La Sa-Sa-Sabrosita... 5 mil watts." [Hall-NM]
- 740 MEXICO, UNID MAY 6, 1200 Heard with morning network ID at 1100 UTC. Cocks crow, alarm clock rings, other sound effects then "Radio Fórmula 1470, Tercera Cadena de la Cuidad." (Third Network of the City) The male announcer then went on to list four stations, all with frequencies, some with powers, all with locations: "XEAJ AM, 1470 Mexico, DF; XEZ AM, 600 Merida, Yucatan; XEIZ AM, 1240 Monterrey, Nuevo Leon; XEBON AM, 1280 Guadalajara, Jalisco" The announcer closes out the network ID by saying that they are broadcasting from "Cuidad de Mexico, Colonia Trinidad." NOTE THAT THERE IS NO MENTION OF 740, the frequency that I was listening to... Although each of these stations is listed in the current IRCA Mexican Log, none is listed as a Radio Fórmula station. I spent a long time on line at the Radio Fórmula web site. It isn't well laid out for our purposes, but I finally found their listing of stations, by states. The URL is <http://www.radioformula.com.mx/rf1000.asp> Cadena 1 is by far the most numerous and it IDs as "Radio Fórmula 970" or just "Radio Fórmula." Cadena 2 is "Radio Fórmula 1500" or just "Radio Fórmula" and has far fewer stations. Cadena 3 IDs as "Radio Fórmula 1470" and, on the web at least, has only the four stations listed above. Cadenas 4 and 5 are the FM stations. I presume that Radio Fórmula has just acquired another station on 740 and put it to transmitting Cadena 3 before changing their canned announcement. It seems that the Mexican radio industry scene is similar to that in the USA: rapid centralization and major group owners acquiring multiple outlets very rapidly. I

might note that the IRCA Log listing of Radio Fórmula station on 740 in Los Mochis, Sin. is NOT listed on their current website. [Bryant-OK]

740 MEXICO XECAQ, Cancun, Quintana Roo. APR 13 1100 UTC I reported this as a strong presumed logging recently. The Radio Fórmula website revealed that, unlike the other stations of Radio Fórmula's three AM networks, XECAQ produces about 20 percent of its own programming. In reviewing my recordings of Radio Fórmula stations, the sign-on pattern of XECAQ is unique to it and they use the slogan "Radio Fórmula Trópica" at least twice as well as the standard "Radio Fórmula, Cadena Nacional." [Bryant-OK]

790 MEXICO XEBI Aguascalientes, Agua. APR 1, 1145 Male announcer with several IDs as "RADIO BIEN" and mentions of Aguascalientes and call letters. Fair to good signal and mentions of upcoming noticias. [Bryant-OK]

790 CUBA Radio Reloj, APR 8 1223 - R. Reloj outlet here fair but atop and steady. [Loy-IL]

840 CUBA Dobleve, Santa Clara, APR 3 0245-0300+ - man in SS taking phone calls with techno music bumpers. Variety SS vocals. @0250 "Esta es Dobleve Santa Clara". Fair, Cuba #75 [Frodge-MI]

870 MEXICO XEAMO Irapuato, GJTO, MAY 17 1126 - "Monitor" program from the OIR network. [Hall-NM]

880 CUBA Radio Progreso Cuba (p); APR 3 0240-0244+ - woman host in SS with SS baladas. Fair, no sign of WCBS. // 640 Poor. [Frodge-MI]

895 ST. KITTS & NEVIS V. of Nevis, Bath Village, Nevis, APR 26 0011 - Caribbean-English speech by man in an echoey hall; poor to fair. [Connelly*rw-MA]

920 MEXICO XEHQ Hermosillo, SON - A review of tape shows that "Globo 920" is the slogan, not "Lobo". Makes sense, since the slogan on their old 590 freq was Globo 590. Thanks Chris Knight for spotting this. [Wilkins-CO]

960 MEXICO XEK Nuevo Laredo, APR 3 0906 - very good and all alone with SS ballads, ads with many Nuevo Laredo mentions. [Loy-IL]

970 MEXICO XEVOX MEXICO Mazatlan, SI, MAY 11 1230 - with a call in segment and then playing banda mostly and a little ranchera. [Redding-AZ]

1000 MEXICO XEMIL Los Mochis, SI, MAY 12 0553 using slogan "La Comadre" and was announcing grupera music but went right into banda, go figure. [Redding-AZ]

980 MEXICO XETU Tampico, APR 7 0436+ - very good with SS music, list of names, many R. Tampico ID's, full ID at top of hour. [Loy-IL]

980 MEXICO XEFQ Cananea, SON, MAY 17 0230 - Noted with "La F-Q" slogans. Web site indicates this station now runs 25kW. They have certainly increased power, as their midday signal is audible across much of SE AZ. [Hall-NM]

1010 MEXICO (pres.) Guadalajara, Jal. APR 7, 1145 Male announcer with multiple announcements during program of romantica music. IDs as "Este es AM, La Poderosa" with mentions of Guadalajara, but no sign of the call letters. [Bryant-OK]

1080 CUBA R. Cadena Habana outlet, APR 9 0605 - good // 1100. [Loy-IL]

1100 CUBA Unid site, APR 3 0900 - SS music to ID top of hour, "Esta es Radio Cadena Habana," first time here. [Loy-IL]

1130 MEXICO XETOL Toluca, APR 9 0612 - fair with SS music, female with many "Radio Lobo" ID's. [Loy-IL]

1130 DOMINICAN REP. HIRL R. Cadena de Noticias, Santo Domingo, MAY 24 0046 - good-very good with news and lots of "Radio Cadena de Noticias" jingles. 1st DR hrd. [Myers-FL]

1180 CUBA Radio Rebelde, APR 3 0015-0030+ - Several men with SS commentaries and discussions. Promo with "...en Rebelde" and another Rebelde promo to tune of Happy Birthday. Good on top except 0020-22 when gave way to WHAM? Cuba #74, at least 1st time 1180 logged as Rebelde; Reloj & Taino in previous incarnations. APR 13 0103-0110+ - man with phone interviews. Allin SS. Good; // 5025, SIO=453. No other MW Rebelde's audible. [Frodge-MI]

1310 MEXICO XEFH Agua Prieta, SON, MAY 14 1515 - Call letter IDs noted often on this station, but no slogans noted over the couple of days we were in the area, except for one or two possible mentions of "Un Lider", similar to XEAZ-1270's slogan "Un líder en acción". [Hall-AZ]

1370 MEXICO XEMON Monterrey NL, MAY 19 1134 - with talk into a time check and slogan R. Fórmula. [Redding-AZ]

1410 MEXICO XECF Los Mochis, SIN, MAY 17 1152 - "LV del Valle de _____, Radio Impacto, Radio Sistema del Noroeste... 10 mil watts." Note power increase. [Hall-NM]

1430 MEXICO XEOX Ciudad Obregon SON 0400 - with ID. They are running // to FM 106 and now plays EE rock from the '80's. Calls itself "Oh Eck-ees"

1450 MEXICO XECB San Luis Rio Colorado, SON, MAY 18 1258 - Sign on with XE anthem, IDs, and Radio Ranchito slogan. Had been chasing this one each morning on the trip before IDing it here. [Hall-NM]

1480 MEXICO XETKR Guadalupe, NL, MAY 18 1132 - Nuevo Leon news and "T-K-R" slogan. [Hall-NM]

1490 MEXICO XEAQ Agua Prieta, SON, MAY 14 1510 - ID by man "XEAQ, La Caliente, mil watts, 1490 kHz, la mejor musica de hoy. [Hall-AZ]

1550 MEXICO XENU Nuevo Laredo, APR 3 0942 - good and steady with music, several "La Rancherita" IDs. [Loy-IL]

1375.02 ST. PIERRE ET MIQUELON RFO, St. Pierre, MAY 19 0345 - man & woman in French; very strong on new "Kaz" antenna, at least 10 dB better than adjacent signals on 1370 & 1380. [Connelly*B-MA]

Tim speaks: "DX-wise, this was a much better trip than most of my recent business trips and vacations. My new Quantum QX Loop performed very well in isolated locations without too many locals (it doesn't work that so well in locations like San Diego or Tucson where there are lots of high-powered local stations, as it is prone to smearing false signals across the dial in those congested markets). Conditions in Page, AZ were fantastic. Signal quality was reminiscent of the 70s or 80s. Even on the car radio at sunset, signals were livelier than I have heard in years. I was in a basement hotel room but had some of the best reception I have had in years."

John speaks: "Since graduation is Saturday, and I'm leaving for 6 months of home building and DXing in the Northwest next Wednesday, this will be my last report from Oklahoma until Thanksgiving. I've also gotten my last "radio help" from my Salvadoran student who graduate this year. Besides helping me with the Radio Fórmula Cadena 3 mystery (on 740), she spent a good bit of time with several of my other MDs from the past month and here are the results."



TRANS-PACIFIC DX

Don Nelson, Walt Salmarin and I spent Memorial Weekend at our DXpedition site at Grayland, WA. Walt and Don largely concentrated on SWBC DX, while I tried to swim against terrible MW propagation to hold up the MW DX end of the stick. The MW propagation conditions were the worst that I've experienced on the Pacific Coast since a truly terrible camping-DXpedition with Guy Atkins and Nick Hall-Patch at Jordan River, BC just after the peak of the last solar cycle. At least this time there were toilets, beds and refrigerators. The first night of "DXing," May 26 yielded a handful of trans-Pacific "hets" and four instances of threshold audio. The following two nights yielded slight improvements in results each night, with the last night - May 29 - yielding the only multiple loggings of Aussies, again at threshold levels. The fellowship was grand as usual, but the entire affair will certainly serve as a contrast when conditions once again enable our usual excellent results from this site. The following loggings list reads MUCH better than it actually was!

567 JAPAN JOIK, Sapporo MAY 27 1128 to 1155 heard at low levels with a traditional Noh drama and brief stylized Noh singing by male actors. Typical Saturday night cultural fare on NHK 1 network. Fair to poor levels. Also noted at similar time period on MAY 28. [Bryant-WA]

585 JAPAN JOPG, Kushiro MAY 28 1145. This 10KW NHK 1 outlet east of Sapporo was noted in parallel to 567 NHK 1 Sapporo briefly at fair to poor levels. [Bryant-WA]

702 AUSTRALIA 2BL, Sydney MAY 29 1132 noted with threshold level Aussie talk by males. [Bryant-WA]

738 TAHITI RFO, Papeete MAY 26 0925 RFO Papeete was the most consistent logging of the DXpedition. Noted with audio each night and peaking at dawn enhancement around 1200 UTC with RFO news in French. [Bryant-WA]

747 JAPAN JOIB Sapporo MAY 28 1137 to 1150 was noted with advanced English language lessons at fair level. [Bryant-WA]

774 JAPAN JOUB Akita MAY 28 1139 to 1150 noted in parallel to JOIB 747 at lower level. [Bryant-WA]

774 AUSTRALIA 3LO Melbourne (pres.) MAY 29 1234 heard very poorly with Aussie talk by males. [Bryant-WA]

792 AUSTRALIA 4RN Brisbane (pres.) MAY 29 1240 noted running a light music show hosted by a male DJ. Fair to poor. [Bryant-WA]

828 AUSTRALIA 3GI Sale (pres.) MAY 29 1245 noted with RR discussion of finance by males. Good level very briefly. [Bryant-WA]

954 AUSTRALIA 2UE Sydney (pres.) MAY 29 1250 heard very poorly with male Aussie talk. [Bryant-WA]

1287 JAPAN JOHR, Sapporo MAY 26 1120 This key station of the Hokkaido BC peaked briefly to low audio levels with a sports report in Japanese (beisbol). [Bryant-WA]

- 1475 MALAYSIA-EAST RTVM, Kota Kinabalu MAY 28 1245 This hold-out on the odd frequency noted as a very strong het only. [Bryant-WA]
- 1503 JAPAN JOKU, Akita (presumed) MAY 26 1210 noted with modern ballad in Japanese at threshold level. [Bryant-WA]
- 1566 KOREA HLAZ, Cheju Island was noted at very low levels with typical FEBC religious programming each morning of the DXpedition in the 1145-1200 "max. dawn" period. [Bryant-WA]
- 1548 AUSTRALIA 4QD, Emerald, Qsld (presumed) MAY 27 1210 to 1228 with Radio Australia discussion program. Fair level. [Bryant-WA]
- 1683.2 AUSTRALIA 2ME, Sydney (pres.) MAY 29 1251 to 1303 fade. Call-in show in ME language (Greek?) until 1300 and then into traditional ME music. Fair to poor. [Bryant-WA]
- 1701 AUSTRALIA 2NTC, Sydney (presumed) MAY 28 1222 until 1256 fade. Middle eastern music, solos by male and female artists and duets. Occasional intros for numbers by male announcer or the artist. One quasi station ID by male in English, but I believe that this was a fade up of the other Aussie on the channel, R. 1701 in Brisbane. Fair to poor levels. [Bryant-WA]
- 1701 AUSTRALIA Radio 1701 (presumed) Brisbane MAY 29 1205 to 1230. Radio 1750 was noted at about equal levels with 2NTC (presumed) and running Oldies Rock and Roll and a few commercials. Fair to poor. [Bryant-WA]



RADIO "EL BUEN PASTOR"
 ACIS
 FRECUENCIAS 6810FM - 6417M - 6.818 MHz
 Dirección Postal: Manó de Oro, Azuay, Saraguro - Loja - Ecuador

CONTRIBUTORS

- John Bryant, Stillwater OK; Ten Tec 340, Kiwa-ed NRD-535, two phased Kaz delta loops + K9AY loop. Northwest loggings used: 1000 foot long two-wire beverages at SW, W and NW; 112' KAZ delta loop <bjohn@provalue.net>
- Mark Connelly WA1ION, DX'ing from Billerica and Rowley MA; Drake R8A, broadband loop, active whip, "Kaz" antenna, Superphaser-1 phasing unit. <MarkWA1ION@excite.com>
- Bruce Conti, Nashua NH; R8B, MWDX-5, 30-m wire, 30-m east sloping wire, noise reduced via 4:1 RF xfms and buried coax. BACONTI@aol.com
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- Tim Hall, Chula Vista CA, DXing from Tombstone AZ and Bear Mountain Lodge NM; ICF-2010, Quantum QX Loop, Toyota car radio <halls@inetworld.net>
- Rick Kenneally, Wilton CT; <woodlandview@yahoo.com>
- Eric Loy, Champaign IL; Drake R-8 and Quantum QX <ecloy@netscape.net>
- Greg Myers, Clearwater FL; Sony ICF-2010, Kiwa pocket loop w/PRN <tmyers01@tampabay.rr.com>
- Kevin Redding, Mesa AZ; CCRadio barefoot. <amfmdvx@qwest.net>
- John Wilkins, Wheat Ridge, CO; Drake R-8, 4-foot box loop. <peakbagger3@juno.com>

INTERNATIONAL NEWS

- HONG KONG: 675 RTHK/BBC WS comes in quite well around 1300-1400 UTC, dominant over co-channel Hanoi and Brunei and various weak Filipinos. Signal strength is very similar to the co-sited transmitters on 864 and 1044, also listed with 10 kW, all of which are generally stronger in SE Asia than the 20 kW units at Golden Hill. I suspect the Peng Chau site on an offshore island is a more favourable location. I'm not sure what to make of the report from Merlin that 675 is really only 1 kW (last MV-Eko). (Alan Davies) 864 continues to carry frequent mentions of 'Hong Kong's Best New Music' and variations on that theme, but it's hard to tell what the official name of the station now is. (Alan Davies) [via ARC Infodesk e-mail]
- INDIA: 1125 All India Radio is expanding its service in the north eastern Indian states. According to deputy director general (north east) of AIR, Rugmuni, a regional radio station of 20 kW medium wave would be commissioned at Tezpur in Assam from July [2000], one which would broadcast programmes in Assamese, Hindi, Nepali and other tribal dialects in the north Lakhimpur (Assam) area. (UNI) (Sawaal News 11.06.2000, via Olle Alm) Information about Indian stations is available from: <http://vu2jos.qrzindia.net/adres.html>. This page is maintained by the wellknown Indian DXer Jose Jacob. (Olle Alm) [via ARC infodesk e-mail]
- IRAN: Bjarke Vestesen, a Danish DX'er has distributed a detailed bandscan of stations heard while visiting Tehran, Isfahan, Shiraz, Yazd and Kashan. The list is also available as a pdf-file on www.ddxik.net (go to "Arkiv" and look for it). [via Hard Core DX in Medium Wave News (UK) e-mail]
- MEXICO: XELBL-1350 San Luis Rio Colorado SON is still here and still using "Radio Centro" slogans. Station has NOT moved to 1570 as reported on some web sites. This may be a CP. XETM-1350 Naco, SON is silent. Not noted from 2 miles north of Naco along the US Mexican border,

der, or from other points in SE AZ over a 2 day period. [Hall-CA]

- UKRAINE: 207 UR 1, Kyiv. Schedule starting from 9 April: Mon-Fri 0227 (Sat/Sun 0257)-2200. (Alexander Yegorov via Signal DX 29.04.2001 via EuroLog 05.05.2001)
- VATICAN CITY: 1530 BBC News is reporting that Vatican R will reduce its transmissions after Easter: "The statement said the broadcaster would shut down its MW transmissions on 1530 for seven hrs a day beginning on 16 April, the day after Easter. 1530 is currently used for 14 hrs a day and so the shutdown would affect some 50% of broadcasts on that frequency, which is primarily used for broadcasts in Europe. (via Hans Johnson-AZ-USA, Cumbre Apr 6) On Feb 1 we have reduced power on MW 1530 from 600 to 300 kW and we've already received reception reports stating that our signal is not so clear now". (Quote by Stefano Valianti, Bologna-Italy, in WDXC May CONTACT magazine, pages 8-9.) (All this due to the electrosmog problem - Olle Alm) [via ARC Infodesk e-mail]
- VIETNAM: A research of press reports together with recent monitoring has revealed extensive details of the high-powered Vietnamese mediumwave transmitters that went on the air in the late '90s.
- 1) North Vietnam (Bac Bo area). The new station is located in the My Van district, Hung Yen province, to the immediate east of the Hanoi city province. The station uses the frequencies of 549 (VOV2) and 675 (VOV1) with a power of 700 kW (presumed to be the total for the two transmitters). The antenna height is 191 m. The transmitters were made by Nautel and delivered by Marconi. The station was expected to start transmissions by March 1997.
 - 2) Central Vietnam (Trung Bo area): The new station is located in the Dong Hoi district, Quang Binh province. The station uses the frequencies of 630 (VOV1) and 729 (VOV2) with a power of 200 kW (presumed to be the total for the two transmitters). The station was inaugurated in June 1996.
 - 3) South Vietnam (Nam Bo area): The new station is located at the Thoi Long hamlet, near O Mon town, some distance to the northwest of Can Tho city, Can Tho province. The station uses the frequencies of 711 (VOV1), 783 (VOV2), 873 (VOV3) and 1242 (VOV6). It was equipped with three transmitters of 500 kW each and two 1000 transmitters used in parallel to form one 2000 kW transmitter. It is presumed that 1242 is the home of the 2000 kW unit. The Thoi long transmitters were made by Harris. The antenna towers range from 90 to 135 m. The VOV3 programme aired on 873 is a special version for the Mekong delta area and includes newscasts in English, French and Russian as well as a minority language service in Southern Khmer VOV6 is the external service. The station started transmissions on 10 July 1997. Maps of the current division of Vietnam into provinces and districts are available at: <http://www.ambafrance-vn.org/accesdec/vn.htm> (Olle Alm, Alan Davies) [via ARC Infodesk e-mail]

MORE LUXEMBOURG EFFECT

Notwithstanding the recent comments in DXN or the comments below, I continue to believe that the second signal is indeed cross-modulation from 1467. The fact that many reporters have indicated that the second audio always remains steadily below the primary further supports my belief. Thought you might find the below of some interest. [Russ Edmunds]

Dear Russ & Erik, I just received this issue and read your "More on Luxembourg (Effect)" and your observations of TWR LW & MW transmissions. Our complete transmission schedule is available on the TWR web site: www.twr.org under "tune in" under the listing for CIS, Europe, No. Africa, ME & C. Asia. Our present schedule from Radio Monte Carlo, Roumoules, France includes: 1467 kHz, 1 MW Northeast (25 degrees) 0345-0415 UTC in German. Note that the transmitter usually comes on well ahead of this and then starts with the interval signal and announcement just before the scheduled broadcast. 216 kHz, 2 MW (315 degrees) 0243-0258 UTC in French. RMC continues after this transmission with their own programming. These two transmitters are at the same site and the antennas are about 1 kilometer apart. The actual carrier on and off times can vary depending on the operators at the transmitter site. 1467 kHz, 1 MW is also on daily 2200-2215 in English and on Sunday and Mondays extended from 2215-2245 UTC. I remember reading about the Luxembourg Effect back in the 50s. When I was with TWR - Bonaire (1966-1993) we had several listeners make observations about it in regard to the 800 kHz, 500 kW transmissions. I suppose most of the MW DX'ers know that the Bonaire station is now using a 100 kW solid state transmitter on 800 kHz with a new antenna system specifically for Caribbean, and So. American listeners. (The web site lists their schedule also). Isn't radio and propagation an interesting subject?! [Chuck Roswell, K2MGL, TWR Frequency Coordinator]

BANDSCAN FROM CYPRUS

Bandscan from Kyrenia, by Tim Bucknall (from Medium Wave News (UK) e-mail list)

153 NTWK 1, Bechar Good Night 6/5/01 TB
 162 RFI, Allouis, Fair Night 6/5/01 TB
 171 Medi-1, Nador Fair Night 6/5/01 TB
 180 TRT-2, Polatli // 93.1, 1062 Fair Night 6/5/01 TB
 183 Europe-1, Saarlouis poor Night 6/5/01 TB
 207 UR1, Kiev, late night nx yl in ukr Excell Night 6/5/01 TB
 225 Polskie R, Raszyn F Pks Night 6/5/01 TB
 225 TRT-1, Van Ex Wk Night 6/5/01 TB
 243 TRT-1, Erzurum, // 97.0, 96.4, 1017, 558 F Night 6/5/01 TB
 252 RTA, Tipaza F Night 6/5/01 TB
 261 BNR, Plovdiv, Political phone-in G pks Night 6/5/01 TB
 540 Kossuth R, Solt Excellent Night 6/5/01 TB
 549 BSKSA, Qurayyat Huge Day 6/5/01 TB
 558 TRT-1, Denizli Poor Night 6/5/01 TB
 558 CYBC-1, Paphos Poor Day 6/5/01 TB
 558 ERTU, Cairo Poor Night 6/5/01 TB
 567 ORTAS-1, Adra Good Day 6/5/01 TB
 576 NTWK-A, Tel-Aviv Huge Day 6/5/01 TB
 585 AA Unid. Could be anything really! (T.M Ritola suggests Iran) Good Night 6/5/01 TB
 603 CYBC-3, Lefkosia Huge Day 6/5/01 TB
 621 ERTU, Batra Huge Day 6/5/01 TB
 630 Unid, via Cukurova TX, N Cyp, not // TRT-1, conducting test transmissions in Turkish with Low Mod, Giving out FM freqs in Ankara and Izmir Huge-Local Day 6/5/01 TB
 639 BBC, Ladies Mile Good Day 6/5/01 TB
 657 Tel-Aviv, Usual Phone ins Huge Day 6/5/01 TB
 666 ORTAS, Sabboura Good Day 6/5/01 TB
 675 PBC, Ramallah, Lots of phone ins and short songs, Distinctively tinny Audio, should be fairly easy to recognise if ever hrd again Excell Day 6/5/01 TB
 693 CYBC-1, Limassol Huge Day 6/5/01 TB
 702 Al-Quds Radio, Huge Daytime AA, Huge Day 6/5/01 TB
 720 BBC, Ladies Mile Good Day 6/5/01 TB
 747 ORTAS, Damascus Good Day 6/5/01 TB
 756 Dist AA, Noted one night only (presume this is the former LBN CLA now based in N.ISR?) Good Night 6/5/01 TB
 765 TRT-1, Gaziantep Good Day 6/5/01 TB
 774 ERTU, Abis Good Day 6/5/01 TB
 783 ORTAS, Tartus Good Night 6/5/01 TB
 792 VOA, Kavalla Good Night 6/5/01 TB
 801 JRTV, Aijun Good Day 6/5/01 TB
 810 R Skopje, Skopje
 819 ERTU, Batra Good Day 6/5/01 TB
 837 R Liban, Amchit Huge Day 6/5/01 TB
 855 RRA, Bucharesti Good Night 6/5/01 TB
 891 TRT, Antalya Good Night 6/5/01 TB
 873 R Voice of Lebanon Good Day 6/5/01 TB
 927 Kol Isreal, Haifa, Usual Phone in Good Night 6/5/01 TB

963 CYBC-1, Lefkosia Huge Day 6/5/01 TB
 1017 TRT, Mundanya Good Night 6/5/01 TB
 1053 RRA, Iasi Good Night 6/5/01 TB
 1062 TRT, Diyabakir Good Night 6/5/01 TB
 1070 The Lefkosa tx listed in WRTH is 100% silent 6/5/01 TB
 1089 Vo Russia, Krasnodar Good Night 6/5/01 TB
 1098 Slovensko 1, Nitra Good Night 6/5/01 TB
 1098 Bayrak 1, Yeni Iskele // 90.6, signs off at 0000LT Fair Day 6/5/01 TB
 1134 Hrvatski R, Zadar, late night nx round up in HRV Poor Night 6/5/01 TB
 1143 Arutz Sheva, Int.W Good Night 6/5/01 TB
 1152 R Romania Actualitati, Cluj, Nx w yl Good Night 6/5/01 TB
 1161 ERTU, Tanta AA singing Huge Day 6/5/01 TB
 1170 R Kumru, Turkey (new?) excellent ID by OM in TUR Good Night 6/5/01 TB
 1206 NTWK-B, Haifa Huge Day 6/5/01 TB
 1224 Galei Zahal R, Beersheba Good Night 6/5/01 TB
 1233 RMC Middle East, Cape Greco in AA Fair pks Day 6/5/01 TB
 1251 V o T GT Homeland, Tripoli Good Day 6/5/01 TB
 1260 VOA, Rhodes Good Night 6/5/01 TB
 1287 Galei Zahal, Tel Aviv Good Day 6/5/01 TB
 1323 BBC, Zyyi Good Day 6/5/01 TB
 1341 ERTU, Cairo Good Night 6/5/01 TB
 1350 TWR, Kamo, Hebrew Px Good Night 6/5/01 TB
 1359 ERTU, Batra Good Night 6/5/01 TB
 1368 Galei Zahal R, Rosh-Pina Good Night 6/5/01 TB
 1377 R Bleue, Lille Good Night 6/5/01 TB
 1404 Galei Zahal R, Jerusalem Good Night 6/5/01 TB
 1422 SR1, Heusweiler Fair Night 6/5/01 TB
 1440 RTS, Jagodina Poor Night 6/5/01 TB
 1458 VOA, Flakke Good Night 6/5/01 TB
 1494 ERT, Rhodes Fair Night 6/5/01 TB
 1494 Bayrak Italian Service, Yeni Iskele, Never // with Bayrak Intl in EE on 87.8 & 105.0 Fair Day 6/5/01 TB
 1512 ERT, Chania Poor/Fair Day 6/5/01 TB
 1539 Arutz Sheva, 2nd Prog, INT.W Good Night 6/5/01 TB
 1548 VOA KWT in EE Poor Night 6/5/01 TB
 1548 Unid AA mx xfade VOA Poor Night 6/5/01 TB
 1557 Hrvatski R, Osijek Good Night 6/5/01 TB
 1566 Unid, Lively AA mx, Definitely not IRN Fair Night 6/5/01 TB
 1584 Unid, Hebrew tlk including some talk about Tehran Huge Night 6/5/01 TB
 1593 ERTU, Matruh Fair Night 6/5/01 TB

RADIO RELOJ STATION LIST

From the station web site, via Steve Whitt

570 Villa Clara 30 930 Ciego de Ávila 10
 610 Trinidad 1 930 Santiago de Cuba 1
 760 Ciudad de La Habana (Emergente) 1 940 Central España, Matanzas 10
 760 Caney de las Mercedes, Granma 10 940 Holguín 10
 790 Pinar del Río 30 950 Ciudad de La Habana 10
 850 Isla de la Juventud 1 950 Mayarí Arriba, Santiago de Cuba 1
 860 Baracoa, Guantánamo 1 960 Cienfuegos 1
 870 Sancti Spiritus 1 960 Guantánamo 10
 910 Bolondrón, Matanzas 5 980 Bayamo, Granma 1
 920 Moa, Holguín 1 1010 Las Tunas 5
 930 La Jaiba, Matanzas 1 1270 Camagüey 10

Ever wonder what an effective verie request letter looks like? NRC member Eric Loy, who currently works for WDWS, forwarded to DX News a copy of the letter below sent to the station in 1945 by former NRC publisher Ray "Pop" Edge. Note the detail, polite tone, and wealth of information for station personnel to use! -pls.



NATIONAL RADIO CLUB
 HEADQUARTERS AT BUFFALO, NEW YORK

PLEASE REPLY TO:
 RAY B. EDGE
 325 SHIRLEY AVE.,
 BUFFALO 15, N.Y.

NOVEMBER 14 1945

Radio Station W D W S

CHAMPAIGN, ILL/

Gentlemen:

I am pleased to report reception of your station heard on NOVEMBER 14 1945 (FREQ TEST)
 from 4:15 A.M. to 4:30 A.M. CENTRAL STANDARD Time on 1400 kilocycles.

C.S.T. Items and announcements heard on this broadcast are as follows:

4:15-00 AM CAME ON THE AIR SAYING THIS WAS WDWS IN CHAMPAIGN, ILL ETC AND THAT THE MUSIC WAS BY CHARLIE SPIVAK AND HIS ORCHESTRA AND SAID THAT THE MUSIC IS BY TRANSCRIPTION, THE FIRST SELECTION PLAYED HAD THE VOCAL BY A WOMAN, NO TITLE GIVEN.
 4:18-00 AM THIS IS WDWS AND GAVE TIME AS 4:18 AM AND MORE MUSIC FOLLOWED.
 4:19-30 AM WDWS, W-WILLIAM ETC AND GAVE THE TIME AS 19 MINUTES AND 35 SECONDS AFTER 4 AM AND SAID WE CONTINUE WITH CHARLIE SPIVAK AND HIS ORCHESTRA AND THE SELECTION WAS THE "ATCHSON-TOPEKA AND SANTA FE" AND HAD MALE VOCAL
 4:21-45 AM WDWS W-WILLIAM ETC AND OPERATES ON 1400 KCS BY AUTHORITY OF THE F.C.C. AND FOR THE COMMERCIAL RADIO EQUIPMENT CO IN KANSAS CITY, MO AND ASKED FOR REPORTS OF RECEPTION AND ADDRESS THEM TO THE CHIEF ENGINEER. THEN MUSIC FOLLOWED, NO TITLE GIVEN.
 4:25-00 AM SELECTION "I'LL BUY THAT DREAM" WAS PLAYED, HAD FEMALE VOCAL.
 4:27-00 AM BROKE IN WITH THIS IS WDWS ETC AND ABOVE SELECTION CONTINUED.
 4:29-00 AM ANNOUNCED- WDWS W-WILLIAM ETC OPERATING ON 1400 KCS AS AUTHORIZED BY THE F.C.C. AND BEEN ON THE AIR FROM 4:15-4:30 WITH A FREQ CHECK FOR COMMERCIAL RADIO EQUIPMENT CO IN KANSAS CITY, MO AND THIS IS JACK BAUM AND AGAIN ASKED FOR REPORTS AND THEN SAID THAT YOU WILL NOW LEAVE THE AIR TO RETURN AT 7 AM AND THEN GAVE THE TIME AS 4:30 AM CENTRAL STANDARD TIME, THEN GOOD MORNING.

MR. BAUM:

DEAR SIR, IF THE ABOVE REPORT IS CORRECT I WONDER IF IT WOULD BE TOO MUCH TROUBLE TO VERIFY THIS REPORT ON ONE OF YOUR STATION LETTER-HEADS. MY REASON FOR ASKING IS THAT I HAVE VERIFIED YOUR STATION BEFORE AND RECEIVED A VERIFICATION CARD, NOW I WOULD LIKE A STATION LETTER HEAD TO GO WITH THAT IN MY FILES.

Receiver 1939 SCOTT 23 TUBES Signal Strength COULDNT THANK YOU.

Antenna INVERTED "L" = 60 FT LONG-30 FT HIGH-RUNNING NORTH-SOUTH WITH LEADIN OFF NORTH END.

Interference YES FROM CJSO ON 1400 KCS IN SOREL, QUE ON WITH A DX PROGRAM FOR OUR CLUB. YOU WERE TIPS FOR A WHILE THEN CJSO TOOK OVER AND COVERED YOU.
 Temperature 42 Weather CLOUDY /HOWEVER BOTH COULD BE COPIED MOST

I shall be pleased to hear from you in reply to the above report at your convenience, and to receive your verification of my reception for which return postage is enclosed. Sincerely thanking you,
 I am

REPORT NO 912-A

Very truly yours,

Ray B. Edge
 325 SHIRLEY AVE.,
 BUFFALO 15, N.Y.

Testing Two "KAZ" Squashed Delta Antennas

By John Bryant

I was really excited when veteran MW DXer Neil Kazaross began using the EZNEC antenna modeling software to optimize various large loop antennas for MW DX use. As far as I know, most of the previous work with K9AYs, etc, has been optimized for the 160 meter radio amateur band.

The first design that Neil actually constructed was what he has been calling a "squashed loop." This design, with a 1 to 4 "aspect ratio," is one that the modeling software shows to reject low arrival angle signals from the backside even better than the classic equilateral pennant/delta. The dimensions of the loop were 10' high by 40' long. For convenience, I have come to refer to this antenna as a "KAZ-10x40" or just the KAZ.

I've operated a four-loop K9AY antenna for two years now, both in my winter home in Oklahoma and at my summer cottage on Orcas Island north of Seattle. I'm interested in finding an even better antenna than the K9AY for use in both locations. In Oklahoma, I DX Mexican MW stations and the primary concern is the rejection of unwanted co-channel signals. Gain is not so important, since signal levels, in general, are quite high during the prime DXing hours. In the Pacific NW, my main interest is DXing Trans-Pacific MW signals. There, gain is king, since the majority of those very weak signals are almost alone in between the 10 kHz channels of the North American stations and since Trans-Pacific conditions are often extraordinarily quiet.

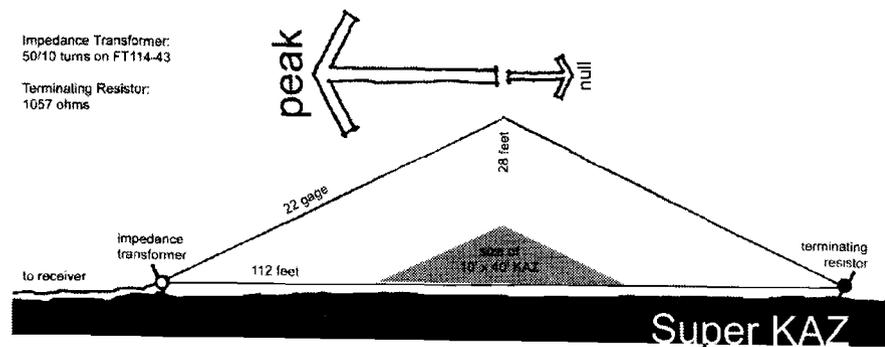
I've tested quite a few antennas over the years, often with well-known Lowfer, Bill Bowers. He has a wide array of laboratory-grade equipment. We've both pretty well concluded that it is impossible to measure the actual F/B ratio of an antenna on MW. We usually work in the very middle of the day to eliminate as much ionospheric skip as possible, but we still have great difficulty finding stations that are totally alone on their channel to use in the tests. Even when there seems to be no other station "in the null" of the target, the antenna is still likely receiving several weak carriers, thus partly filling in the null and reducing the measured F/B quite significantly over the absolute value determined by the antenna configuration. We've found that doing direct A/B comparison tests between two or more antennas simultaneously tends to give us a more useful idea of which antenna is performing best. Since I my semi-permanent K9AY is in a pasture with plenty of room to spare, I decided to try both methods of testing.

My K9AY is a classic equilateral delta, 28 feet on a side, with the lower wire about 1.5 feet above ground. My KAZ-10x40 was mounted on a piece of ABS plastic pipe, with the apex at 11 feet and the lower (40 foot) wire at about 1 foot above ground. The KAZ-10x40 was constructed of multi-strand 12 ga. wire and terminated with 885 ohms of resistance. The impedance transformer was hand wound on an Amidon FT-114-43 (10 turns and 44 turns). The two terminations were attached to the antenna with banana plugs so that the ends of the KAZ could be swapped without actually moving the loop itself. The coax antenna leads enter my shack where I can switch instantaneously between the K9AY and the KAZ. Signal strengths were measured with my Ten Tec 340 that has an S-meter which is calibrated in dBm as well as S-units.

For initial testing, I selected 10 stations in located in Southwest Oklahoma or in/near Northeast Oklahoma. These stations were on both ends of the dial and were generally in a direct line diagonally across the state with me in the middle. The antennas pointed right down the diagonal line.

TESTING FRONT TO BACK RATIOS & RELATIVE GAIN: K9AY vs. KAZ

Unfortunately, five of the ten stations had a fairly strong co-channel when the primary station was nulled: GREAT for DXing, but impossible for F/B measurement. Four of the remaining five stations were running less than 20 dB above the noise floor when peaked. When nulled, they went into noise, of course, but that doesn't really indicate an accurate F/B ratio. I was able to do a reasonably accurate F/



B ratio only on KGGF, 690 in Coffeyville, KS. The K9AY provided a 20 dB ratio and the KAZ-10x40 did 23 dB. I trust the validity, though not the level, of this reading. KGGF is exactly in line with the antenna, to my NE, and puts an S-9 plus signal here via a directional pattern. It is important note, though, that there is a 250 w. ND station directly off the SW end of the antenna (KPET in Lamesa, TX). It is very likely that this station, though not audible during my F/B measurement on 690 KGGF, was probably acting to "fill in the null" during the test. How much did it contribute? Who knows, though 8 to 10 dB does sound reasonable to me.

During the Front-to-Back testing process, I was able to record accurate "relative gain" figures on eight of the ten stations, while they were directly off the front of the antennas. My figures varied between 10 and 15 dB more gain for the (unamplified) K9AY over the (unamplified) KAZ-10x40. Also refer to more formal gain measurements later in this article.

"IN USE" COMPARISON TESTING: K9AY vs. KAZ

When comparing the two antennas during prime time DX hours in the evening and early morning, things got really interesting. The signal levels were high enough that it was impossible to tell the difference between the native gain of the two antennas "by ear," I had to look at the S-Meter. In about 80 to 90 percent of the cases, the content and quality of the two signals was identical, as well. In that other 15 percent or so, the KAZ out-performed the K9AY!

For instance:

1510 kHz. has WLAC, Nashville and XEQI, Monterrey at about equal distance from me. Looking toward Monterrey, the KAZ must have less side-lobe than the K9AY, because the XEQI signal was always clearer on the KAZ, even when I attenuated the K9AY by 10 dB to equalize the gain of the two antennas.

700 kHz. has nearly unnullable WLW on it. Pointed southwest, mostly away from Cincinnati, The K9AY gave me a signal of -80 dBm, while the KAZ provided a -103 dBm, much weaker. If you factor in the 10 dB or so of difference in native gain of the two antennas, it appears that, in this instance, the KAZ nulled WLW by an additional 13 dB! What's more, for the first time ever, I could actually listen to a station co-channel with WLW! While writing the first half of this article, I enjoyed listening to XEDG, 700 kHz. Radio Romantica in Hidalgo del Parral, Chih. With the KAZ, Radio Romantica was in the clear about 50% of the time and in a jumble the rest. The K9AY can manage to "hear" the Mexican about 2/3 of the time, but always rather far beneath WLW. One of the nicest things about the KAZ that both Kazaross and I have noticed is the ease of shifting its direction. The next morning, I took 5 minutes and shifted the KAZ 25 degrees more toward east-west to get WLW in the exact rear null and now I often listen to Radio Romantica totally undisturbed!

Some examples of equal performance of the K9AY vs. KAZ:

580 kHz. Both antennas eliminated semi-local WIBW in Topeka, KS and revealed XEMU, Piedras Negras running at "about S-8." GREAT WORK!

780 kHz. WGN puts in an above S-9 signal here at night. With both antennas turned to the southwest, XEMF, Montclova, Coah. ran "about S-6" with WGN about 95% gone.

Both of the later two tests were done with the S-meter covered... I could tell no difference "by ear" between the two antennas and just estimated the signal strength.

The "Super KAZ"

After reading a draft of the first half of this article, antenna guru K6SE cautioned that gain is not really an issue in a receiving antenna since actually hearing the signal was dependant upon the signal-to-noise ratio rather than the absolute gain of the antenna. There is an old truism which states that "if you can hear the basic band noise well, you'll hear any signal peaking above that band noise even better. Of course, that is true, as far as it goes. However, it's been my experience that there are more occasions than people realize where the absolute gain of a receiving antenna is the limiting factor. Mostly, these occasions may arise when you are listening to a very quiet band, with a very quiet receiver. Since I'm using a new Ten Tec 340 and since I'm fortunate enough to live away from virtually all man-made noise (hey, it's a big cow pasture!) I was very interested in finding out if the 40' KAZ was "gain-limited" in any meaningful way.

About a week ago, I built "Super KAZ," a 28'x112' version of KAZ, using 22 gage wire and one of the fine 10 meter telescoping fiberglass masts from Germany. Using the much smaller gage wire, Neil figured the impedance at about 1060 ohms. I ended up winding a new impedance transformer (50 turns vs 10 turns on a FT-114-43 Amidon toroid) and boosting the far-end resistor to 1057 ohms.

While testing the smaller KAZ at mid-day, I had noticed several rather weak signals coming from the southwest (the center of gain) seemingly all alone on their channels. Further, there were no strong signals on immediate adjacent channels and my daytime MW conditions are as near noise-free as it gets. So, this seemed a perfect opportunity to model the conditions that I R*E*A*L*L*Y care about: that marvelous 90 minutes, centered on dawn, when (on the Washington coast) the band noise often drops to near zero and the whole of East Asia opens up for MW DXing.

Expiring? Time to renew? Not sure when? Need to call or e-mail someone? Check the back page - it's all right there!

Gain Does Seem to Matter

Working about mid-day, I was able to find six stations at threshold audio levels on the 40' KAZ. Two were located at the low end of the band, two at the middle and two at the top. I put the KAZ adjacent to the Super KAZ on my antenna switch and began to compare. In every instance, the apparent signal-to-noise ratio was *significantly better* on the Super KAZ. In other words, the S-meter showed a much stronger signal on the Super KAZ.... as expected.... but, there was also a very significant improvement in the quality of the signal. All or almost all of the "band noise" left the signal on the Super KAZ. I rechecked all of my connections and thought about the whole thing for a while. Since the basic signal-to-noise ratio of an antenna is related to its sensitivity pattern and since the pattern (but not the gain) of the KAZ and the Super KAZ should be identical, the 40' KAZ must be "gain limited" under the specific conditions tested. In other words, what I was hearing on the 40' KAZ was **not** band noise, but rather the noise floor of my receiver! I added about 10 dB of amplification to the KAZ signal and attenuated the Super KAZ a like amount; this pretty well equalized the apparent gain of the two antennas. As expected, the KAZ signals remained much noisier than the same previously marginal signals when received with the Super KAZ.

Final Gain Comparisons

To complete the study, I ran final gain comparisons between all three antennas, again at about mid-day. The K9AY is listed both first and last in the following chart:

Daytime Gain Comparisons
K9AY vs KAZ vs Super KAZ vs K9AY

Station	K9AY	diff.	KAZ	diff.	Super KAZ	diff.	K9AY
540 Monterrey	-93	11	-104	21	-83	10	-93
930 Okla. City	-57	14	-71	22	-49	8	-57
1050 Lawton	-92	20	-112	25	-87	5	-92
1320 Clinton	-97	13	-110	20	-90	7	-97
1460 El Reno	-84	17	-101	23	-78	6	-84
1520 Okla. City	-56	14	-70	21	-49	7	-56
MEAN		14		22		7	

K9AY is a 28' delta, KAZ is 10' x 40', Super KAZ is 28' x 112'

I also rechecked the front-to-back ratios of each KAZ antenna, again at high noon, again using KGGF, Coffeyville, KS, 690 kHz. as my target. This time the KAZ measured only 18 dB (it had previously measured 23) while the Super KAZ measured 23 dB of F/B. The differences in the two measurements of the 10x40 KAZ simply reinforce the vagaries of measuring F/B ratios on MW, even at high noon on a carefully selected station. I have noticed real differences in the day-to-day daytime propagation here at the solar peak. My guess is that the station in Lamesa, Texas was filling in more of the null as I noticed that XEWA on 540 was actually audible at good levels at mid-day, very unusual for my location. What the test did show, unequivocally, is that the Super KAZ had a F/B ratio at least as good and probably somewhat better than the KAZ, at least as I've constructed them.

The F/B ratios of these two KAZ designs ought to be identical, I think. Probably, too, the termination resistor of the smaller KAZ is not quite the correct value. Neil calculated the gain difference between the two versions of the KAZ at 17 dB, where I measured 23 dB. That, too, argues that my small KAZ is not quite operating at the optimum.

CLOSING REMARKS

Although I intend to run many more tests of the Super KAZ and a mid-sized KAZ in the Pacific Northwest this summer, I think I've come to at least a few useful findings:

1) The useable directivity of the 40 foot KAZ is at least as good and probably just a bit better than my classic K9AY at both the top and bottom of the band. That's great news, since the KAZ is so much smaller/cheaper. Neil designed the 40 footer as small as he dared, hoping to develop an antenna that could be erected in an urban back yard, a rooftop or even in a large attic.

2) The classic K9AY outgains the 40 foot KAZ by just about 12 to 14 dB. I measured this before I read the upload where Andy Ikin was quoted as saying that an increase in cross-sectional area of a loop by double gets ya about 12 dB of gain. The area of the KAZ-10x40 is 200 sq.ft. the area of the classic K9AY is 350 sq. ft. Later, Kaz calculated the difference between my two antennas and got 10 dB. How 'bout that... It pleases me that my measurements and science come close to agreement... adds confidence about my process and about the prediction models.

3) Given the relatively high signal levels at night, the 12 to 14 dB difference in gain between the K9AY and the smaller KAZ was ALMOST NEVER perceivable in the audio. When I covered the S-meter for a while, I simply couldn't tell the difference between the two antennas, most of the time. Occasionally, as discussed above, the KAZ was actually superior - due to reduced backside slop. It also pleases me that this very small KAZ, a real "urban DXer's" antenna, can perform on a par with the

K9AY for almost all real-world DX situations.

4) H*O*W*E*V*R..... In the Pacific Northwest, under those marvelous dawn conditions on medium wave, I need all the gain that I can get. The K9AY is pretty non-competitive with Beverages out there without its 10 to 13 dB of switchable amplification... and I'd really like more native gain from the KAZ... so, out there, I'll darn sure be trying the Super KAZ as a potential Beverage beater!

Obviously, a good deal more work needs to be done to optimize both the K9AY and the KAZ for MW DXing in various parts of the US and abroad. A number of questions come to mind:

1) What is the smallest KAZ that will not be "gain-limited" even at the bottom of the broadcast band? Is there any theoretical work available on this???

2) What happens to a K9AY when one goes to the full 1 to 4 KAZ aspect ratio? The one undeniable advantage of the K9AY configuration is the ease of loop switching arrangements.

3) Will the added gain plus the excellent front-to-back ratio allow the 120 foot Super KAZ to compete with Beverages on the West Coast at dawn? Truly, I suspect not, though the F/B may really help us in DXing the hard-to-hear Hawaiian channels and the Trans-Pacific stations where the 9 kHz. per channel and the 10 kHz. per channel rhythms coincide.

4) I wonder what a phased array of two KAZs of about 15 x 60 and spaced about 250 feet apart would look like. I can just fit that in my Okie cow pasture..... hummmm.

5) Speaking of phased arrays, I just purchased one of Gerry Thomas' new Quantum Phasers and it has been love at first sight. I can routinely and easily lay at least 45 dB of null on local pests during the day. Night operation of any phasing unit is much more of an art form, of course. While I was testing the F/B of the two KAZ designs against KGGF, I phased the two of them against each other while they were pointed directly away from the station. The total F/B of the system was 55 dB! That's taking an S-9 + 20 dB signal just about down to the noise floor and in a cardioid pattern at that.

Neil Kazaross' work modifying the K9SE delta is certainly pointing the way to some VERY useful antennas for us all and has led to a lot of fun for me. BRAVO, Neil!

Pennant and Kaz Antenna Tests

Mark Connelly, WA1ION

This article is a follow-on to John Bryant's recent article "Testing Two 'Kaz' Squashed Delta Antennas" (reference 1) and my article "Pennant Antenna with Remote Termination Control" (reference 2). At my home location in Billerica, MA during April, 2001 I installed a Kaz design antenna, named for developer and noted international medium wave DXer Neil Kazaross. After having taken some test data on it, I took this antenna down and installed a Pennant antenna of a similar configuration to the one used in my tests at West Yarmouth, MA in July 2000. For both antennas I used coaxial feedline and the Vactrol termination control scheme detailed in my previous Pennant article. Both antennas were configured so that the terminator was on the west end, since interference in the southwest to northwest sector is generally what I'm trying to null. Figures 1 and 2 show the shape and size of the two antennas that I evaluated.

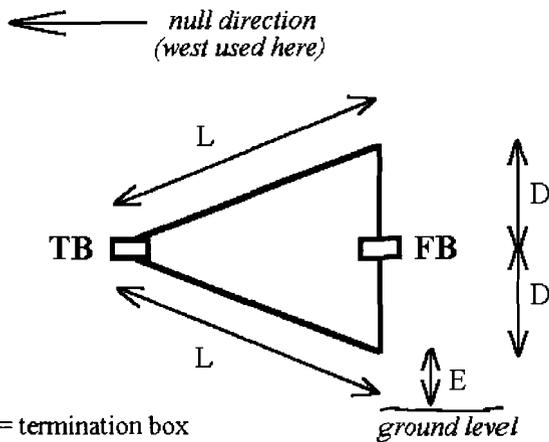
For nulling / peaking set-ups on both antennas, the adjustable termination resistance was indirectly "measured" by recording the DC voltage present at the arm of the control potentiometer and then computing the resistance based on measured values that I included in Table 3 of my first Pennant article (reference 2). When a voltage fell between measured voltage-versus-resistance points, I used an Excel sheet to interpolate R values linearly. Maximum termination resistance, over 20K ohms, occurs at 0 volts at the arm of the controller potentiometer (i.e. no current to the LED part of the VTL5C4 Vactrol). Minimum resistance, about 54 ohms, occurs with 10 volts at the pot arm. After the voltage goes through a series of RF chokes and dropping resistors en route to the termination, the voltage actually "seen" at the Vactrol's LED is about 2 VDC; this gives a current flow of about 25-30 mA there.

Pennant Observations

With the antenna placed for optimum nulling to the west, termination resistances in the adjustment range of 1K to 3K produced nulls of 8 to 24 dB. A 15 dB null was typical. Some nulls took a signal below the level of local electrical noise (running about S2 to S3), or below the level of another co-channel station, or below the "slop" from an adjacent channel station. In those cases, I did not enter a null depth value in the Excel calculation table. Stations in or near the null bearing (west) had peak signal values when the termination was set to one of the end scale values: 54 ohms, or greater than 20K. Most of the time, for stations in the southwest to northwest sector, the minimum termination value of 54 ohms "de-nulled" the signal to the greatest extent.

Stations close to a right angle to the plane of the antenna - north or south in my case - nulled best with termination resistances between 54 ohms and 1K. Null depths were shallower, about 3 to 12 dB typically. Because resistance values dialled up for stations north or south were similar, the pattern produced was likely figure-of-eight rather than cardioid at those settings. Peak pick-up of these right-

"PENNANT ANTENNA"



TB = termination box

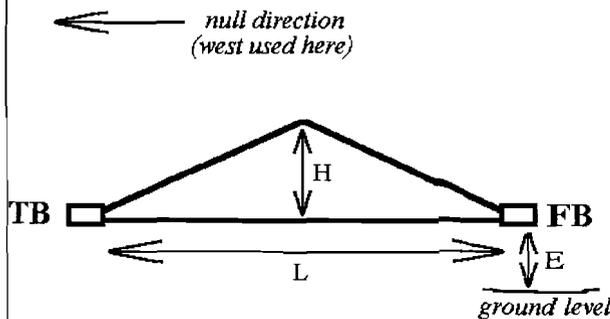
FB = feedpoint box

D = distance from feedpoint box to top or bottom = 2.15 m (7 ft.)

E = elevation of lowest point above ground = 1.5 m (5 ft.)

L = length of sloping section = 9.15 m (30 ft.)

"KAZ ANTENNA"



TB = termination box

FB = feedpoint box

E = elevation of base above ground = 1 m (3.3 ft.)

H = base-to-apex height = 4 m (13.1 ft.)

L = base length = 16 m (52.5 ft.)

angle stations was usually at maximum termination resistance (> 20K).

Nulls of stations in the desired pick-up area (the northeast to southeast sector) were, as expected, very shallow: typically 0 to 7 dB. Variation was often hard to observe. Minimum signal pick-up generally coincided with minimum termination resistance. Maximum signal strength characteristically occurred at maximum resistance; however, at values that worked for west-nulling (e.g. 1K - 3K), signal strength of easterly stations was close to the achievable maximum.

Kaz Observations

The Kaz Antenna operated very similarly to the Pennant with the following distinctions:

(1) Null depth was SLIGHTLY (~ 1.5 dB) better in the desired southwest to northwest "kill zone". The spreadsheet showed 16.6 dB to be a typical null-depth value. Some nulls as good as 28 dB could be obtained.

(2) Termination resistance required to effect a null was somewhat higher than on the Pennant. For stations on close to westerly bearings, typical termination resistance values were in the range of 1.4K to over 8K. This performance may have been the result of the antenna being fairly close to the house and to its own coaxial feedline as well as to another coaxial line coming from the sloper.

Comments Applicable to Both Antennas

The Vactrol remote termination scheme is a MUST!! I'm amazed at the great results

John Bryant had with a single fixed termination resistance value. I feel that you are going to have to adjust your termination resistance over a range of at least 500 ohms to 5K ohms unless you have these antennas constructed in a perfectly open area away from houses, power lines, coaxial lead-ins, other antennas, metal masts, and maybe even trees. That applies even if you only want to null stations on bearings within +/- 30 degrees of the design direction. I feel that the ability to "slew" the null over a much greater bearing range is a nice side benefit of the Vactrol system. Admittedly nulls more than 30 degrees away from the design direction aren't maximum depth, but they can still be useful. As far as phasing goes, setting up two Pennant or Kaz antennas at a spacing of 1/8 to 1/4 wavelength is the best way to go, but if you have to position them closer, either orient them differently or make one different

from the other by using different termination resistances. Minimum resistance (even a dead short) to terminate one of them would yield a minimal null where something like 1K on the other antenna would produce a substantial null. Phasing two antennas set up this way could be very useful.

These terminated loops are somewhat more susceptible to local electrical noise pick-up than a conventional balanced (tuned or broadband) loop is. Place the antenna in a relatively quiet area and things should be OK.

Signal capture (sensitivity) of both the Pennant and Kaz antennas, as configured here, was very similar. I did not use an amplifier, though one having about 20 dB gain is seriously recommended - especially for rural DXers - because the signal levels obtained from a Pennant or Kaz antenna of the sizes I tried is about 20-23 dB lower than that from a 30 m (100 ft.) sloper via 4:1 transformer.

Both antennas, because of the adjustable termination resistance, were often superior to the sloper in reducing nighttime skip from domestic stations in the southwest to northwest design sector. I could even make a dent in "superpests" WPTR-1540 and WQEW-1560, two of the most difficult stations to null here at night. Around local midnight, reception of numerous high band stations from Spain and France was usually about the same (in terms of audibility if not S-meter level) when I switched between the "workhorse" Euro-sloper and the Pennant or Kaz antenna under test.

A full set of the Pennant test data is available in a PDF format (reference 3). The complete Pennant-versus-Kaz Excel sheet is obtainable in a downloadable ZIP file (reference 4).

The table below demonstrates the performance of the Pennant and Kaz antennas on a short list of stations monitored under daytime groundwave conditions at Billerica, MA.

Pennant versus Kaz Antenna Tests: a sampling of stations

DAYTIME BANDSCANS - 19 & 27 APR 2001 - BILLERICA, MA - (GC= 71.221 W / 42.533 N)

Sorting order is by bearing (degrees clockwise of true north)

Bearing degrees	Dist. Km	Freq. kHz	Call	State	Pnt peak dB o/0	Pnt Null dB o/0	Pnt PK-N dB	Pnt Null R ohms	Kaz peak dB o/0	Kaz null dB o/0	Kaz PK-N dB	Kaz Null R ohms	Sloper max dB o/0
173.25	28.00	1600	WUNR	MA	57.0	52.2	4.8	54	58.0	49.2	8.8	314	86
176.77	12.96	1150	WAMG	MA	68.0	56.0	12.0	275	68.0	57.0	11.0	444	93
185.81	84.46	630	WPRO	RI	40.8	26.4	14.4	432	43.2	27.0	16.2	551	60
186.36	83.77	920	WHJJ	RI	45.6	39.6	6.0	524	42.0	34.8	7.2	707	58
187.90	28.29	850	WEEI	MA	75.0	62.0	13.0	618	72.0	61.0	11.0	1135	99
207.63	35.51	890	WBPS	MA	56.0	46.2	9.8	1060	58.0	43.2	14.8	2285	81
207.63	35.51	650	WJLT	MA	44.4	34.8	9.6	1172	49.2	33.0	16.2	1920	66
212.68	32.08	1200	WKOX	MA	65.0	52.8	12.2	942	63.0	56.0	7.0	1833	93
212.90	32.02	1060	WBIX	MA	75.0	61.0	14.0	1141	72.0	61.0	11.0	2110	96
229.78	282.65	880	WCBS	NY	39.6	25.2	14.4	2096	40.2	12.0	28.2	8460	52.2
235.28	59.84	1310	WORC	MA	49.2	38.4	10.8	1250	50.4	40.2	10.2	1570	71
241.92	19.25	1120	WBNW	MA	64.0	52.8	11.2	1250	62.0	49.8	12.2	2608	91
241.94	66.34	830	WCRN	MA	58.0	36.0	22.0	2993	60.0	43.2	16.8	8383	81
242.97	34.12	1470	WSRO	MA	50.4	32.4	18.0	1154	51.6	30.6	21.0	1408	72
246.39	77.09	760	WVNE	MA	46.2	24.0	22.2	2154	51.0	27.0	24.0	5611	67
269.21	42.24	1000	WCMX	MA	48.6	40.2	8.4	1558	46.8	39.0	7.8	2531	66
278.28	51.02	1280	WEIM	MA	54.0	42.0	12.0	1486	56.0	43.2	12.8	1877	80
320.03	18.07	980	WCAP	MA	65.0	53.4	11.6	787	60.0	56.0	4.0	999	94
320.61	33.06	900	WMVU	NH	49.8	43.2	6.6	951	50.4	42.0	8.4	>20K	77
334.85	46.38	1370	WFEA	NH	52.2	40.2	12.0	498	46.8	39.0	7.8	736	76
344.85	55.99	610	WGIR	NH	44.4	32.4	12.0	395	43.2	39.0	4.2	1197	71

AVERAGE OF PEAK-NULL (dB) IN 225 - 285 DEGREE DESIGN SECTOR:

Pennant 14.9
Kaz 16.6

AVERAGE OF PEAK LEVELS (SENSITIVITY BENCHMARK) (dB over zero):

Pennant 54.7
Kaz 54.5
Slopers 77.6

References:

(Note: Over time Web URL's may change. If this occurs, it may still be possible to retrieve the articles by going to known DXer Web sites or to search engines for links. Hard copies are likely to be available from the National Radio Club and International Radio Club of America reprints services.)

1. Testing Two 'Kaz' Squashed Delta Antennas, John Bryant, 2001
"http://members.aol.com/DXerCapeCod/kaztests.pdf"

2. Pennant Antenna with Remote Termination Control, Mark Connelly, 2000
 "http://members.aol.com/DXerCapeCod/pennant.pdf" and "http://members.aol.com/DXerCapeCod/pennant.htm"
3. Pennant Antenna Test Data – Billerica, MA, Mark Connelly, 2001
 "http://members.aol.com/DXerCapeCod/billerica_pennant_test.pdf"
4. Pennant versus Kaz Antenna Test Data, zipped Excel sheet, Mark Connelly, 2001
 "http://members.aol.com/DXerCapeCod/bscan_billerica_pennant_kaz.zip"

Appendix:

Independent Pennant Antenna Testing by Ken Alexander in Ontario, Canada
 From: "Ken Alexander" <kpathai@hotmail.com>
 Sent: Wednesday, April 25, 2001 8:26 PM

Pennant Antenna Review and Impressions

After several days of scrambling around to collect parts, build circuit boards, and package everything up I was finally able to spend this past weekend testing my first pennant antenna.

The antenna was modelled using EZNEC. The intention was to create an antenna that would cover the medium wave band and down into the longwave band. After experimenting with several different sizes I settled on sizing it by making the end 0.015 wavelengths high and the sides 0.05 wavelengths long at 900 kHz. I arrived at these sizes after trying several different sizes that were close. After a while I sat back and worked out what the sizes I had been using were as a fraction of a wavelength and realized I was close to 0.015 and 0.05. The first time I ran my model using these figures the model performance jumped. I was so pleased with the improved performance I decided to stick to this size. The dimensions work out to 16.4 ft high with sides 54.6 ft long.

Next I built the pennant termination control package as designed by Mark Connelly. I must say that Mark's control package worked very well. However, most of the nulls occur within 5 or 10 degrees of the rotation of the pot and it requires the delicate touch of a brain surgeon to find the deepest part of the null. I may try adding a second pot to act as a fine tuning control. Regardless, it did work very well!

The antenna was made of #14 stranded appliance wire and was erected between two trees at our weekend DXpedition site in Coe Hill, Ontario. As luck would have it, the trees placed the antenna at a bearing of 43 degrees, which aims the null directly at the Toronto/Hamilton area (at 223 degrees) and the forward lobe directly towards Europe, exactly what we are after! The bottom of the antenna's vertical section was approximately 3 ft off the ground.

The antenna was used on Friday night without an amplifier, but the results were gratifying! The LCD bargraph S-Meter on my AOR 7030 isn't conducive to accurate meter readings so I recorded what I could, and relied on what my ears told me. Stronger stations from Toronto such as CFTR-680 and CHWO-740 with S9+10dB signals could generally be nulled to S3 to S5, where they began to disappear in the background clutter. WJR-760 from Detroit, about 17 degrees off the null axis could be removed completely, of course it's a weaker station to begin with so it doesn't take as much to make it disappear.

On Saturday, I built an amplifier based on a Mini-circuits ERA-4SM integrated circuit amplifier and added it on. This brought signals up to the levels we are used to seeing from our 1000 foot beverage antenna, and finally I was completely happy with my Pennant antenna. I spent the latter part of Saturday afternoon going through the MW band and have listed my observations below:

Freq	Station	City*	Un-nulled	Nulled	Bearing**	Remarks
530	CIAO	Toronto	S8	S3	225	Barely readable
560	CFOS	Owen Sound	S6 to 7	S3+	270	-
590	CJCL	Toronto	S9+5	S6	224	-
610	CKTB	St. Catharines	S9+5	S6	213	-
640	CFYI	Toronto	S9+10	S7	224	-
680	CFTR	Toronto	S9+10	S5	220	-
710	CJRN	Niagara Falls	S7	S4	208	Gone in clutter
740	CHWO	Toronto	S9+10	S3	228	Almost gone
760	WJR	Detroit, MI	S5	S3	240	Gone in clutter
770	WTOR	Buffalo, NY	S8 to 9	S3	205	Gone in clutter
800	CJBQ	Belleville	S9+15	S9	185	-
820	CHAM	Hamilton	S9+10	S4	223	Barely audible
860	CJBC	Toronto	S9+10	S3	228	Gone in clutter
900	CHML	Hamilton	S8	S3	223	Gone in clutter
920	CKNX	Wingham	S7	S4	~260	Barely audible
950	WBBF	Rochester, NY	S7+	S6	180	Gone in clutter

980	CKRU	Peterborough	S9+20	S9	182	-
1010	CFRB	Toronto	S9+5	S6	228	-
1040	WYSL	Avon, NY	S7 to 8	S3	200	Gone in clutter
1050	CHUM	Toronto	S9+5	S5	226	Almost gone
1080	WUFO	Amherst, NY	S6 to 7	S3	202	Gone in clutter
1120	WMNY	Buffalo, NY	S6 to 7	S3	203	Gone in clutter
1140	WCJW	Warsaw, NY	S7	S3	?	Gone in clutter
1180	WHAM	Rochester, NY	S9+10	S7	180	-
1210	WPHT	Philadelphia, PA	S7	S3	~150	Gone in clutter
1250	CJYE	Oakville	S9	S6	231	-
1270	CJTN	Trenton	S9+10	S7	184	-
1330	WFNN	Erie, PA	S6 to 7	S3	213	Gone in clutter
1350	CKDO	Oshawa	S9+5	S7	223	-
1420	CKPT	Peterborough	S9+15	S7	182	-
1440	WJLL	Niagara Falls, NY	S8	S3	208	Gone in clutter

Notes:

- * - all stations are in the province of Ontario except as noted
- ** - bearings are degrees from true north, taken from Coe Hill, Ontario

Impressions:

I've tried several different antennas at our Coe Hill site in an effort to reduce local station interference so we could DX European MW stations. At different times these have included:

- * several loop antennas, both homebuilt and commercially built
- * 500 and 1000 ft terminated beverage antennas
- * combinations of 500 and 1000 ft terminated and unterminated beverages phased with a modified MFJ-1026 phasing unit
- * the same combinations of beverage antennas phased against an MFJ-1024 active antenna with the MFJ-1026 phasing unit.
- * a homebrew K9AY antenna that was wired completely wrong and was torn down only minutes after trying it

The best setup has been a 1000 ft terminated beverage as the main antenna phased against a 1000 ft unterminated beverage with the MFJ phasing unit. Both antennas are installed at a bearing of 45 degrees and approximately 100 ft apart (that's the best separation we can manage with the coax we have).

This setup is very effective but there are several problems:

- * using the phasing unit is a very slow and "fiddly" process. Our usual DXing technique is to load all of the European MW frequencies in our receivers' memories, then race through them looking for strong hets and stopping to tune in the loudest ones. Stations often fade out in the time it takes to phase out strong locals.
- * when the snow is deep, as it was this winter, laying out 1000 ft of wire in the bush is impossible (laying out two of them is twice as impossible!).
- * several of us aren't as young as we used to be and getting through the woods on a good day isn't as easy as it used to be.

The Pennant seems to be the answer to our problems. It has a nice, deep null, it can be set up in minutes, and nulling is simple compared to phasing. Propagation last weekend wasn't good enough to hearing anything more than weak carriers from Europe, but once the amplifier was installed the carriers were no weaker on the Pennant than they were on our beverage. This bodes very well for when the DXpedition Season starts again next September.

Final Note: The last thing I did last week before sneaking away from work early to head to our DXpedition site was to print out John Bryant's review of the KAZ. I read it after setting up my Pennant. Since returning I modelled the KAZ with EZNEC and am encouraged by what I find. Now that the electronics for the Pennant are built and working well the next thing I will try is the KAZ configuration! 73 - Ken

It may not be perfect ...
 but the NRC AM Log is, simply, the best there is because of your contributions. Why not make the next edition even better? Send all corrections and changes to
 Wayne Heinen - 4131 S. Andes Way - Aurora, CO 80013-3831, or nrlog@aol.com. Thanks!

DX'er's Notebook

Shared tips, topics, and Internet info

TOUGH STATES

Rick Dau <rdau36@yahoo.com>: This is an old thread, but I'll put in my thoughts. From three different locations here in Iowa (Oakland, Iowa City, Spirit Lake), I've managed to bag every one of the lower 48 states except Oregon, Maine, Vermont, and Rhode Island. I do have two tentative receptions of KWJJ-1080 from the mid-1990s, and a very tentative logging of the Lake Oswego station on 1640 from October 1998, but anything definite from Oregon continues to elude me. Only two catches from Idaho: KBOI, which seems to come in at sunset only during the last week of September, and KID-590's DX test from about 5 years ago. KDWN-720, KROW-780, and the Laughlin station on 870 are the only Nevadans to have made it here. Another one of those late September regulars is KGA, but anything else from Washington is very difficult, although I do have a much-cherished QSL from KOMO-1000 dated Feb. 1989, and was thrilled to get KWSU-1250 nearly two years later. Only New Hampshire loggings are both from DX tests, WNTK-1020 and the 1250 from Manchester. Have tried many times at sunrise for both WVMT-620 and WSKW-1160...one day, those WILL arrive, I'm sure of it.

Neil Kazaross <neilkaz@interaccess.com>: You'll get Oregon if you try for KEX 1190 at sunset near the ends of Sep/Oct/Nov. I'm a couple hundred miles east of you and can get them sometimes with WOWO phased. Have you ever heard Idaho 1620? My attempts have all failed.

Rick Dau: Neil, 1620 is actually pretty tough here, what with a 10 kW blowtorch on 1630 (transmitter is just 5 miles from my QTH) breathing down my neck, but I have been able to snare WTAW, WHLY, and KAZP here during those rare times when splatter from KCJJ is at a minimum. The Idaho station would be a dream catch for me. As far as Oregon goes...I have tried a couple of times to go after KXL-750 at sunset in late September, thinking that a station further down the dial would have a better chance of making it here, but WSB is just too strong. 1190 at night here in the winter is just a jumble between Fort Wayne and Dallas. I would hope that maybe KOAC-550 will do a CPC test for us folks again sometime soon.

Kevin Redding <amfmtvdx@qwest.net>: 1620 is heard here every night. KBOI is a morning listener here but they were almost 24/7 in the winter in AZ. Don't hear (KID-590) often but on occasion.

Neil Kazaross: Good to know that 1620 gets out. I hope to bag them come Sept prior to their sunset where they should be running 10 kW and Omaha only 1 kW.

Patrick Martin <mwdxer@webtv.net>: KDBZ-610-Portland has been operating for several months from the KEX site in SE Portland. They are ND 5/1 kW. They wanted 50 kW but the FCC said no. KXL-750 is directional to the West, but KEX-1190 is ND day, but directional nights. 1640 does not get out well, even with 10 kW. We had an apt. in NW Portland for a while. At 2 miles from their transmitter site, I could hear KDIA under them at night without any trouble. Their 1 kW sounded more like 250w and the 10kW days sounds more like 1 kW.

Willis Monk <wb5khd@inet75.com>: Rick Dau, I wonder where you are?, If you have QRM from Dallas and Ft. Wayne on 1190, Also from WSB-750.

In the middle and late 60's, I was in Charleston, SC and was hearing KOMO-1000 from Seattle, and did log KXL-750 when WSB would fade out. Being right at the ocean side help. The Caribbean was in nightly. As were Oregon, Idaho, California and Utah. Seems to be easier to hear the west coast from SC than it is from here in TN. I did have trouble hearing Montana, Arizona and Nevada and the plains states like Kansas, from Charleston, SC.

From here in southeastern TN, I have a hard time hearing WSB-750. The Braves games are on this station and WSB in weak here. Maybe I am too close.

What I would like to hear is Alaska and Hawaii from here in TN. I do have a QSL from KORL-650 but I was in Garland, TX when I heard it. WSM-650 Nashville is hard to hear here also. At night even the stations from Chattanooga are lost.

Rick Dau: Willis, I am in Iowa City, Iowa, in the eastern part of the state, and 1190 here at night, from sunset on, is usually a battle between WOWO and KJOL, or whatever call sign the Dallas station uses nowadays. On some evenings, KSVI in Beloit, Kansas and WHMT in Humboldt, Tennessee will visit my QTH. My Iowa City logbook shows no stations from Oregon or Idaho, just one from Nevada (KDWN) and two from Washington, KGA and KUJ, the latter on a DX test. From out east, I have just one from Delaware (WDOV's DX test from 1991), two from New Hampshire, two from Connecticut

(WTIC and WNLC), and two from New Jersey, WWJZ-640 and WJDM-1660. I could keep trying over and over at sunrise and sunset during the dead of winter for Oregon, Idaho, and the missing New England states, but I'm guessing that I'll have a better chance of hearing these on DX tests.

And we'll extend this to the international side of the issue:

Benjamin Dangerfield <ben-dangerfield@worldnet.att.net>: To Mike Battaglino and any others here in the Eastern U.S. Don't give up on New Zealand! When 4YA Dunedin was on 780 it put in a good signal here with only 20 kW when the frequency was clear. It's now on 810, so forget it, but there are many possible splits, and summertime might be a good time to try for them, when it's winter down there.

Michael P. Battaglino <Michael_P_Battaglino@newyorklife.com>: Ben, Thanks for "inspirational" message! :-). When I get to the new house in late June I'll be able to run a REALLY LONG (for me, anyway) wire along the property and in the woods behind it, so I'll give it a shot. If I were to catch something it would be THE highlight of my DXing career, never having heard NZ before.

Russ Edmunds <wb2bjh@nrcdxas.org>: But how long ago (read that less man-made noise, fewer stations) was that?

Bruce Conti <BACONTI@aol.com>: I heard French Polynesia (Tahiti) on 738 just last year, so it might be a challenge but not impossible with the right equipment (such as a high-end receiver like the Drake R8A/B and noise-reduced phased wire antennas). New Zealand would be on a similar bearing from here. The unstable solar activity might produce just the right conditions too. Local dawn/sunrise will be the best time to try.

David Gleason <amdavid@pacbell.net>: Another I remember making the East (Cleveland is in the east still, isn't it?) is, or was, Rotorua on 1000 with 10 kW. It was an occasional visitor after Seattle signed off in the early 60's. Not an issue of power but of a clear frequency.

Robert Foxworth <rfoxwor1@tampabay.rr.com>: Don't be in a real rush. Your chances will be much better in about 6 or 7 years when we are at the next solar minimum. I heard two NZ from New Jersey, 880 and 1000, well enough to verify, (+ 800), and both were in 1964, in December and March. I don't recall ever seeing such receptions in the Eastern US during years of solar maxima. I didn't hear such receptions in the 60's when solar activity was high. My next best results were in '73 and '74 (another minima) but by then co-channel problems were much worse. My 2NA-1510 logging was also in 1964. But then you might be the first to prove this wrong, and I hope you can do it.

Picking up from last time...

NOISE

Bruce Conti <BACONTI@aol.com>: If you can't install an outdoor wire antenna 20+ feet away from radiated noise sources, or you're limited to use of a loop antenna, then your best bet is to locate your receiver and antenna in a remote corner of the house. If you're in an apartment or condo with a balcony or porch, try locating a loop outside with varactor remote controlled tuning.

Indeed, there can be many sources of household noise. Look for so-called "vampire" devices that remain powered on even when not in operation. Anything that operates by remote control or with a digital clock is a vampire; it continues to use electricity, even when off. Remote-control TVs and VCRs, telephones powered by wall-wart transformers, telephone answering machines, microwave ovens, digital thermostats, motion detectors, garage door openers, etc. are all vampires that are running and consuming electricity 24/7. These vampire devices have recently made the headlines in California where electricity needs to be conserved.

Cable TV wiring can be a source of noise. Disconnect the cable at the coax T-connector located on the outside of your house, usually near the ground and attached to a safety ground rod. If the internal cable TV wiring in your house is a source of noise, then the internal wiring needs to be replaced with high-grade cable and connectors that don't leak RF.

My forced hot air furnace radiates severe noise whenever the blower fan motor is running. My noise-reduced antennas get rid of most if not all the noise from the furnace on mediumwave, and reduce the noise significantly on longwave. Switching to battery power reduces the noise further by getting rid of any conducted emissions created by the blower motor's current spikes. I don't have a basement, so the furnace is on the same floor as the radio room, thus my situation is probably similar to those with basement DX shacks. A portable receiver located within a couple of feet of the furnace will pick up deafening noise. If you're stuck in the basement next to the furnace, I would expect that a noise reduced antenna will eliminate most if not all the noise from the furnace or other utilities based on my experience.

Kevin Redding: And (cable TV) can be band covering and awful. This is my WORST problem. To make it worse all the cables in the whole neighborhood radiate this noise. Believe me, at the cost to replace it all, they will never change the wiring until it rots. Although (switching to battery power)

makes a huge improvement, its still not the whole story. There are lots of things that RADIATE the signal and not through the wiring. Still need to know a little more about the transformer and how its connected.

Bruce Conti: "Hey—what a great way to meet the new neighbors—wandering around my property with a radio and headphones pointing it at different things!" This is actually the best way to find a quiet location for a wire antenna! If you can't follow my "20-foot rule," then do a walk-around your property to determine the quietest location for an outdoor wire. Do both a day and night survey as noise pick-up may vary based on what might be activated in the neighborhood. Then your neighbors will really be talking when they see you throwing wires into the trees.

Michael P Battaglino <Michael_P_Battaglino@newyorklife.com>: Bruce, I'll have the trees to do it, too! A much bigger lot that goes way back away from the house and I do not have any houses behind me! I think (I hope) it will wind up being a good location.

Kevin Redding: OK Bruce I have done everything except the transformer. I will go looking for a Mini-Circuits models T4-1 or T4-6. I shunt the transformer across the shield and conductor of the coax outdoors at the antenna end. How do I get the antenna to pass signal to the coax. Do I just run loops around or through the transformer? Is it just a toroid with wire wrapped around it from the antenna and the coax fed end?

Would like to read the Feb issue of PopComm but the magazine is very rare in Arizona and I don't have access to the old Target DX stuff because I wasn't in the club yet. I am for anything that will kill some noise. Its pitiful here. I even get it on portables so I don't have much hope, but I will try anything.

Think you can post some more info on this since I don't have access to the items listed?

Bruce Conti: The transformer has four pins. Two pins are the low impedance windings which are attached to the coax. The other two pins are the high impedance windings which are attached to the antenna and ground.

Mark Durenberger <Mark@durenberger.com>: Kevin, have you tried a truly balanced loop such as the big Kiwa loop? Those things REALLY can make a difference!

Neil Kazaross: I have a Kiwa Loop and while it is less susceptible to noise than a random longwire or vertical it still picks up severe line noise unless set in the direction to null the majority of it. When I lived in a neighborhood in Rancho Bernardo, CA the area had buried wiring and little line noise. Here in IL my semi-rural area was VERY quiet until about 3 months ago when something happened to the power lines and they became exceedingly noisy much of the time. I'll check with the Ham who lives about 1/4 mile away from me and see if we can't both complain and get the power company out here.

Rick Shaftan <shaftan@ptd.net>: I have a problem with a phone line that makes using a loop difficult, plus the fax machine puts out a lot of noise. The computer isn't that bad.

John Sampson <jsampson@qwest.net>: In 45+ years of DXing, I have had a number of noise problems; some are solvable, some aren't. Current ones reflect comments by others and include:

1. Wife's computer - This is an Apple Power Book G2, the in line transformer gives noise at all times when connected to a hot AC circuit (have solved the problem in Minnesota with an in-line surge suppresser that can be turned off when the computer is not in use, fortunately, our power up there is rather bad and subject to spikes so I have been able to sell the concept; power is not as susceptible here in SCW and haven't figured out an ascetic way to put a suppresser in line yet). When her computer is turned on, I can't use the radio at all, squeals blanket everything.
2. Low voltage desk lamp - Even when connected to a half hot switch and off, this gives a motor boating effect all over the band. When on, is just as bad as the above computer. I have to unplug it from the power line to eliminate its noise.
3. Television Set - We have one of those vampire types (a Zenith), squeals at various frequencies when off, the only way to eliminate those is to unplug the set (I have connected an in-line extension cord with an on/off switch that I can use to depower the thing when DXing).
4. My computer - An Apple Power Book G3, not as bad as my wife's but still provides enough interference so that it needs to be disconnected from the power line when DXing.
5. Printer - Have an Epson here in SCW, which is somewhat noisy when off but in line, and an Apple 1200 in Minnesota, which is terribly noisy when off but in line; both need to be effectively unplugged before DXing.
6. Dimmer Switches - Have a number of these in the house in SCW (not my idea!); all need to be off before DXing.
7. Cable TV - As Bruce Conti says, a big RF leakier!, unfortunately, I have a line very close to the radio here in SCW.
8. Low voltage track lighting - Have this in Minnesota; when on, so much noise that I can't DX; when off, no problem. Did have one in another house that we owned in the early 1990s; I found, about the time that we moved, that it was my primary noise source when "off" (had dimmer switches that, even though "off", evidently were still in the power circuit and gave significant noise; when they

were on, forget DXing!).

9. Electric golf cart charger - I suspect that this isn't a common problem; however, we have an electric golf cart with an internal charger and when this is connected and charging, it's extremely noisy.

10. Clothes Dryer - When on, generates some noise (my listening area is very close to the laundry room); solution, don't do laundry (ha, ha).

11. All else- When we first moved to Sun City West, we were one of the few houses in our area and the band was very quiet. Since the area has built up, noise has increased significantly. Even when all of the noise sources in the house are turned off and the main breaker is thrown, I can put a portable radio by the incoming power line and get an annoying amount of noise.

As a test several years ago, I tried, in a table lamp, one of the florescent light bulbs that are being touted by the electricity providers as an energy saver. It proved a terrible noise generator and I pitched the ones that I had purchased.

In other houses, I've also noticed noise coming from furnace motors. Fish tank heaters were identified as a big problem, too, but haven't heard much about them recently.

It's my opinion that increases in electrical noise are a byproduct of "advancements" (and I use that term very loosely) in technology and that electrical noise is something that we DXers don't like but are going to have to endure. Unfortunately for the DXer, solid state controlling devices, florescent lighting, vampire stuff and Cable Television are a fact of life.

Patrick Martin <mwdxer@webtv.net>: I have been reading with interest about everyone's noise problems. Fortunately, I have very few where I live. I live in an area where all the power lines, cable, etc. are underground. However, the highway (101) is only about 500 feet from me and the power lines along the highway get noisy at times. I have lived here since 1981. One thing that interested me was the low noise level. Even though the houses in the area have doubled, the noise level hasn't changed much. My biggest problem has been my neighbors electric fencing. I do need a receiver with a noise blanker to remove than. Other than that the noise generally is almost zilch on MW & SW. On LW I do get more noise, but I rarely DX LW so it isn't a concern.

About 15 years ago my neighbor bought a fish tank and after a few weeks the arcing was noisy, so I asked her if I could clean the contacts and it worked. She moved about a year later and the noise was gone.

The new energy saving fluorescent bulbs are a bit noisy. The local power company was giving them away (2 of them), so I ordered two to try them out. They don't buzz, but do cause carriers. The radiation was only a few feet away on a portable. Maybe it is different here with everything underground. The radiation isn't bad. Also the ground is wet here a lot of the time so the grounding works well.

I have been going to move several times during the years, but in checking the DX and noise in the different areas I would rather stay here.

In the house there is one laptop that causes very little noise unless you are close to it, Web TV seems to be quiet except for the printer (HP) when in use. The sat. equipment is quiet enough too. Anything noisy

would go out the door pronto. No light dimmers or anything like that. By the way the two free bulbs I got are not in use.

All my antennas are connected with coax and matching transformers, so no noise pick up there either. I have had my share of noise and if I can control it I do. The power company (Pacific) has been very good in running down arcing lines on the couple of occasions I have needed some help.

Robert Foxworth <rfoxwor1@tampabay.rr.com>: A thorough list, with some surprising things on it. Another one I saw recently, which surprised me - a drop-in stove top for natural gas use. New ones don't use pilot lights, for gas conservation. Instead, there apparently is some sort of electronic circuit that senses when the front gas knob is turned, and operates an igniter. These things generate a constant sputtering-type RF noise. I was a victim of one when last living in NY.

Paul Smith, W4KNX <sunray2@gte.net>: Not quite on subject, but I have to comment. Those new energy saving fluorescent's with the electronic ballast operate at much higher frequency than the 1,200 flashes per minute the old ones did. We put a frequency counter on one and read about 35 kHz with all kinds of harmonics. I fix TV's amongst other electronics, and we have had problems with Infrared remotes not working where these lamps are used. They put out so much garbage that the remotes can't get over the interference.

Patrick Martin: How far did the harmonics radiate? The screw in bulbs I have tried here are not bad. Maybe because the utilities are underground. I do know the power company sent out thousands in Oregon and Washington free.

Russ Edmunds <wb2bjh@nrcdxas.org>: As I've said before, my shack is in the basement. I've done thorough checks of everything, both with the HQ-150 and loop and walking around with a portable.

The number one problem here is SCR dimmers and light-sensitive switches, including the sensors

for the garage door openers.

Number two is the televisions, although I have noticed minimal problems with the "vampire" issue, perhaps because one or the other is almost always on.

We have a server, and 2-3 computers running at any given time, and the server is actually on the same power circuit as my shack, but I notice no problems unless I put the portable within 18 inches of any of the equipment.

The igniter element in the dryer is worse than the one in the oven, and both are worse than any thing the furnace radiates.

But, I still do not understand how outdoor noise-reduced wires can have any effect on radiated energy which is picked up by the wiring of the receiver itself!

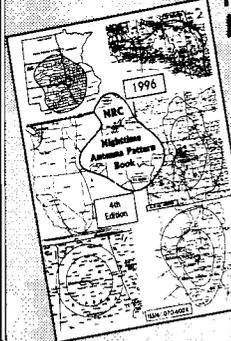
Benjamin Dangerfield <ben-dangerfield@worldnet.att.net>: Russ, I agree that light sensitive switches may be a main problem, but why garage door openers? Our openers don't even cause any radio noise even when the door is going up or down which is about a half dozen times a day.

Russ Edmunds: Not the openers themselves, but it's the motion sensors which are there for safety to protect children and small animals to prevent the doors from closing on them.

Rick Kenneally <woodlandview@yahoo.com>: Moving my listening station to a different part of the house farther away from our noisy electrical panels has really improved conditions on the lower end of the band, but it has also surfaced some other QRM sources. Our child-proof nightlights give off a wicked buzz when on, and my little Sony recording Walkman gives an interesting warble on certain frequencies. Finally, there is the unID neighborhood warble that is strong near power lines but from which you never quite escape.

I mention this because I was wondering if *DX News* could open up a section for reporting new QRM sources. Seeing as there are almost as many as there are radio stations, and that the challenge of identifying them is often greater than that of IDing stations, it seems that we could define a whole new branch of the hobby. Now, how to get them to QSL...

See you another month...



The NRC Nighttime Antenna Pattern Book, 5th Edition will be available by the end of June; advance orders are now being accepted. The NPB is the perfect mate to the NRC AM Log, as the NPB provides DX'ers with up-to-date maps of all (except Class IV) stations with nighttime operations. Convenient to use: 3-hole punched for standard binders. Only \$16.95 to U. S. and Canadian members; \$22.95 to U. S. and Canadian non-NRC members. Airmail to members: to Latin America, \$24.00; Europe, \$25.00; rest of the world: \$28.00. Order from: NRC Publications - Box 164 - Mannsville, NY 13661 (NY residents, please add sales tax)

The NRC AM Radio Log, 21st Edition, including cross-referenced...

Sold Out! However, advance orders for the 22nd edition (available Sept. 5) at the usual prices will be accepted.

Standard binders. Still only \$16.95 to U. S. and Canadian members; \$22.95 to U. S. and Canadian non-NRC members. Airmail to members: Latin America, \$24.00; Europe, \$25.00; rest of the world: \$28.00. Order from: NRC Publications - Box 164 - Mannsville, NY 13661 (NY residents, please add sales tax).



Confirmed DX'er Greg Myers gmym01@tampabay.rr.com, gmyers@floridadigital.net P. O. Box 20112 St. Petersburg, FL 33742-0112

Your successes in obtaining QSL's and other station items

This is my first attempt at doing something for the hobby- hope all goes well. When sending by e-mail, I will reply to your listings within 2 days so you know it got through. On with it!

- 560 KLZ Denver CO, confirmation letter in 2 days for e-mail report. V/s W.C. "Cris" Alexander, DOE. (Griffith—CO)
- 594 JOAK Tokyo JAPAN, f/d card in 45 days. V/s T. Yaguchi. (Martin—OR)
- 600 KCOL Wellington CA, f/d prepared card in 4 days after follow-up. V/s Carol L. Ward. (Wilkins—CO)
- 630 KXLI Opportunity WA, verie form in 12 days after a follow-up. V/s Bud Nameck. (Martin—OR)
- 730 CJNW Vancouver BC, verie form in 43 days. V/s Mark Friesen, CE. (Martin—OR)
- 740 CHWO Toronto ON, p/d card, station and ODXA info in about 3.5 months. V/s Brian Smith, QSL Mgr. (Myers—FL)
- 780 WPEV777 Tampa FL, Florida State Fair TIS. V/s Rick Vymlatil, Exec. Dir. (Myers—FL)
- 810 WHB Kansas City MO, prepared card in 20 days after follow-up #2. V/s Bob Muson. (Martin—OR)
- 820 XEMVS Mexicali MEXICO, n/d letter, prepared card, 5 promo CD's in 29 days for follow-up and \$1.00. V/s Pablo Brizuela, Cir-Gen. US address is PO Box 872125, Calexico, CA 92232. (Wilkins—CO)
- 870 WPRH240 Denver CO, f/d prepared card in 7 days. V/s L.O. Fenstemaker, Supt. (Wilkins—CO)
- 900 KCLW Hamilton TX, p/d e-mail in 19 days for written follow-up. V/s Charles Martin, Consultant. (Wilkins—CO)
- 950 CMCI Habana CUBA, Radio Reloj, 2-page n/d "Carta QSL" e-mail in 1 day for e-mail report. V/s Isidro Betancourt Silva, Dir. Gen. (Myers—FL)
- 980 WTEM Washington DC, f/d letter in 3 weeks after a follow-up. V/s Tod Castleberry, Dir. AM Operations. (Myers—FL)
- 990 KHBZ Honolulu HI, confirmation on report in 16 days. V/s Brian Loughison. (Martin—OR)
- 1020 KINF Roswell NM, f/d form letter in 17 days. V/s Gary Babcock (W5GNB). (Wilkins—CO)
- 1030 KCTA Corpus Christi TX, n/d e-mail in 1 day after an e-mail follow-up. Also, promised a letter and station "stuff" via snail mail- which of course has not showed up. V/s David Freymiller, OM. (Myers—FL)
- 1070 KFDI Wichita KS, confirmation on report in 20 days after a follow-up. V/s Norm Mullins, Eng. (Martin—OR)
- 1080 KRLD Arlington TX, f/d letter, KRLD microphone magnet in 1 mo. for 2 mint stamps. V/s Erik Disen. (Twiggs—CT)
- 1140 KCLE Cleburne TX, f/d letter in 9 days for follow-up. V/s Gary Moss, President. (Wilkins—CO)
- 1180 XEDCH Cd. Delicias MEXICO, n/d letter. Prepared card in 45 days for follow-up and \$1.00. V/s C. Carmen Meza Espinoza, Gerente. (Wilkins—CO)
- 1190 KJOI Dallas TX, letter in 5 days. V/s Bill Taylor, CE. (Martin—OR)
- 1197 JOWL Sapporo JAPAN, f/d card in 30 days. No v/s. Japan MW QSL #110. (Martin—OR)
- 1200 WQSL Ozark AL, p/d e-mail in 1 day for an e-mail report. V/s Fred Bacher. (Myers—FL)
- 1220 KLVZ Denver CO, same as 560-KLZ above. (Griffith—CO)
- WLSD Big Stone Gap VA, handwritten letter in 21 days. V/s Ray Church, DJ. (Martin—OR)
- 1270 WNOG Naples FL, f/d letter in 7 days. V/s Keith Stuhlmann, DOE. (Myers—FL)
- 1310 KBTK Corrales NM, p/d letter, stickers in 8 days. V/s Gerald Susoeff, CE. (Wilkins—CO)

630 CHED
AM STEREO RADIO

40

WVMC	Mount Carmel	IL	KEES	Longview	TX	KQAM	Wichita	KS	1540		
WCKY	Cincinnati	OH	KCLK	Clarkston	WA	WADR	Remsen	NY	KXEL	Waterloo	IA
KUIK	Portland	OR	1440			KSDR	Watertown	SD	WADM	Decatur	IN
WPTT	Pittsburgh	PA	WGEM	Quincy	IL	1490			WMCB	Martinsville	IN
1370			WEZJ	Williamsburg	KY	WNDA	Deland	FL	WTXY	Whiteville	NC
WCOA	Ocala	FL	WLXN	Lexington	NC	WSYL	Sylvania	GA	WBTC	Uhrichsville	OH
WAXE	Vero Beach	FL	WNPV	Lansdale	PA	WDBQ	Dubuque	IA	KGBC	Houston	TX
WWCB	Cory	PA	WKJN	Scranton	PA	WDAN	Danville	IL	1550		
1380			WAJR	Morgantown	WV	WZOE	Princeton	IL	KAPE	Cape Girardeau	MO
WLEL	Ormond Beach	FL	1450			WOMI	Owensboro	KY	WUTQ	Utica	NY
1390			KDMN	Buena Vista	CO	WRMT	Rocky Mount	NC	1560		
WBLL	Belle Fontaine	OH	WWJB	Brooksville	FL	WSTP	Salisbury	NC	WSQR	Sycamore	IL
WNIO	Youngstown	OH	WSTU	Stuart	FL	KOVC	Valley City	ND	WTOD	Toledo	OH
WTJS	Jackson	TN	WMVG	Milledgeville	GA	WGMF	Watkins Glen	NY	WFSP	Kingwood	WV
WKDR	Burlington	VT	WFMB	Springfield	IL	WAZL	Hazleton	PA	1570		
WRIG	Wausau	WI	WATA	Boone	NC	KYZS	Tyler	TX	WFLR	Dundee	NY
1400			WKXL	Concord	NH	WBYM	Hampton	VA	WPTW	Piqua	OH
WCOH	Newnan	GA	WDAD	Indiana	PA	WIGM	Medford	WI	WNKX	Centerville	TN
WIEL	Elizabethtown	KY	KBFS	Belle Fourche	SD	1500	W DEN	Macon	WKBH	LaCrosse	WI
WKNW	Sault Sainte Marie	MI	WLAR	Athens	TN	GA			1580	KWYD	Colorado
1410			WSMG	Greeneville	TN	1510	WPUT	Brewster	Springs	CO	
WDOV	Dover	DE	1460			WVAC	Norwalk	OH	1590	WXRSS	Swainsboro
WHLN	Harlan	KY	KMCA	Redding	CA	WVAC	Norwalk	OH	KWBG	Boone	IA
KDBS	Alexandria	LA	KENO	Las Vegas	NV	WAUK	Waukesha	WI	WCBC	Greencastle	PA
WDOE	Dunkirk	NY	WWKL	Harisburg	PA	1520			WCAM	Camden	SC
WPCC	Clinton	SC	WEMR	Wilkes Bare	PA	WLUV	Rockford	IL	1600		
1420			WRAD	Radford	VA	WMLM	Alma	MI	KDAK	Carlington	ND
KY			1470			KRHW	Sikeston	MO	WBLV	Springfield	OH
WACK	Newark	NY	WRGA	Rome	GA	WWKB	Buffalo	NY	WTTT	Tiffin	OH
WKSJ	Pulaski	TN	WPDM	Potsdam	NY	1530			1690		
1430			WBKV	West Bend	WI	WLSJ	Lapeer	MI	WPTX	Lexington Park	MD
KFIG	Fresno	CA	1480			WEYZ	North East	PA			
KTZB	Tulsa	OK	WRSW	Warsaw	IN						

Keep in mind that PRN covers ONLY those races held at Atlanta, Bristol, Charlotte, Texas, Las Vegas and Sears Point. Lead Announcers: Doug Rice and Mike Garow

Programs:

Fast Talk, hosted by Benny Parsons, Monday nights at 7:00 PM ELT

The Pit Reporters, Wednesday nights at 7:00 P.M. ELT

Garage Pass, daily 5-minute program, airing varies by affiliate. Web Address: www.goprn.com

Mojo Radio 640

from The Toronto Star, via Ginnie Lupi

On MOJO 640, it's all guys, all the time Betsy Powell ENTERTAINMENT REPORTER It's a station that aims to put "the stubble on the face of Canadian radio."

When MOJO Radio (AM 640) signs on Monday, it'll be the world's first 24-hour talk radio station exclusively for men, according to its owner, Corus Entertainment.

Market research showed there's an opportunity to serve a niche audience - males 25 to 54 - by providing a forum to discuss, debate and salute the things that matter to them most, Jim Johnston, general manager of Corus Radio Toronto, said yesterday after a raucous news conference at a downtown pub.

So what's on MOJO's menu? "Sex, gadgets, gear, cars, comedy, beer and babes," Corus promises.

True to form, a massive ad campaign will feature the station's "MOJO models," lingerie-clad blondes reclining on satin sheets and cozying up to stereotyped symbols of men's favourite things: power tools, baseball gloves and hot dogs.

The guy theme played out through yesterday's news conference, where a steady stream of Van Halen and Steppenwolf tunes filled the packed saloon.

Reporters were dispatched with black tool kits containing glossy men's magazines, a hockey puck, foam beer cooler and pocket wrenches. Tucked in were cardboard coasters, including one with a picture of an aforementioned MOJO girl that looks like an escort agency ad. On the flip side, a cryptic come-on: "She'll be anything you want her to be. Even a coaster."

Okay then.

The concept of "audio testosterone" wouldn't have flown a few years ago, said Johnston, credited as the architect of this soon-to-be airwave guyville.

"The climate has changed," he said. "People are a lot looser now, a lot more relaxed. It's not as important to be politically correct now. We're in the year 2001."

Did we mention sex?

"Guaranteed to keep guys abreast of everything," said a news release detailing the personnel. The after-midnight Mojo Sex Show, hosted by "Dr. Date" Rebecca Rosenblat, a Hustler magazine columnist, will dispense advice on issues of "the heart, gut and groin."

Sex talk will be of the hetero variety, apparently, as the station has no plans to target Toronto's huge gay community.

"Not at this point," Johnston said. "Who knows? We have to start here; we'll evolve the station in time."

The station hopes listeners will also tune in for jock talk, updates, scores and interviews with athletes and commentators. The station will broadcast live NHL, baseball and NFL games and wrestling. And yes, it wouldn't be a radio station without contests.

"Guy events," jokes Johnston. One promotion, The Guy Getaways, will offer prizes such as a golfing trip to Arizona. But there's a catch. To get the trip validated, a significant other has to give her permission on air. No wife or girlfriend? A mother will do.

Most on-air talent will be familiar to Toronto listeners. Wearing T-shirts in black and orange - the station's colours - they posed together for pictures yesterday, with the MOJO models, naturally. The lineup includes veterans Mike Stafford, John Derringer, Spider Jones and Scruff Connors. Howard (classman and Fred Patterson (The Humble and Fred Show) and Maie Pauts are jumping from "brother" station The Edge 102.1. (Corus also owns Q-107.)

Pauts, who will host a daily, two-hour magazine show from noon to 2 p.m., said she didn't realize how much she stood out until she gathered with her new colleagues for the photo-op.

"I'm not intimidated or bothered by that," she said later. "I think it's good they have women. Guys like women, and it is important for guys to have some kind of women's perspective on issues, too."

Nor are MOJO's myriad "guy topics" meant to exclude women listeners, Johnston said.

"We feel, with this station, that a number of the issues we're going to be dealing with - health, fitness - will have unisex appeal. Women will also check the station out to find out what guys are thinking."

Advertising executive Karen Cameron will be open ears. To a point. She buys radio airtime for advertisers and sat in on yesterday's kickoff.

"Definitely, interest-wise, I'll tune in," she said, "just like I did Howard Stern - until I could take no more."

Johnston predicts a radio station for women won't be far behind. He also suggests MOJO will siphon listeners from other AM stations, and "a lot is going to come from men who aren't listening to radio right now."

They weren't listening to Talk 640. MOJO's precursor has been trailing in the ratings.

It's no secret AM has lost listeners in droves since the '80s. But Fred Patterson said he hopes his road trip with the guys is good for AM's fortunes.

"Let's just say maybe we'll help revive it."

How to place mail orders:

Write to NRC Publications - P. O. Box 164 - Munnsville, NY 13661-0164. Enclose check or money order. NY residents, please add state and local taxes. Please allow 3-6 weeks for shipping.

IRCA Mexican Log, 6th Edition, 2000

The IRCA MEXICAN LOG log lists all AM stations in Mexico by frequency, including call letters, state, city, day/night power, slogans, schedule in UTC/GMT, formats, networks and notes. In addition, stations that have changed frequency since 1996 are cross-referenced on the old frequency. The call letter index gives call, frequency, city and state. The city index (listed by state, then city) includes frequency, call and day/night power. The log has been completely updated from the 1998 edition and carefully cross-checked by IRCA members. This is an indispensable reference for anyone who hears Mexican radio stations. Size is 8 1/2" x 11" and three-hole punched for easy binding.

Prices: IRCA/NRC members - \$8.00 (US/Canada/Mexico/sea mail), \$9.00 (rest of the Americas airmail), \$9.50 (Europe/Asia airmail), \$10.00 (Australia/New Zealand airmail). Non-members: add \$2.00 to the above prices. Order your copy today, in US funds payable to Phil Bytheway, from

IRCA Bookstore - 9705 Mary Ave. NW - Seattle, WA 98117-2334

Fabricating Impedance Transformers for Receiving Antennas

By John Bryant

With the proliferation of local neighborhood noise sources and the growing popularity of wire antennas in configurations other than the inverted L, coaxial cable has become the antenna lead-in of choice for most radio hobbyists. Since the impedance of most commonly available coax is either 50 or 72 ohms and since many wire antennas exhibit impedance of 400 to 1000 ohms or more at the feed point, directly connecting the coax to a wire antenna invites very significant signal losses due to the impedance mismatch. Given this situation in the listening hobbies, it has been a mystery to me why impedance transformers and baluns for receiving antennas have not been more commonly available on the retail market. Further, the few transformers that are available are offered at around \$60.00. While this may be a fair price, considering labor, profit and retail mark-up, *the parts cost for a good weather-tight balun or impedance transformer is well under \$10, paying retail for the parts!* If you own a soldering iron and can make even a semi-reliable connection, you really ought to consider "rolling your own" baluns and transformers. The total labor time is about one hour per unit and the construction is quite simple. Personally, I make mine in front of the TV on Sunday afternoons. Essentially, while making transformers, I'm paying myself \$50 per hour to watch the Dallas Cowboys have yet another terrible season. Not a bad deal, at all.

Selecting Components

You need to obtain some connectors, a weather-tight box, and the guts of the transformer. For the wire connectors, I have come to use the type of binding posts that also accept a banana plug in the top of the post. That way I have several choices of connection methods at the antenna. These parts are all available at Radio Shack. I have fallen in love with one special form of banana plug, though, that is only available from professional parts houses (Mouser #17HR549, #17HR550). The shaft of the male plug has a stiff wire running down it and it makes a VERY reliable connection by actually plowing a shallow furrow in the metal of the female banana socket. The connector for the coax is a normal chassis-mount coax connector of your particular flavor. More and more hobbyists seem to be switching to BNC connectors for their ease of use and better weather characteristics, though only professional-class receivers yet use this type.

Some DXers swear by all-metal boxes for this application. If you fall into this camp, the cast aluminum Hammond boxes are my choice. I buy mine through Antique Electronics Supply (<http://www.tubesandmore.com/>). Those who use metal boxes are usually attempting to maintain the system as RF sanitary as possible, preventing stray signal pick-up by grounding the box, usually to the coax shield. However, the majority of DXers I know, and most manufacturers, use cast plastic enclosures. They reason that the stray signal pick-up is minuscule, compared to the size of the antenna, and let the ease of using the plastic boxes, and their significantly lower cost, make that decision. Personally, if I'm in one of my rare obsessive/compulsive phases, I use metal; if I'm "normal," I use plastic. I've never been able to distinguish between the two designs in actual use.

All of the impedance transformers with which I am familiar are based on some sort of ferrite core with windings around it. Several well-known East Coast DXers favor manufactured transformers from Mini-Circuits. And just wire this tiny transformer in the appropriate box and add connectors. The very small 9-to-1 Mini-Circuit transformers are perfect for converting the 450 ohms of beverages and many other wire antennas to 50 ohm coax. I used these small units for several years, before swearing off them entirely. DXing on the prairies North America generally exposes wire antennas to a good bit of static electricity. Both Bill Bowers and I had several random failures of the Mini Circuits units, probably due to the hair-small wire used to wind the transformer. The main problem was that the failures were often partial, making us think - for several nights running - that conditions were really bad. What a waste! After the third such failure, I returned to the tried-and-true "roll your own" techniques based on relatively larger ferrite toroids. These techniques were originally taught to me over a decade ago by Nick Half-Patch, Technical Editor of IRCA and published in a co-authored article in *Fine Tuning's Proceedings 1988*.

Once the decision is made to roll your own using ferrite toroids, there are just two decisions left: the size of toroid and the specific ferrite mix to be used.

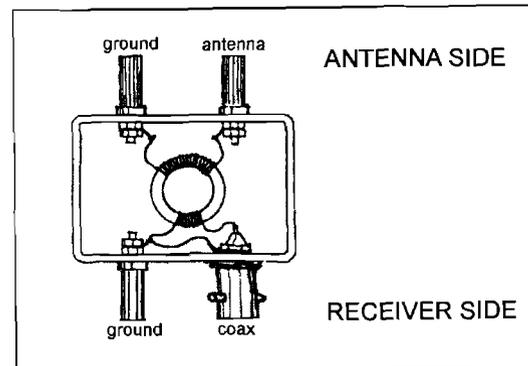
In North America, at least, most of us use the toroids from Amidon. These may be purchased over internet directly from the manufacturers representative at (<http://www.bytemark.com/amidon/>). I've used three sizes of cores over the years. The smallest that I have used is a 1/2" diameter toroid (Amidon's FT-50) which looks like a half-eaten Life Saver candy. To get the proper turn count through the donut

hole, you must use very fine magnet wire and a large needle. I found the whole operation overly fussy and I was also concerned about static electricity burning the hair-thin wires. I saw no advantage in using cores this small and I don't recommend them now. The largest toroids that I've used measure 1.4 inches in diameter (FT-140.) These work great, but they are a little heavy and expensive for my taste. I recommend the middle size, 1.14 inch diameter donuts which are large enough to handle easily and I use 30 gage insulated wire from Radio Shack (# 278-501, 502 or 503) for the windings. This wire is small enough to make a neat close-wound coil of the proper turns-count on the toroid and yet the wire is large enough and stiff enough to be easy to handle.

The Amidon web page has a great deal of technical data to assist you in selecting the proper ferrite material. However, all of that stuff is rather arcane and will take you a while to wade through. What it comes down to is this: **if you want to work from .5MHz to 30 MHz, select "Type 43" material. This material also gives "reasonable" performance on LW. If you are certain that your interests are limited to LW, MW and Tropical Bands (.2 to 15 MHz), then "Type 75" ferrite is what you need.**

If you've followed me this far through this technical thicket, it's probably time to take a break.

Let's hunker down in the shade and let me scratch out an illustration to show you where we are headed:



Calculating The Turns Count

Let's calculate the turns count for impedance matching a beverage antenna with an impedance of 450 ohms to 50 ohm coax. Because this is a step-down transformer, the primary (attached to the antenna) will be the larger winding and we'll deal with that first.

The first formula to use will give us the desired inductance of the primary winding:

$$\text{desired } L \text{ of winding} = X_L / 2\pi f$$

where L= Inductance in millihenries

X_L = Reactance in ohms f = Lowest frequency of operation in kHz

X_L may be found by multiplying the impedance of the antenna to be matched by a factor of 4. This X_L would be

4 x 450 ohms or 1800 ohms. To make things easy, lets use 500 kHz. as our lowest frequency of operation.

So, L of the primary winding = 1800/2 x 3.1416 x 500 or .573 mH

Now that we know the inductance (L) needed for the primary winding, we can apply the following formula to determine the number of turns needed for the primary winding.

$$N = 1000 \sqrt{L/A_L}$$

In narrative, this formula should be read: Number of turns required (N) is equal to 1000 times the square root ($\sqrt{\quad}$) of the Inductance (L) divided by the constant A_L .

The constant A_L is determined from the Amidon technical literature and takes into account the RF qualities and the size of a Type 43 toroid that is 1.14 inches in diameter. The A_L for the FT-114-43 is 603.

So, working the formula above, $N = 1000 \sqrt{.573/603} = 1000 \times .030825 = 30.8$ turns, use 31

The turns count for the secondary winding (connected to the coax) may be determined by the same method or by knowing that the impedance ratio of a transformer is the turns ratio squared. We are trying to get from a 450 ohm antenna to a 50 ohm coax, so the impedance ratio is 9 to 1. The turns ratio must then be 3 to 1... so, the secondary winding is 10 turns. Working it out with the formula yields 10.2 turns.

By golly, we have waded clear through the technical thicket. Burn any blood sucking leeches off your arms and legs, rest up in the shade for a while and pop a cool one. You deserve it!

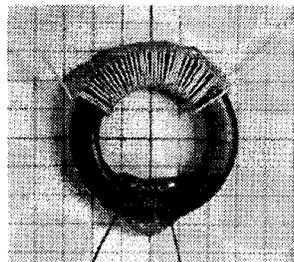
If you want to match one of the currently popular delta or pennant antenna designs, determining the turns count follows the same process. The impedance of pennants and flags is somewhat dependant on the size of wire used and the height above ground. Most seem to fall in the range of 900 ohms to 1000 ohms, so a 950/50 (or 19-to-1) step-down transformer would probably work well for most of this type antenna. The same process as that above can be used to determine the turns count. To save you the effort, here is a chart of turns counts for both Type 43 and Type 75 Material:

Turns Counts

Based on FT-114 Amidon Toroids

Antenna Type	Antenna Impedance	Ferrite Type	Prim. Winding	Sec. Winding
Beverage	450 ohms	43	31	10
Beverage	450 ohms	75	13	4
Delta	950 ohms	43	45	10
Delta	950 ohms	75	20	5

The windings should be placed on the toroid in a "close wound" fashion, with the primary and secondary windings spaced as far apart as possible on opposite sides of the donut.

*Typically Wound Toroid Winding*

Note the series of hot glue dots on the edge of each coil. I use this strategy to keep the windings in place.

IN USE

About all that we have left to discuss is various arrangements for placing the transformer between your antenna and coax. Unfortunately, it is at this point that we leave the world of science and begin to deal with sorcery. It turns out that there are a lot of ways to hook these things up, and most of the controversy centers on various grounding schemes. There are two main circuits to discuss:

Single Wire Antennas

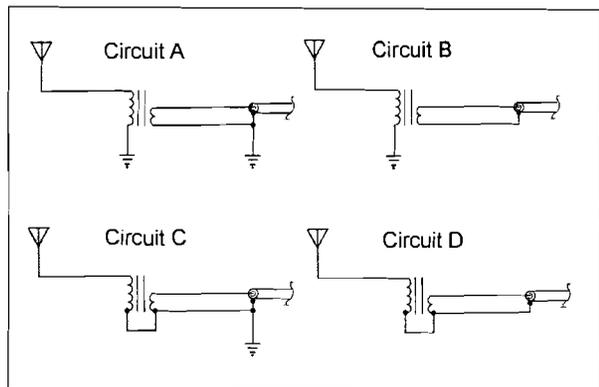
There are three or four choices of circuit arrangements here and the best one for your application probably should be determined by careful experimentation. The "scientifically superior" arrangement is probably that shown here as "Circuit A." The second side of each of the coils is connected *separately* to ground. Signal current and static electricity flows from the antenna through the larger coil directly to ground. Current between ground and your receiver is induced into the smaller coil. The main argument against Circuit A is that individual grounds must be separated by at least 12 to 15 feet to be electrically separate, or so I've read. Due to connection through the ground itself, what is probably

being accomplished, electrically, with Circuit A is actually Circuit C. Circuit B is the one that Nick Hall-Patch has used with excellent results for years. Grounding of the coax shield, if any, is accomplished at some distance from the transformer.

Circuit C recognizes the problem of possible interaction between the two "separate" grounds and simply connects the grounded side of both coils and the coax braid to a *single* ground at the antenna feed point. This is the circuit that I use when the feed point of the antenna is within

three or four feet of the ground and the grounding conditions are good. After writing this article and having Nick pound his approach through my thick skull yet one more time, I think I'll be switching my approach to Circuit B.

Circuit D is the arrangement that the "magnetic balun" manufacturers normally use. The grounded sides of the coils are connected together and hooked to the braid of the coax. The grounding that is so vitally necessary for signal flow is accomplished through the coax braid and left totally to the user. This is the circuit that I use for random wire antennas and I ground the braid at least once between the antenna and the receiver. I will confess, though, that I've used Circuit D with good success on occasion with an ungrounded coax and an ungrounded receiver. I know that I'm taking a chance with static electricity build-up, and I wonder whether all of the signal energy is reaching my receiver; but there



you are: my guilty little secret.

Loops

Luckily, with loops like the KAZ delta, etc., things are fairly straightforward. The larger coil of the transformer is connected directly (in series) into the loop. One side of the smaller coil is connected to the center conductor of the coax. The other side of the smaller coil may be connected to the coax braid, may be grounded, or both. If the loop feed point is within a foot or so of the ground, it is probably best to ground the second side of the smaller coil. However, if you have a poor grounding situation, or the feed point is in the air, the smaller loop ought to just be connected to the coax braid.

Closing Remarks

About the only issue left to mention is physically attaching the transformer to the interior of the box. I'm rather sure that most constructors will have a favorite method. Mine is to simply hot glue the transformer securely to the plastic box. In some cases, I have even totally encapsulated the transformer in hot glue. I have sometimes wondered if I wasn't somehow affecting the magnetic qualities of the transformer with the hot glue. Bill Bowers has run some quite sophisticated bench tests concerning this and assures me that the qualities of the transformers are unaffected by hot glue.

Well, there you have it. For those of you interested in making \$50.00 per hour rolling your own matching transformers while watching your favorite sports franchise get blown away yet again, order some cores, make a quick trip to Radio Shack or your junque box and HAVE AT IT. May the forces (magnetic) be with you!

National Radio Club and the DX Audio Service Present Pittsburgh 2001 - "A Radio Odyssey!"

Join us for the NRC/DXAS Convention in Pittsburgh, PA, at the Greentree Radisson from Friday, August 31, through Monday, September 3, 2001.

Formerly the Greentree Marriott, the Radisson hosted NRC Pittsburgh 1990. The city and the Allegheny County area have many great features including the Pittsburgh Pirates' brand-new home for baseball, PNC Park.

Registration: Convention registration is \$40 and will include a Saturday night buffet, Sunday morning breakfast, snacks, soda, and beer. Convention activities include speakers, a DX Quiz, the infamous NRC Auction, tentative station tours including KDKA, and more!

Your registration must be made by check or money order and made payable to "National Radio Club" and sent to John R. Malicky - 995 Shadycrest Road - Pittsburgh, PA 15216-3046. Please send auction items to the same address.

Room Reservations: For early arrivals, five rooms have been reserved; 25 rooms are reserved on Friday and Saturday, and 20 on Sunday. Reservations will be held only until August 10 for single- or double-bed rooms at \$69 per day. Reservations are guaranteed after 4 pm by a first-night room deposit or a major credit card. Make your reservation directly with the Greentree Radisson by calling 1-800-333-3333.

Travel: Pittsburgh International Airpost (which opened October, 1992) has daily flights by many airlines including USAir, and service includes a complimentary hourly shuttle service to and from the Radisson. The Greyhound Bus Station is downtown three miles from the hotel. By car, the Radisson is just off the Parkway West or I-279 (From I-79, take I-279 north to Exit 4, "Greentree/Mt. Lebanon Exit", turn left at the traffic light onto Greentree Road [Rte. 121], turn left at the first traffic light onto Mansfield Avenue; go through two lights, and then look for the Marriott Drive "Radisson" hotel sign and turn right. From the turnpike, I-76, take I-376 through downtown, which becomes I-279 south to Exit 4 "Greentree/Crafton Exit" and bear left onto the "Crafton Exit", then turn left onto Mansfield Avenue; go through two lights, and then look for the Marriott Drive "Radisson" hotel sign and turn right. See you in da 'Burgh!



Pittsburgh ... someplace special!

Pavek Museum of Broadcasting

By Bill Moser

What AM station broadcasts with a tenth of a watt on 1200 kilohertz? The answer is KPAV, located at the Pavek Museum of Broadcasting in Saint Louis Park, MN (a southwest suburb of Minneapolis). The building address is 3515 Raleigh Avenue. The phone number is 952-926-8198. The www. address is pavekmuseum.org.

Joe Pavek had an old radio he didn't want to throw out. That was the genesis of a collection of radios and related equipment which has evolved into the Pavek Museum of Broadcasting. A visit is well worth the admission price of \$5.00 for adults and \$3.00 for students and senior citizens.

The museum has a preservative function. It is home to one of the best collections of radio, TV, audio and broadcast equipment in the world. More than a thousand radios, transmitters and TV sets from the first half of the 20th century are on display. KPAV broadcasts from an authentic 1950s era studio. The equipment for this was donated by KWOA in Worthington, MN and by other area stations.

The museum has an educational function. Each year, an average of 5000 school students are introduced to electrical and broadcasting concepts through class visits and Saturday morning events. Boy Scout and Girl Scout troops are often hosted on Saturday afternoons. The kids get to go "on the air," broadcasting news, music and an NBC-style 3-note chime to the adjacent parking lot!

The museum also provides a hobby function. The Minnesota DX Club (boasting some 3 dozen members) has meetings here on a regular basis. Amateur operators can enjoy making world-wide contacts from the state of the art ham shack. One of the most extensive treasuries of technical service

literature ever assembled is also available for reference.

Our tour was hosted by Associate Director Tom Mittelstaedt. He knows our hobby, and agreed to accept the donation of my AM, FM and TV verifications when I can no longer enjoy them. The museum already has amateur and short wave verifications for those interested in seeing them.

The Pavek Museum of Broadcasting is open Tuesday through Friday from 10 a.m. to 6 p.m. and Saturday from 9 a.m. to 5 p.m. Groups are asked to make reservations in advance of their visit. This is a non-profit organization supported by admissions and contributions. A newsletter is printed and mailed regularly.

Washburn Crosby Company

Gold Medal Floor

Gold Medal
Radio Station

TWIN CITIES, MINN.

September 23, 1924

Rt. Rev. Austin Dowling,
244 Dayton Avenue
St. Paul, Minnesota.

Dear Bishop Dowling:

We should like you to attend the formal opening of the GOLD MEDAL Station W L A O, Minneapolis-St. Paul, to take place Wednesday evening October 1, at seven o'clock, in the Directors' Room of the Washburn Crosby Company on the second floor of the Chamber of Commerce Building, Minneapolis.

The opening program will consist of broadcasting by remote control a series of musical and vaudeville numbers during the serving of the dinner following which a program of speeches by those in attendance at the dinner will be broadcast.

The GOLD MEDAL Station occupies a unique position in the field of radio broadcasting by reason of the splendid cooperation of the business interests of the Twin Cities through the St. Paul Association and the Minneapolis Civic and Commerce Association with the Washburn Crosby Company.

That the operation of the Station will carry out to the fullest degree the expectations and hopes of the Northwest is the sincere desire of its management.

Recognizing the necessity for strict adherence to schedule in broadcasting the program, it is hoped that you may find it possible to be on hand promptly at the hour indicated.

We will indeed appreciate your early acceptance in order that proper arrangements may be made for receiving you.

Very truly yours,

Harry Hill
Manager

GOLD MEDAL STATION
MINNEAPOLIS-ST. PAUL

HV:#4

HILLS AT MINNEAPOLIS, BUFFALO, CHICAGO, KANSAS CITY, LOUISVILLE, GREAT FALLS, MALISPE

Musings

of the Members

Thoughts from NRC members ... the opinions expressed in this column are those of the individual writer and do not necessarily reflect those of the editors, publishers, or the National Radio Club, Inc.

Dave Schmidt NRCMusings@aol.com

P. O. Box 3111

Scranton, PA 18505-0111

Times are local per Muse; submit double-spaced only.

Ed Kowalski - 10430 Collingham Drive - Fairfax, VA 22032 edrk@atrpower.net

It's been years since I've sent in a MUSE, so a reintroduction is in order. I'm 60 years old, married with one son, and have been DXing for something like 50 years, using a succession of receivers, starting with a Zenith console, through the Hammerlunds, Nationals and Sonys. Believe it or not, the most DXing fun I had occurred when I was the poorest, in my teen years! I was using an 8-tube Philco 37-650 with two home-built (that was the operative word in those days) preselectors in series (one used a 6AK5, the other a 6SN7) with a Heath Q-Multiplier thrown in for good measure. From my location in Philadelphia, using a CB ground plane antenna and a long wire, I did so well that my loggings at one point were questioned by one of the 'experts'. One of the thrills at that time was logging Cario on 737 (?) khz. In this Internet age, it's very easy to access programming from all over the world, but you still can't beat the thrill of hearing an actual transmission from the other side of the earth. Those early hour sessions, prior to sunrise, waiting for a possible Trans Pacific signal or hearing Europeans barreling in while its still daylight on this side of the Atlantic add joy to the hobby. I am very happy to see the NRC continue to publish comprehensive construction articles on antennas and tuners. These have done more to help the DXer than many believe. If you are looking for the best ways to improve your receiving equipment, the NRC reprints of those projects are invaluable. For those who find that equipment modification is one of the joys of life, do not hesitate to put on paper those receiver mods that you find most useful. And, I suspect that there are more tube-type receivers out there than many realize; my HQ180 is a truly great instrument. The hobby lives on, even under the horribly crowded band conditions that we must live with today. Vy 73 (And thanks for the kind words Ed, they're appreciated by all involved!-DWS)

Rick Dau - 1015 West Benton ST. #52 - Iowa City, IA 52246-5117 rdau36@yahoo.com

I greatly enjoyed reading recollections from the NRC's broadcasting elite in the last few Musings columns. No stories of my own to share, of course, but I do recall the time just a few short years ago that WMT-600's sports director, Ron Gonder, reading a morning recap of the previous day's stories, mispronounced the name of pro golfer Fred Funk by leaving a key letter out of the surname. Not the first time that's happened, I'm sure, but it has to be frightening to the announcer when it goes out over the air, nonetheless. The aerobeacon on 524, UOC, is a thing of the past. IRCA's Tim Noonan told me that it had moved to 349, but a check of that frequency turned up nada. I won't miss it, as it often mixed with WSUI to create havoc when DXing 1430 and 1440 at this QTH. I want to get some advice and suggestions here from NRC members about receivers. Specifically, I'm interested in finding out which receiver on the market is best at eliminating splatter (plus images, spurs, and mixing products) from local stations, yet has a digital readout and allows one to leapfrog frequencies with the push of a button. The ICF-2010 possesses the latter two qualities but doesn't seem to pass muster in terms of cutting down on splatter. I remember Chicago's ROB KRAMER, about a decade or so ago, swearing by the Kenwood R-5000, saying that it virtually eliminated splatter from WMAQ and allowed him to get groundwave DX on 660 and 680 (and considering how close he is to the 670 transmitter, that's quite a feat). Which radio, in your opinion, is the best at accomplishing this? I do know I sure would like to get KAZP-1620 and WKSH-1640, plus anything on 900 and 920, here during the day. The move of WSUI's transmitter site to Hills, IA (just south of Iowa City) was scheduled to happen by the end of this year, but the usual red tape has held that back to mid-2002 at the earliest. Making the conventions of the two major BCB clubs this August and Sept. might be tough for me, as I have no wheels right now, but I will sure try. Thazzit for now. 73 and good non-static lightning-crash-free summer DX to all.

Truckin' Bozo Radio Network

via Rick Dau

580	KFXD-ID	1180	WHAM-NY
700	WLW-OH	1240	KLIK-MO
	KWLW-UT	1510	WLAC-TN
1030	KTWO-WY		
1040	WHO-IA	99.5	WCOY-IL
1130	KWKH-LA	101.3	WCUZ-MI
1170	WWVA-WV		