

# DX News

•Serving DX'ers since 1933•

Volume 66, No. 20 - March 1, 1999 (ISSN 0737-1659)



## Inside ...

2 .... DDXD  
12 .... DXP-1 Phasing Unit

20 .... Professional Sports Nets  
21 .... Stations 40+ in 1962

### CPC Test Calendar

CHUC	ONT	1450	Mar. 6	0000-0600
KTSA	TX	550	Mar. 8	0100-0300
KIML	WY	1270	Mar. 8	0200-0500
KSDR	SD	1480	Mar. 10	0100-0600
WHMA	AL	1390	Mar. 15	0101-0145
KNEU	UT	1250	Mar. 15	0200-0700
KJJK	MN	1020	Mar. 15	0500-0600

**CHUC-1450** (P. O. Box 520 - Cobourg, ON K9A 2L3, Canada) will conduct a rescheduled DX test Saturday, March 6, from 12:00-6:00 AM Eastern Time. The test will include march music & Morse code ID's. Reception reports may be sent to Mr. John Ton, Engineer. E-mail: jton@eagle.ca or chuc@eagle.ca. Arranged by J. D. Stephens for the National Radio Club.

**WHMA-1390** (P. O. Box 278 - Anniston, AL 36202-0278) will test on Monday morning, March 15, from 0101 to 0145 Eastern time. The test will consist of the phrase "This is a DX Test" along with Morse code ID's. WHMA will operate with 1000 watts and then 5000 watts, switching from non-directional to their directional pattern. Their directional pattern is directed due south from Anniston. Reception reports may be sent to Jay Freeland, Chief Engineer. Arranged by Bill Hale for the National Radio Club.

**KJJK-1020** (P. O. Box 724 - Fergus Falls, MN 56538-0724) will test with Morse code ID's on Monday morning, March 15, from 0500 to 0600 Eastern Time. KJJK will be operating with 2000 watts non-directional and 370 watts directional. The night pattern has two major lobes: 020 degrees and 222 degrees (both at 881 watts ERP). Reception reports may be sent to Mr. Jeff Swedberg, Program Director. Arranged by Bill Hale for the National Radio Club.

*From the Publisher ...* I must confess that this is a rather different issue from what you may be used to; only four items this week: the construction article on the DXP-1 phasing unit, thanks to Mark Connelly; DDXD; Sports Nets, and the middle section of the over-40-in-'62 compilation. And no AM Switch nor IDXD, as Jerry and Jim head south for mini-vacation, and no Musings again, as Dave continues to build stations and patch up his computer. Perhaps we'll be back to

normal next week?

**DXChange ...** Kermit Geary (1266 Riverview Dr. - Walnutport, PA 18088) is looking for a source of seven-inch reels of tape; Fred Vobbe (706 MacKenzie Dr. - Lima OH 45805-1835) is offering an Epson LQ-1070 dot matrix printer, parallel port, Win95 supported, tractor feed or letter, up to 17" wide, in good condition at \$40.00 plus shipping. And a tip to those of you who have Internet access: you might check out the electronics section in eBay ([www.eBay.com](http://www.eBay.com)); recent DX-quality receivers have included an R8, HQ-180's and an 129X; ICF-2010, ICF-5900W (that went for a premium); and many other portables and ham-type receivers. I'd warn you that there are enough bidders (including me) that nothing is going for a song any more, but some items have sold fairly cheaply. It's worth a hit.

*Welcome to these new members ...* Burton V. Perrine, Austin, TX; Noel Vietmeyer, Lorton, VA; John Huber, Bel Air, MD; Cranston Bonnell, Frederickton, New Brunswick; Albert J. Arnold, Chesterfield, VA; Kent Plourde, Bristol, CT; Ray Bauernhuber, Rosedale, NY (rejoins); Robert Schuette, Portland, PA; Kim Juhase, New York, NY; James D. Skladny, San Bernardino, CA; David B. Jansky, Sunbury, PA; Bill Mead, Toms River, NJ; Terry L. Pridgen KC4YTF, Hampton, VA; Christopher M. Roach, Fairless Hills, PA (rejoins); Richard S. Kunath, Negaunee, MI (rejoins); Frank Widmann, Colts Neck, NJ; and John R. Vodenik, Springfield, OH.

### DX Time Machine

*From the pages of DX News:*

50 years ago ... from the March 5, 1949 DXN: It was reported that the FCC was conducting tests from a number of stations, including WNOP-740, WKKW-850, WNAO-850, WWVA-1170, and WJJK-1170, requiring all-nighters on those frequencies to stand by, for the purpose of gathering directional antenna data for use at the NARBA Conference in Canada in September.

25 years ago ... from the February 25, 1974 DXN: Richard Clark, writing from Callao, Peru, reported that he was working on his 1-DA loop antenna article to "clear everything up for some people".

10 years ago ... from the Monday, February 27, 1989 DXN: Jerry Starr reported that he was celebrating 33 years of steady employment in the broadcasting industry, and "Perhaps this will explain my addled condition...".

# Domestic DX Digest

West: Bill Hale phantom2@caxz.net

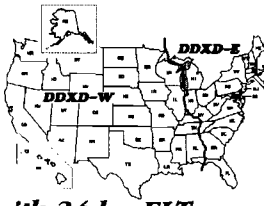
6124 Roaring Springs Drive - North Richland Hills, TX 76180-5552

East: David Yocis DavidYocis@aol.com

532 LaGuardia PL, #462 - New York, NY 10012-1428

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

(Division line is  
between East and  
Central time zones)



## DDXD-West

### MEDIUM WAVE RAMBLINGS

- Welcome new reporter, Joel Herrman of Storm Lake, Iowa who checks in with some news from the Hawkeye State. In addition to Joel's confirmation that 940 in Des Moines is // 93.3 and playing oldies, we have positive response from John Rieger and Nicholas Pattison of St. Claire Shores, Michigan.
- Several more Graveyard distance records have fallen. Keep up the good work, GYers!! Speaking of GYDX, time to plug the NRC/DXAS Graveyard Reflector again. To subscribe to the GYDX distribution, send a message to GYDX-REQUEST@NRCDXAS.ORG. In the subject line put the single word SUBSCRIBE. In the body of the message put the words SUBSCRIBE GYDX followed by your e-mail address. Be sure to put in your address. After you do this, and send the message, you will get a confirmation message back within 15 minutes. When I send GYDX updates, you will have it in your mailbox in 5 minutes.

### REPORTERS

- FA-ID Frank Aden Boise FRG-7 with 4 foot box loop <wvl23a@prodigy.com >  
 SA-MB Shawn Axelrod Winnipeg ICR-70, Drake R8 + MFJ 1026 Phasing Unit + 4' unamplified box loop/Quantum Loop/145' long wire/100' indoor wire <saxelrod@mb.sympatico.ca>  
 RD-AZ Ragnar Danneskjold Mesa GE Superadio III <ldwxer@juno.com>  
 JH-IA Joel Hermann Storm Lake <jhermann@rconnect.com>  
 GJ-CA Gary Jackson Sacramento FRG-8800 + KIWA Loop  
 BK-CA Bob Karchevski Sunnyvale R8-A/2 long wires/MFJ-1026mw <karchev@nortelnetworks.com>  
 FM-IL Frank Merrill Macomb Kenwood R-1000 using car battery; 300' wire  
 JJR-WI John Rieger South Milwaukee FRG-100, Kiwa loop, MFJ-959B Tuner/Preamp, DSP-599zx audio noise reduction filter <johnrieger@webtv.net>  
 RR-UT Rocky Robello Sandy Sangean ATS-909 and Select-A-Tenna <KA7EII@webtv.net>  
 DS-CA Dave Sundius Redondo Beach CCRadio <dwsundius@mindspring.com>  
 EW-NE Ernie Wesolowski Omaha  
 Ed.-TX Editor North Richland Hills

### STATION NEWS & NOTES

- 620 KMNS IA Sioux City - Now news-talk, replacing ABC Real Country. *The Dolans, Michael Medved*, others; with ESPN Sportstalk at night. Still ABC/I news at :00. (JH-IA)
- 830 WCCO MN Minneapolis - 2/15 0205-0230 - OFF the air. (EW-NE)
- 940 KXTK IA Des Moines - Yes, this is now simulcasting 93.3 KIOA, EXCEPT 6-10 AM with *Imus in the Morning*. Calls are still KXTK, with legal ID at :00 (over top of programming, all other references to *Oldies 93.3/KIOA*) (JH-IA)
- 1350 KRNT IA Des Moines - Now running *Art Bell* (moved from 940, same ownership of stations.) (JH-IA)
- 1590 KYOK TX Houston - 2/14 - Now Radio Disney. Ex: gospel. [sent to me by my son Chris, in Houston - Ed.]
- 1600 KUSH OK Cushing - 2/9 around 2200 - They're not gone yet! Noted with high school basketball and call letters. (FM-IL)
- 1620 KSMH CA Auburn - 2/11 1030 - Testing, with REL programming. Strong S-20+. (GJ-CA)
- 1620 KYIZ WA Renton - 2/13 0324 - Fair, with ID: KRIZ and KYIZ. This may be new to the air as I have not heard it before. (DS-CA)

KISSIN' OLDIES  
**WKSH 1340**

- 1700 WRNU FL Miami Springs - 2/16 0722 - Poor signal, under KBBG, with radio Unica Spanish language programming. NEW calls. NEW!! (SA-MB)
- 1700 KTBK TX Sherman - "We hope to get it on the air just past 15th March. 10kW ND Day, 1 kW night. (actually .7 kw night) both into 5/8 wave radiator." This from Hue Beavers, CE for KLIF, etal. Hue e-mailed a picture of the new 160' tower (about one-half complete) and it has been relayed to a couple of interested parties who feature such things on their web pages. Want to see? Just ask. The new transmitter will be on-site about 1 March, so here's another one to start listening for. [Ed.-TX]

**WLNA**  
**1420 AM**

### UNIDs and UNID HELP

- 1685.4 UNID ?? - 2/13 0750 - UC music and EE talk. Looping E-W. Programming different than WBHD. References to Pine Bluff, AR. I suspect this may be a spur from KCAT(1340), but due to heavy QRM no ID was heard. (JTR-OK)
- 1670 UNID ?? - 2/6 0600 - Behind WNML, with TTs 'til 0620. Very weak, so assume East Coast??? Any ideas? (GJ-CA)

### DX AND EQUIPMENT TESTS

- 660 KEYZ+ ND Williston - 2/15 0105-0130 - Heard code ID at 0105. Weak, but readable under KTNN. Nothing else heard. (FA-ID)
- 660 KEYZ+ ND Williston - 2/15 0105 - Heard KEYZ in Morse code followed by 1000 Hz tone lasting for three seconds. Got lucky, heard this one just before KTNN started playing music. Listened until 0210 but didn't hear KEYZ again. (RR-UT)
- 660 KEYZ+ ND Williston - 2/15 - Code sets heard five different times between 0108-0121. Codes were heard at four different pitches and content was different each time. Very creative! Dominating the scene were KTNN and KAPS, but CFFR not noted. (PT-WA)
- 660 KEYZ+ ND Williston - 2/15 0134 - CW ID and 1000 Hz tone heard only, on fade-up over CMHG/XERTL/WFAN. This was on day pattern. I called them at the time. (EW-NE)
- 660 KEYZ- ND Williston - 2/15 0049-0134 - KTNN-AZ dominates with Navajo drum music, news in EE at top of hour. Had religious-sounding station behind (KGDP-CA?). No tones or code heard. (BK-CA)
- 1540 KTGGt MI Spring Harbor - 2/14 0030-0130 - Possible weak code under KXEL. Not enough to send a tentative report. (FA-ID)
- 1540 KTGG- MI Spring Harbour - 2/14 0030 - Not heard. Only KXEL and a very weak UNID. (SA-MB)

### TIS & OTHER STUFF

- 1610 TIS/HAR CA Tulare - 2/11 1000 - On California Highway 99. Giving traffic and highway directions to the Tulare Agricultural Fair. Nice signal for 211 miles. (GJ-CA)
- 1700 TIS/HAR CA near LAX - 2/12 0830 - Still testing with strong signal. (GJ-CA)

### MIDNIGHT TO 0800 HOURS ELT

- 1000 WMVP IL Chicago - 2/10 0748 - News, call ID. Good signal in phase null of KTOK. (JTR-OK)
- 1030 KCWJ MO Blue Springs - 2/10 0730 - Call ID and *Don't leave home without it*. Playing REL or C&W music. New call; changed from KOWW (the cow). (JTR-OK)
- 1030 KCTA TX Corpus Christi - 2/10 0740 - Preaching, over/under KCWJ, with call ID. (JTR-OK)
- 1210 KLDI WY Laramie - 2/15 0200 - ID and into CBS News. Never heard before. (EW-NE)
- 1590 KDAV TX Lubbock - 2/17 0745 - Poor signal, in a mess, but heard a time check, weather, and ID. New!! (SA-MB)
- 1630 KKWY WY Cheyenne - 2/8 0405 - With *The Spirit of Wyoming* . . . 1630 KCWY. Playing old/traditional C&W. Refreshing change from modern, slick country! (FM-IL)
- 1630 KKWY WY Cheyenne - 2/12 0752-0823 - C&W music, weather for Wyoming at 0755, call letters at 0801 ending with WY, ad for *TWA* at 0802. Weak. (GJ-CA)
- 1640 KKJYt OR Lake Oswego - 2/9 0101 - With what sounded like . . . station for the Northwest, KJ . . . fighting KDIA, with WKSH the third station! Couldn't tell which one(s) religious music belonged to. (FM-IL)

- 1660 KXOL UT Brigham City - 2/13 0500+ - Very strong, testing with no audio. Station behind with male and female talking at times, but unable to tape it, as was so poor. Darn! (GJ-CA)
  - 1670 WNML GA Warner Robins - 2/13 0700 -With sports show, so must be this. Fair-to-poor. (GJ-CA)
- 0800 TO 1600 HOURS ELT**
- 610 KZSS NM Albuquerque - 2/12 0800 - Talk with call ID. Very weak, in loop null of WDAF. New here. (JTR-OK)
  - 870 KAAAN MO Bethany - 2/9 0800 - Call ID and *Your home in the country*, then ABC News. (JTR-OK)
- 1600 TO 2400 HOURS ELT**
- 590 KLBJ TX Austin - 2/14 2305 - With ID after the news. *Your news leader*, KLBJ. New log. (RD-AZ)
  - 690 KFXN MN Minneapolis - 2/16 1828 - Good, unusually strong, with promo . . . *tune in to 1130 KFAN*, then ESPN Radio programming. No WVCY at all! (JJR-WI)
  - 710 KGNC TX Amarillo - 2/12 2105 - Call ID and *The sports you want to know*. Fading, in loop null of KCMO. (JTR-OK)
  - 880 KRVN NE Lexington - 2/16 1840 - Good and loud! End of C&W song, calls, local ads & upcoming Rodeo Report! (JJR-WI)
  - 950 KLIK MO Jefferson City - 2/8 2105 - C&W music, call ID then ABC News. New here. (JTR-OK) Out of PSA, and into 3WS jingle & oldie. Not heard in a while. (JJR-WI)
  - 1030 WBZ MA Boston - 2/10 2050 - Talk on health, with call ID. New here, for Massachusetts #1 logging. (JTR-OK)
  - 1030 KTWO WY Casper - 2/16 1852 - Good, loud, way over WBZ. Weather update, ads & C&W music. K-2 said so fast, I had to listen to tape 4 times to be sure! The next break at 1856 announcer said *1030 K-T-W-O* slowly. Oh well! :) (JJR-WI) Good for 55 watts! (JJR-WI) Would sign on at 0700 EST. (JJR-WI)
  - 1580 KDZZ MN Albuquerque - 2/13 1827 - Radio Disney programming // 1690. NEW!! (SA-MB)



**GRAVEYARD DX UPDATE**

\* indicates record held by DXer from North America

					Miles			
<b>1230 kHz:</b>								
KGEO	CA	Bakersfield	Tim Hall	Chula Vista, CA	217			
<b>1340 kHz:</b>								
KOMY	CA	Watsonville	Tim Hall	Chula Vista, CA	408			
<b>1400 kHz:</b>								
WIDE	ME	Biddeford	Joe Kureth	Uniontown, MD	360			
WHTB	MA	Fall River	Joe Kureth	Uniontown	344			
CHNL1	BC	Clearwater	Tim Hall	Banff, AB	197			
CKRP		Princeton	Tim Hall	Banff	*248			
<b>1450 kHz:</b>								
CFHC	AB	Canmore	Tim Hall	Lake Louise, AB	41			
<b>1490 kHz:</b>								
WGMF	NY	Watkins Glen	Joe Kureth	Uniontown, MD	190			
KOJ738	UT	Capitol Reef NP	Tim Hall	5 miles from the park	5			
<b>Totals:</b>		<b>1230</b>	<b>1240</b>	<b>1340</b>	<b>1400</b>	<b>1450</b>	<b>1490</b>	<b>Total</b>
Russ Edmunds N. NJ/SE PA		36	42	33	41	38	53	243
Joe Kureth Uniontown, MD		30	35	40	40	36	39	213

**DDXD-East**

Deadlines are Tuesdays: March 2, 9 and 23.

Welcome to *Nicholas Pattison* whose loggings debut in this week's DDXD East!

Just a quick reminder to e-mail contributors: please make sure that you include "DDXD" or "NRC" or some such thing in the subject line so I know that your loggings aren't one of the numerous pieces of junk e-mail I get all the time.

And to all contributors: Please remember the name of this publication: DX News. I've been getting a fair number of reports lately of the basic 50 kW clear channel stations (like WJR-760 or WBAL-1090) which pretty much everybody in the DDXD-East can hear on a regular or semi-regular basis. I've also been getting a lot of repeat reports of the same station from the same contributors. Remember, if you hear a station all the time, it isn't news to hear it again! Please, please, please send your reports of your most interesting and news-worthy loggings! If you're finding that you're sending loggings which aren't appearing in the bulletin, please review this policy and just send us the good stuff. (David's comments here apply to all DX columns, as far as we're concerned! -pls)

Joe Kureth is doing very well with his new antenna and reaches a new milestone with WHMP-1400, as does Jeff Falconer with WACB-860 ... see below for details! Congrats to both.

**STATION NEWS**

- 970 WNED NY Buffalo - After public outcry, may delay dropping news and switching to // WBFO-88.7 from mid-February until June. I'll keep you posted. (GC-NY)
- 1440 WMVB NJ Millville - 1/23 1553 - Now with NWS-TLK format, "Cumberland County's Voice," UPI News at 1600. Has been heard since with USA news and features. Ex-WREY and SS. (DB-DE)
- 1600 WQVL DE Dover - Has operating with only one tower for a couple of months now, remaining towers were taken down to make way for development of the site. Assume U1, not sure of power. (DB-DE)
- 1650 WHKT VA Portsmouth - 2/11 1830 - Ad for Christian dating service, religious talk show, good signal. (WM-MD)
  - + 2/12 0700 - Fair-good over KCNZ, after several weeks of hearing them testing with instrumental music and no ID's, finally got some real programming. ID as "This is AM 1010 WPMH Portsmouth-Norfolk-Virginia Beach, AM 1650 WHKT Portsmouth," into "Mini Bible College" sponsored by International Cooperative Ministries. (MB-ON)
  - + 2/12 1846 - Good signal with wide variety of REL programs simulcasting with WPMH-1010. ID's, local ads clusters, sign-off at 2400. "AM 1010 WPMH Portsmouth-Norfolk-Virginia Beach, WHKT AM 1650 Portsmouth." (RA-MA)
  - + 2/12 1857 - With ads, ID's, and "Insight for Living" REL program to tuneout at 1925. ID at 1859 explained everything: "WPMH, AM 1010, currently simulcasting with AM 1650 WHKT. WHKT will soon be broadcasting its own programming when installation of production engineering equipment is completed." Loud signal eclipsing WMDM as the strongest on the X-band. (AR-ON)
  - + 2/14 2131 - Very good on top of usually strong KDNZ with REEL phone-in program, promo for show Monday-Friday "on AM 1010 WPMH and AM 1650 WHKT," ID at top of hour with both calls. Now on regular programming? Also noted 2/16 with conservative talk. (DB-DE)
  - + 2/15 1835-1900 - Fair under, over KDNZ, religious program "The Bible Answer Man" (I did not make that up!), dual call ID 1843 but only caught "WHKT" part, top of hour ID "... Virginia Beach, Virginia, AM 16-50 WHKT." Apparently the incessant instrumental music test is over. VA #10. (HF-MI)
  - + 2/16 1800 - Good in KDNZ null with ID as "AM 1010 WPMH Portsmouth-Norfolk-Virginia Beach, AM 1650 WHKT Portsmouth," then FRN news. (SF-TN)
  - + Date? 1800 - ID "WPMH AM 1010 Portsmouth, WHKT AM 1650 Portsmouth," SRN News, REL. (DL-MD)



**DX TESTS**

- 660 KEYZ ND Williston - 2/15 0105-0130 - Not heard. (RA-MA) Not heard. (SF-TN)
- 1150 KXTA CA Los Angeles - 2/8 0400, 0500 - Not heard, too much jumble. (SK-PA)
- 1450 CHUC ON Cobourg - 2/6 0000-0600 - Not heard through the jumble, unneeded. (SK-PA)
- 1540 KTGG MI Spring Arbor - 2/14 0030-0130 - Not heard, WDCD just too strong here. (RA-MA) Heard with two code periods, poor-fair under CHIN, KXEL. (SF-TN)

Not heard; e-mail from the station said the test was run, but KXEL QRM was very strong at the station itself! (RM-CT)

**UNID and UNID HELP**

- 610 WSNB CT Torrington - Re: recent unID's here, the night pattern for this is NW out of the transmitter site in Harwinton, on top of a hill SE of Torrington. WSNB is // WDRC-1360, WWCO-1240, and WMMW-1470 with NOS and CNN Headline News on the hour. (RM-CT)
- 760 UNID -- ----- 2/9 2118 - Someone running OC, third night in a row. Causes WJR to sound wavy. (SK-PA)
- 840 UNID -- ----- Date? Time? - In WHAS null, C&W oldies, looping E-W, KTIC? Gave web site as www.countryoldies.com. (JF-ON) [That's the web site for a program; station list says KTIC is the only one on 840, Sundays at 3 p.m. local time (i.e. 1600 ELT). - DY]
- 1160 WELX FL Callahan - 2/14 0658-0702 - Presumed this is my unID in IDXD no. 19; per David Crawford it carries Radio Unica. Tuned in to continuous multi-instrument interval signal to 0700, then "Cadena Unica" and "Cadena Radio Unica" ID's and world news by man in SS. No legal ID heard. (TLK-FL)
- 1310 UNID -- ----- 2/10 1702 - "Tonight, Old Dominion vs. Monarch on ESPN 1310." Then traffic with ad to call 622-6664, Nextell ad. Unneeded WGH has been heard with "The Score" ID, not this. (SK-PA)
- 1350 UNID -- ----- 2/13 1827 - Fair-good with non-ID "Sports Radio 1350 and 1600," ESPN jingle, into talk on the final Leafs game at Maple Leaf Gardens. (MB-ON) [WOYK, I believe. - DY]
- 1390 WGCI IL Chicago - This is JF-ON's unID in no. 18. Recently changed from "Dusties" to "The all new gospel radio 1390," an ID heard here on 2/18. (BF-IL)
- 1420 UNID VA ----- 2/7 1800 - Sign-off by female, "Our studios and transmitter are located on Route 1 in ... Virginia," then SSB. No matching addresses in Log. Probably unneeded WKCW, anybody know for sure? (SK-PA)
- 1520 UNID -- ----- 2/5 0705 - Listing of local events, mention of Fairmont, under WWKB. Black gospel music also heard. (WM-MD)



**LOGGINGS: 0000-0800**

- 870 WFLO VA Farmville - 2/9 0710 - Popped out at sunrise, weather forecast, results of area college basketball games, bluegrass music. (WM-MD)
- 880 WRFD OH Columbus-Worthington - 2/10 0758 - "AM in Columbus" program, local news and weather, Christian Foster Parent PSA, "AM 8-80 WRFD," good with no WCBS. (JEK-MD)
- 940 KXTK IA Des Moines - 2/10 0140 - Canned ID "Good times and great oldies, 93-3 KIOA." Ad for Home and Garden Show, weather from News Channel 8 meteorologist. At 0157 ad for Quality Ford in Des Moines, then "Don't touch that dial. Here comes another 12 great oldies in a row from Oldies 93-3, KIOA." At 0200 ID over song being played, "AM 940 KXTK Des Moines." Good to excellent; tried to null and discovered a weak CBM mixing with Mexico. (SK-PA)
- 1040 WSGH NC Lewisville - 2/3 0738 - Preacher, sounding like Ross Perot, quoting Scripture. (RH-NJ)
- 1130 WLBA GA Gainesville - 2/7 0103 - SS ID as "La Mexicana," won't give an EE ID. Has been heard rightly for the last month, going over WBBR a lot. Thanks to IDXD for clearing this up. (SK-PA)
- 1170 WAVS FL Davie - 2/14 0702-0712 - Tune-in to Caribbean-accented female, "News from the Republic of Trinidad and Tobago is brought to you by ...," into items on oil refinery layoffs, University of the West Indies plans, 14 year-old boy caught stealing electronics (must have been a satellite feed), then canned ID by man: "You're listening to the only 24-hour Caribbean radio station in the U.S., WAVS Davie-Fort Lauderdale, Florida, 1170 AM." Suspect that's a dubious claim. Into EE gospel program. (TLK-FL)
- 1340 WIRY NY Plattsburgh - 2/7 0006 - "You're listening to the Entertainers," "The best music on the best station," OLD, good signal briefly. (HJH-PA)
- 1460 WGNA NY Albany - 2/4 0710 - WGNA calls, mention of 107.7, C&W music. (JEK-MD)

- 1570 WYTI VA Rocky Mount - 2/16 0635 - Mention of Rocky Mount, ID. (WM-MD)
- 1580 WEAM GA Columbus - 2/9 0325 - Good with calls, REL music. Caught this one DX'ing after a 12-hour shift. New. (MB-IN)

**LOGGINGS: 0800-1600**

- 650 WSM TN Nashville - 2/8 1248 - First time heard at this time of day. (RJ-NC)
- 810 WNSI AL Jacksonville - 2/13 0833 - Ads from Alabama Bar Association promoting meditation, for Dr. Banker vision improvement program, for Alabama State Parks. (RJ-NC)
- 860 WSBS MA Great Barrington - 2/4 0830 - ID, local news, weather and sports, OLD format. Only logged once before, in 1965. (JEK-MD)
- WOAY WV Oak Hill - 2/4 0830 - Ski retort ad, "Timberline at 1-800-SNOWING," call ID. (JEK-MD)
- 940 WKYK NC Burnsville - 2/8 1305 - C&W music, "K-94" ID. (RJ-NC)
- 990 WALE RI Greenville - 2/8 1558 - Tentative with "Please call us at (617) 667-77...", mixing with unID. (SK-PA)
- 1240 WWWC NC Wilkesboro - 2/7 0844 - Church service in progress, discussion about developing 200 acres of church property. (RJ-NC)
- 1250 WKDX NC Hamlet - 2/7 0905 - B-GOS minister mentioning call letters at beginning of service. (RJ-NC)
- WDVA VA Danville - 2/7 0900 - ID given between 2 church services. (RJ-NC)
- 1270 WHLD NY Niagara Falls - 1/30 0829 - Good and on top with promo for Country Gospel program Saturday at 1:00. (DB-DE)
- 1290 WDZY VA Colonial Heights - 2/2 1520 - Radio Disney with rock music, same program as WQEW-1560. (RH-NJ)
- 1420 WIMS IN Michigan City - 2/3 0835 - Weather, ID, weak. (HJH-PA)
- 1510 WEAL NC Greensboro - 2/3 0840-0900 - GOS music, contest for trip to Bahamas, "Inside Gospel" with Diane Blackman, ID. Much wanted, new. (JEK-MD)
- 1560 WCNW OH Fairfield - 1/30 0801 - Noted with ad for something including 637- phone number, ID, program from CEM Network "brought to you by the Church of God Tri-State", briefly on top of jumble that included someone with NBC news intro. (DB-DE)

**LOGGINGS: 1600-2400**

- 540 WDAK GA Columbus - 2/7 2240 - ID "The Sports Monster," NBA scores, One on One Sports. (RJ-NC)
- WWCS PA Canonsburg - 2/13 2129 - ID "WWCS, the Station of the Nation," snow removal ad (724-745-9168), poor. (PM-VA)
- 550 WGR NY Buffalo - Date? 2000 - ID "WGR, Buffalo News Radio 55," dominant. (DL-MD)
- WKRC OH Cincinnati - 2/4 2100 - Up fair, ID, into ABC news. (HJH-PA)
- 560 WQAM FL Miami - 2/4 2348 - ID "560 QAM," sports talk. (RH-NJ)
- 590 WLVA VA Lynchburg - 2/14 2050-2109 - Assumed with "All the great songs," Priceline and Geico ads. Poor over, under flutter. (PM-VA)
- 620 WHJB PA Greensburg - 2/4 2327 - Station promo, up to fair level, ID as "WHJB Greensburg-Pittsburgh," into song "In the Summertime" by Mongo Jerry. (HJH-PA)
- WVMT VT Burlington - 2/8 2142 - Weather, ID "AM 620 WVMT," just about there under null when. (HJH-PA)
- 680 WCTT KY Corbin - 2/12 2040 - NOS music, 2044 weather and ID, very poor in Toronto null. (DZ-NY)
- 690 WJOX AL Birmingham - 2/4 1825 - In clear on car radio with sports talk, ID, ad for World Cellular. (RH-NJ)
- + 2/9 1820 - Ad for National Tire & Battery, traffic report, ID, then sports show. (WM-MD)
- WZAP VA Bristol - 2/3 1745 - REL music, USA Sports Network, first time heard. WOKV usually heard here with CBF gone. Again 2/9 1720, bluegrass-style REL music, revivalist preachers from Abingdon (Virginia) and Baltimore. (RH-NJ)
- + 2/13 1715 - Very emotional religious talk by man, 1801 Strong but mixing with equally strong WOKV. (DZ-NY)
- 700 WWTL MD Walkersville - 2/3 1705 - In clear with AA program. (RH-NJ)
- 720 WRZN FL Hernando - 2/9 2305-2400 - NOS, Sinatra tunes, "Sunshine 720," out-dueling





WGN until sign-off. Only 250 watts? (RJ-NC)  
 + 2/11 2200 - NOS music, "Sunshine 720," ID under WGN, then news on the hour. (WM-MD)

730 WGCR NC Pisgah Forest - 2/9 1740 - Male with ID in WGN fade; fair-poor. (WM-MD)  
 WLIL TN Lenoir City - 2/12 2015 - High school basketball with mention of Lenoir City and University of Tennessee. 2019 ID to commercials. Poor but alone. (DZ-NY)

790 WSVG VA Mount Jackson - 2/16 1720 - C&W music, ID, "If your friends don't listen to country music, are they really your friends?" (WM-MD) [With friends like that, ... - DY]

800 WLAD CT Danbury - 2/8 1755 - Connecticut lottery ad, calls and news promo, slogan "Radio Eighty WLAD," into "Titanic" theme, good. (JEK-MD)

820 WNYC NY New York - 2/10 2215 - Promo by female, "You're listening to public radio WNYC, 820 AM, New York," panel discussion of play review. (RJ-NC)  
 + 2/16 1800 - End of program, "This is NPR," list of sponsors, ID. (WM-MD)

840 WVPO PA Stroudsburg - 2/15 1755 - NOS music, ID "The Voice of the Poconos," good in WHAS null. (WM-MD)

WKTR VA Earlysville - 2/15 1745 - REL music, ID in WHAS null. (WM-MD)

850 WYLF NY Penn Yan - 2/2 2055 - Song "Never My Love," "Keeping you company all night long, we're AM 850, WYLF." (WM-MD)

WRBZ NC Raleigh - 2/16 1755 - Sports talk, ID as "The Buzz." (WM-MD)

860 WACB NC Taylorsville - 1/26 1947-2000 - Fair at times in partial CJB null with strange combo of OLD, NOS, C&W music, "WACB Taylorsville" at top of hour. More than 8 watts. New, #2,900 logged. (JF-ON)

940 KXTK IA Des Moines - 2/14 2247-2302 - Poor, often faded to CBM, with OLD music, ID "KIOA 93-3." (NP-MI)

950 WEZO NY Rochester - 2/3 1700 - ID "We're WEZO Rochester, an Intercom station." (RH-NJ)

960 WERC AL Birmingham - 2/10 1807 - Calls, Computer Direct Outlet ad, into Paul Feinbaugh talk program, good. (JEK-MD)  
 CFFX ON Kingston - 2/10 1642-1651 - Good, ID "Kingston's Good Time Oldies, GTO 9-60," ads for Canadian legal will kit, Bell Ford-Lincoln-Mercury, Engel's Applicances, no call ID. (HF-MI)

1000 CFLP PQ Rimouski - 2/4 1728 - With talk show in FF. (RH-NJ)

1040 WJNO FL Boynton Beach - 2/11 1810 - Weather forecast, promo for station promo, ID. (WM-MD)

1070 WIBC IN Indianapolis - 2/14 2329-2359 - "Dragnet," ads for Bayer and Nicorette, "WIBC Indianapolis" ID 2358. Good to fair. (PM-VA) [Note correct frequency on this, Peter! - DY]

WFLI TN Lookout Mountain - 2/9 1800 - Poor to fair mixed with CBA, a couple of "1070 WFLI" ID's by female, USA Radio Network news. (MS-ON)

1160 WSCR IL Chicago - 2/14 2309 - ID "Sports Radio 1160," weather, Ticket Master ad. Fair on top of babble. (PM-VA)

1190 WLIB NY New York - 2/5 1817 - Legal sign-off announcement, mentioning transmitters in Lindhurst, N.J., left carrier on. Also 2/11 2359, call letters over reggae music, no sign of WOWO. (JEK-MD)

1200 WSML NC Graham - 2/5 1735 - ID for WSJS-600, traffic report, mention of Maxwell Jewelers. (WM-MD)

1210 WDGR GA Dahlonga - 2/7 1740-1805 - End of North Georgia-Shorter basketball game, North Georgia College ad, Hank Williams, Jr. song, and NBC news. (RJ-NC)

1220 WFAX VA Falls Church - 2/8 1714 - "This is Tom Brown speaking for everyone at Roe Law Ministries," then "Join us every evening at 5 p.m. on WFAX." In mix. (SK-PA)

1250 WARE MA Ware - 2/6 2008 - Calls, NOS music. Not heard in many years. (JEK-MD)  
 + 2/16 1950 - Song "Send in the Clowns," other NOS, "Your station for memories," ID. (WM-MD)

1260 WNSS NY Syracuse - 1/28 1930-1945 - Poor in WRIE, WWMK, WPHB mess with continuous news, "W-News 1260" slogan. Finally logged for call change, ex-WNDR. (JF-ON)

CIHI NB Fredericton - 2/9 1951 - Crystal Blade tattoo service, PSA for cat safety, "See-



High" weather forecast, good. (JEK-MD)

1270 WLII TN Newport - 2/10 1935 - Lead-in to Tennessee basketball pre-game show. (RJ-NC)

CJCB NS Sydney - 2/3 1846 - C&W, call ID, sports commentary on the NBA. (JEK-MD)

1330 WWRV NY New York - 1/29 2100 - ID surfaced over jumble, "WWRV 1330 ... and Radio Cristiana, 530, Turks and Caicos Islands, British West Indies," into REL program in SS. First time heard. (JF-ON)  
 + 2/12 1800 - Fair with ID in EE "Broadcasting from Paterson, New Jersey, by satellite to the world, this is WWRV New York, 1330 AM, with Radio Visión Cristiana International, 530 AM, South Caicos, Turks and Caicos Islands," into usual SS religion. (MB-ON)

1360 WNJC NJ Vineland - 2/12 1812 - Fair-good with OLD, promo for 1-888-705-5464 request line and DJ promo "... and you know what to do, baby, where I'm at Fridays and Saturdays on WNJC 1360 on the weekend." QSL'ed as WWBZ in 1978, on a frequency check. (MB-ON)  
 + 2/12 1928-2000 - Good with King Arthur Request Line, OLD music. (NP-MI)

CKEC NB Bathurst - 2/5 1840 - Presumed with Halifax (N.S.) hockey game, ads for New Brunswick businesses. Again on 2/9 2000 with ID "The Bay's best music mix, CKBC." (JEK-MD)

1370 WFEA NH Manchester - 2/10 2224 - Calls, NOS, Roger Williams' "Autumn Leaves," good. (JEK-MD)

1380 WMYF NH Portsmouth - 2/6 2000 - Legal ID, NOS format, good signal. (JEK-MD)  
 WSYB VT Rutland - 2/6 1906 - "Radio Classified" ad looking for advertisers, into P. Cramer's "Last Date." (JEK-MD)  
 + 2/10 1758-1800 - Poor, bubbling up with call ID, high school hockey pre-game, mentioning sponsors Allen's Pools and Spas, Ag-Way Energy, and Vermont National Bank. New, VT #2. WPHM dominant with talk but may have shifted patterns; CKLC also in there. (HF-MI)

1400 WHMP MA Northampton - 2/3 1730-1800 - Game-show type program with call-in players, tones sounded like what's heard on "Wheel of Fortune," clear ID 1800. New for MA #55 and #2,500 overall! Again on 2/7 1638 with University of Massachusetts basketball game end, sponsors, and local weather. (JEK-MD)

WHCC NC Waynesville - 2/4 1755 - Calls, Frankie Avalon's "Venus." Good for a few minutes. (JEK-MD)

WICK PA Scranton - 2/2 1900 - Song "Listen What the Man Says," ID // WYCK-1340. Mixing with unID basketball game. (WM-MD)

WRON WV Ronceverte - 2/7 1900 - Partial ID atop the mix: "It's 7:00 on the valley's choice for ... Lewisburg, West Virginia." Has to be this; it's right below Lewisburg. (SK-PA)

1420 WIMS IN Michigan City - 2/15 1811-1820 - Poor, but good on peaks with man reading local news, Bill Landen with remote, ad for Michigan City Savings & Loan, "WIMS news time ...." Mixing with WFLT, others. (HF-MI)

WBSM MA New Bedford - 2/5 2259 - Promo for real estate program, ID. (JEK-MD)

1430 WMYS IN Indianapolis - 2/15 1806-1810 - Fair with excellent peaks, Mark Shaw talk show, "The voice of common sense ... talk of the Heartland." QRM from Chinese: CKYC? (HF-MI) [I think calls are CHKT now; WNJR also runs various languages including Chinese at times. - DY]

1450 CHUC ON Cobourg - 2/10 1706-1710 - Poor, man with OLD, ID "14-50 CHUC," only in LSB here to avoid WMAX-1440 slop. (HF-MI)

1460 WBET MA Brockton - 2/6 1959 - Talk America Network, "...for the Metro South, WBET" into network news. (DB-DE)

WWKL PA Harrisburg - 1/25 2000-2010 - Fair with CJOY with OLD, "Cool 99.3" slogan. Ex-WCMB, WIMX. (JF-ON)

1480 WADR NY Remsen - 2/14 2329-2400 - NOS music, CNN news, slogan "The Stars Radio Network." (NP-MI)

WDAS PA Philadelphia - 2/3 1700 - ID, promo heard in mix. (WM-MD)  
 CHRD PQ Drummondville - 2/4 2325 - Presumed in FF, overriding NYC's Korean. (RH-NJ)

1490 WPOR ME Portland - 2/10 2001 - "High school basketball on WPOR is brought to you by the Family Restaurant ...," one team may have been Winfield Christian. Mixing atop, steady. (SK-PA)

- WOLF NY Syracuse - 1/30 1700 - Fair with mail order ad, ID by man "You're listening to WOLF Syracuse and WOLF-FM Oswego." (MS-ON)
- WAZZ NC Fayetteville - 2/9 1739 - "Join Hall of Fame broadcaster ... hockey Thursday night on 1490 WAZZ." Rose atop WAZL which was simulcasting WARM-590. (SK-PA)
- 1550 WZDK CT Bloomfield - 2/3 2000 - Radio Disney program // WQEW-1560. (JEK-MD)
- WCTZ TN Clarksville - 2/8 2128 - "You'll find it all at ... 200 ... Street in Clarksville," behind CBE. First time I've made out any of the talking. (SK-PA)
- 1590 WVNA AL Tuscaloosa - 2/3 1945 - Tuscaloosa-Mississippi State basketball pre-game show. For having logged this one just a few months ago, seems fairly regular now. (JEK-MD)
- 1600 WPDC PA Elizabethtown - 2/11 1910 - Heard "Sports Radio 1600" ID in mess. (WM-MD)
- WCPK VA Chesapeake - 2/11 1900 - End of religious talk show, ID. (WM-MD)
- 1640 WKSH WI Sussex - 2/3 1755 - SRN news, ID as "WKSH Sussex-Milwaukee," temperature 39, Scripture read by lady from James 4:8. Best signal yet. (RH-NJ)
- 1680 WTTM NJ Princeton - 2/5 1612-1700 - Strong, way over WJNZ with BIZ from BNN // WHWH-1350, slogan "WHWH 1350, we mean business." Not sure of right call, WTTM or WHWH. (JF-ON) [I believe that 1680 is WTTM. - DY]
- + 2/5 1640 - Consumer safety tip from Governor Whitman, then BNN, ads for Liberty Sites, Colonial Cadillac at 1652, ID 1700: "You're listening to financial news 1350 WHWH Princeton, smart listening 24 hours a day, We Mean Business." Then ABC news, very good, no sign of WJNZ (thankfully!). Solves my 1350 unID. (SK-PA)



#### TIS AND MISCELLANEOUS

- 1610 HAR NC Near Salisbury (WPKX-383) - 2/7 1400 - HAR for the I-85 corridor south to Charlotte. The date is usually right on this station, but the time is always incorrect. Very good signal here. (RJ-NC)
- 1630 TIS NC High Point (WPNS-974) - 2/7 1410 - Consistently lousy signal, has been on over a month but just recent began using ID. (RJ-NC)
- 1640 UNID -- ----- 2/10 1752 - Good briefly with maritime weather, ocean wave heights, tide tables. Probably coastal NJ, NY, or New England. (JEK-MD)
- 1700 WINC? VA Winchester - JEK-MD's logging of WINC 92.5 FM on 2/1 1200 had to be a rebroadcast by a pirate station. I checked with Archie McKay, WINC's Chief Engineer. His station is not equipped for operation on 1700 kHz, and has no plans for an X-Band allocation. In addition, WINC-AM and WINC-FM always program and ID separately. This sounds like my reception of WOWO, Ft. Wayne on 1610 on 2/24/98, along with WYFI, Norfolk on 1630 on 9/14/98. (PC-VA)
- 1710 Pirate? -- ----- 1/30 2030-2100 - Quite good on LSB to escape utility QRM, with Aerosmith music, no announcements. Later noted with Elton John music. (JF-ON)

#### INTERNET UPDATES

News from Scott Fybush's "North East Radio Watch," used by permission: WLAW-MA-1270 has been given six more months by the FCC to build the long-standing CP for a new station here; owner Edmund Dinis plans to move the Portuguese programming of WJFD-97.3 (New Bedford) to this if it ever gets going. James and Robert Karam, owners of WHTB-1400 (Portuguese) and WSAR-1480 (English) in Fall River, have failed so far to persuade the FCC to cancel WLAW's CP. WWRL-NY-1600's CP for 25,000 watts day was reinstated by the FCC.

#### STATION ADDRESSES

Ray Arruda says that per his QSL, write to WJNZ-MI-1680 c/o Jeff Shelp, Director of Engineering, 2610 Horizon Drive, Suite F, Grand Rapids, MI 49546. Phone (616) 956-3323.

Harry Hayes passes this along concerning WTLA-NY-1200: "A report sent to P.O. Box 100, North Syracuse was returned by the post office. I mailed to WTLB's address and station answered in a few days. Address on envelope is P.O. Box 100, Syracuse 13217 (not North Syracuse). So either address, this one or WTLB's, works."

Steve Kennedy reports a new address for WACA-MD-1540: 11141 Georgia Avenue, Room 310, Wheaton, MD 20902.

#### REPORTERS

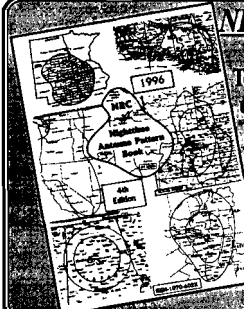
- |        |                   |   |
|--------|-------------------|---|
| RA-MA  | Ray Arruda        | Acushnet MA - R8A, SW8, LW, Quantum loop  |
| DB-DE  | Dave Braun        | Wyoming DE - R-5000, LW, Quantum loop   |
| MB-ON  | Mike Brooker      | Toronto ON - RF-2200, RFB-45  |
| MB-IN  | Mark Burns        | Terre Haute IN - R8, 80' LW, Kiwa loop  |
| GC-NY  | Greg Coniglio     | Cheektowaga NY - Station news   |
| PC-VA  | Perry Crabill     | Winchester VA - UnID help   |
| JF-ON  | Jeff Falconer     | Clinton ON - HF-1000, Kiwa loop, 45' vertical   |
| BF-IL  | Barry Finkel      | Chicago IL - UnID help  |
| SF-TN  | Steve Francis     | Alcoa TN - TRF, Select-a-Tenna  |
| HF-MI  | Harold Frogge     | Midland MI - R71A, MFJ956, ANC4, 185'/85' RW's  |
| RH-NJ  | Richard Harrison  | Hewitt NJ - Bose Wave, Satellit 340, Select-a-Tenna, LW   |
| HJH-PA | Harry Hayes       | Wilkes-Barre PA - SR11, Trans-Oceanic, Kiwa pocket loop   |
| RJ-NC  | Russ Johnson      | Lexington NC - Superadio III, Optimus 12-603A and 12-174, DX-375, Select-A-Tenna, 160-m. inverted V |
| SK-PA  | Steve Kennedy     | Coal Township PA - Superadio III  |
| JEK-MD | Joe Kureth        | Uniontown MD - SW8, NESW LW   |
| TLK-FL | Terry Krueger     | Clearwater FL - NRD-535, HQ-180A  |
| DL-MD  | Dave Larrabee     | Columbia MD -   |
| PM-VA  | Peter Martin      | Arlington VA - Optimus 12-603A  |
| WM-MD  | William McGuire   | Cheverly MD - DX-380  |
| RM-CT  | Ron Musco         | Poquonock CT -  |
| NP-MI  | Nicholas Pattison | St. Clair Shores MI - DX-375  |
| AR-ON  | Andy Rugg         | Cornwall ON - HQ-180AC, Quantum loop  |
| MS-ON  | Morris Sorensen   | Scarborough ON - YB-400, built-in antenna   |
| DZ-NY  | Dan Ziolkowski    | Hamburg NY - Sony 2010, Kiwa filters & loop   |

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# DXP-1 DXpedition Phasing Unit

Mark Connelly, WA1ION - 12 JAN 1999

Phasing units of various types have been in use by medium wave DXers for at least 35 years, since the era of Gordon Nelson and Bill Bailey (and possibly before that). The devices have proved to be very valuable tools in the serious DXer's interference-fighting arsenal. Reprints of many designs may be obtained from the National Radio Club [reference 1]. The object of phasing units, as different as the individual designs may be, has always been to combine the contributions of two antennas at a 180 degree phase relation in order to null out a dominant signal (or noise) and let otherwise-inaudible weaker co-channel and adjacent channel signals come through.

The DXP-1 is intended to "pick up where the MFJ-1026 left off", namely coverage of the 100 to 2000 kHz frequency range.

DXP-1 provides features, such as tuning, that are not even available on a modified MFJ-1026 [reference 2].

At present (JAN 1999), "homebrewing" a unit such as the DXP-1, or modifying an MFJ-1026 (/1025), are the only phasing unit options open to LF and MF DX enthusiasts in the USA and Canada.

Al Merriman [reference 3] has been modifying MFJ phasers; contact him if you're interested in going this route. He might even be able to build homebrew design units for DXers as well. The JPS ANC-4 is another option, but it has been noted in some cases to have overload problems and hit-or-miss nulling below 2 MHz. In many countries there is another option: the Wellbrook APU 100, built in the UK (but presently not exported to the USA or Canada). Andy Ikin of Wellbrook [reference 4] can supply additional information.

It is sincerely hoped that MFJ, JPS, Kiwa, or some other competent DX-accessory manufacturer will soon produce a good longwave / medium wave phasing unit for US and Canadian DXers.

DXP-1 grew out of a need to simplify a larger unit, the Superphaser-1, for easier assembly and uncomplicated operation on DXpeditions where DXing is often done in a vehicle with less-than-optimum lighting, space, and temperature conditions.

Keeping the size of the unit compact (chassis: 5 x 4 x 3 in. / 12.7 x 10.16 x 7.62 cm) makes it a good candidate for DXpeditions involving air travel.

Phase shifting is wideband in nature: this is similar to the MFJ models, the Sherwood QRM Eliminator, and delay-line d-i-y models like the DL-2 and the (Gerry Thomas) Phase One.

Unlike R-L-C tank-circuit shifted models (the Nelson and early Connelly units), a null set up in a given direction is often effective plus or minus 100 kHz or more from the set-up frequency.

After the summation point, amplification can be broadband for rapid operation, quick checking of parallel frequencies, etc. Alternately, tuned operation may be used for improved sensitivity and signal-to-noise ratio. Tuned operation is especially beneficial with low to moderate priced receivers, particularly portables from Sony, Sangean, Grundig, et al.

There are two tuned modes. Mode TM1 places the varactor tuning capacitance in a series configuration for maximum signal transfer. Mode TM2, shunt (i.e. parallel) variable capacitance, provides a bit less signal coupling, but offers somewhat better freedom from spurious responses in high-signal areas such as cities. The TM2 mode also provides sharper tuning (higher "Q").

Frequency ranges are as noted in Table FR-DXP1.

Table FR-DXP-1

S4 to TM1; S3 to position noted		S4 to TM2; S3 to position noted	
S3 = 1	145 to 300 kHz	S3 = 1	95 to 150 kHz
S3 = 2	300 to 570 kHz	S3 = 2	150 to 290 kHz
S3 = 3	570 to 1070 kHz	S3 = 3	290 to 475 kHz
S3 = 4	1070 to 1900 kHz	S3 = 4	475 to 950 kHz
S3 = 5	1900 to 3650 kHz	S3 = 5	950 to 1550 kHz
S3 = 6	3650 to 6300 kHz	S3 = 6	1550 to 3000 kHz

## OPERATING THE DXP-1

### Initial set-up:

Connect a passive (unpowered) antenna to J1, or connect an active antenna (such as an MFJ-1024 whip) to J3.

Connect the second antenna to J2 (if passive) or J4 (if active).

Connect a DC power source of +12 volts (min.) to +18 volts (max.) to J5.

Connect the receiver, via coaxial cable, to J6.

Set R1 and R2 fully clockwise and set R3 to center. Set S1 to 1.

Set S3, initially, to the position for the operating frequency as indicated in the TM1 section of Table 1.

If untuned (broadband) operation is desired, set S2 to BB (broadband) and skip over the "Tuning" part of this procedure.

### Tuning:

Set S2 to TUN (tuned). In most areas S4 can be set to TM1 for maximum system sensitivity. In strong signal areas, the TM2 setting of S4 may be preferable.

Ensure that S3 is set for the desired frequency range, in accordance with Table 1. Adjust R4 for maximum signal level (peak).

### Amplitude Balancing:

With S1 on 1, observe the level of the dominant signal (or noise) to be nulled. Also do this with S1 on 2. If the signal level had been greater in the S1 = 1 position, adjust R1 so that the signal level measured with S1 on 1 is equal to that obtained with S1 on 2.

Conversely, if the signal level had been greater in the S1 = 2 position, adjust R2 so that the signal level measured with S1 on 2 is equal to that obtained with S1 on 1.

### Nulling:

NOTE: To get used to nulling, initially attempt it on steady daytime medium wave signals before trying it at night.

Set S1 to Null-a and adjust R3 for the best reduction of the dominant signal to be removed. Also do this R3 adjustment with S1 set to Null-b. Leave S1 on the null position which gave the deeper, better-defined null.

Finish up the null by small interactive adjustments of R3, R1, and R2. Occasionally it may help to go back to the "Amplitude Balancing" section and proceed forward from there.

### References cited:

[1] National Radio Club web = <http://nrcdxas.org>

[2] MFJ modification article web = <http://www.nordicdx.com/antenna/special/mfj1026.html>

[3] Al Merriman, K4GLU e-mail #1 = [merriman@shore.intercom.net](mailto:merriman@shore.intercom.net) e-mail #2 = [k4glu@yahoo.com](mailto:k4glu@yahoo.com)

[4] Andrew Ikin - Wellbrook Communications, UK e-mail #1 = [aikin@globalnet.co.uk](mailto:aikin@globalnet.co.uk) e-mail #2 = [andrew.ikin@baedsl.co.uk](mailto:andrew.ikin@baedsl.co.uk)

## DXP-1 CONSTRUCTION DATA

### Table HL-DXP-1: DXP-1 hole-drilling list

X = Horizontal distance, in inches, from the vertical centerline (VCL) on the side observed. Negative values of X are left of VCL, positive values of X are right of VCL.

Y = Vertical distance, in inches, from the bottom horizontal edge of the side observed.

D = Hole diameter in inches.

Hole loci are first marked on the box with a scribe and are then drilled with a .125" bit. Subsequently, as required, the holes are enlarged to the proper size by using progressively larger bits up to that corresponding to the final desired diameter.

Chassis Box = Mouser # 537-TF-779: 5" X 4" X 3"

LEFT SIDE					
Hole #	Comp. Desig.	Description	X	Y	D
1	J1	Line 1 Passive Ant.In (BNC-f)	-1.25	1.0625	0.375
2	J3	Line 1 Active Ant.In (BNC-f)	-0.75	0.4375	0.375
3	G1	grounding H/W - int.&ext.lug	0.0	0.4375	0.125
4	J4	Line 2 Active Ant.In (BNC-f)	0.75	0.4375	0.375
5	J2	Line 2 Passive Ant.In (BNC-f)	1.25	1.0625	0.375

TOP SIDE

Hole #	Comp. Desig.	Description	X	Y	D
1	S3	Bandswitch - tab	-1.6875	3.5	0.125
2	S3	Bandswitch - shaft	-1.6875	3	0.375
3	S1	Input Select switch - tab	-1.6875	1.5	0.125
4	S1	Input Select switch - shaft	-1.6875	1	0.375
5	R1	Line 1 Level pot - tab	-0.75	3.25	0.125
6	R1	Line 1 Level pot - shaft	-0.4375	3.25	0.3125
7	R3	Phase Null pot - shaft	-0.625	2	0.3125
8	R3	Phase Null pot - tab	-0.625	1.6875	0.125
9	R2	Line 2 Level pot - shaft	-0.4375	0.625	0.3125
10	R2	Line 2 Level pot - tab	-0.125	0.625	0.125
11	M1	Line 1 phase-shift card H/W	0.375	3.125	0.125
12	S2	Function switch - tab	0.375	2	0.125
13	S2	Function switch - shaft	0.625	2	0.25
14	M2	Line 2 phase-shift card H/W	0.375	0.875	0.125
15	S4	Tuning Mode switch - tab	1.75	3.5	0.125
16	S4	Tuning Mode switch - shaft	1.75	3.25	0.25
17	R4	Tuning pot - shaft	1.75	2.125	0.3125
18	R4	Tuning pot - tab	2.0625	2.125	0.125

RIGHT SIDE

Hole #	Comp. Desig.	Description	X	Y	D
1	A1	BUF-B amplifier card - H/W 1	-1.0625	2.4	0.125
2	A1	BUF-B amplifier card - H/W 2	-1.0625	0.4	0.125
3	J6	RF Out (BNC-f)	0.0	0.5	0.375
4	J5	B+ In (RCA-f)	0.75	0.875	0.25
5	G2	grounding H/W - int.&ext.lug	1.3125	0.875	0.125

Vendor Codes for Parts Lists

CS = Circuit Specialists = <http://www.cir.com/>  
MCL = Mini-Circuits = <http://www.minicircuits.com/>  
MOU = Mouser = <http://www.mouser.com/>  
RS = Radio Shack = <http://www.radioshack.com/>  
TA = Tech America = <http://www.techam.com/>

Table PL-DXP-1

DXP-1 DXpedition Phaser upper level parts list

\* = A note relating to this item follows the parts list.

Item	Designator	Description / Value	Vendor	Vendor Stock #	QTY
1	A 1	BUF-B amp. card	>>>	see Table PL-BUF-B	1
2	C 1-8	capacitor, 0.1 uF	MOU	539-CK05104K	8
3	C 9,10,11	capacitor, 200 pF	CS	DM10-201J	3
4	C 12	capacitor, 150 pF	CS	DM10-151J	1
5	C 13,14	capacitor, 0.001 uF	MOU	581-EXCD102J	2
6	C 15,16	capacitor, 390 pF	CS	DM10-391J	2
7	D 1 *	varactor, MVAM108	TA	900-5704	1
8	G 1,2	screw, 4-40 X.375"	MOU	572-01881	2
9	G 1,2	hex nut, 4-40	MOU	572-00484	2
10	G 1,2	solder lug, #4	MOU	534-7311	2
11	H misc. *	screw, 4-40 X .25"	MOU	572-01880	4
12	H misc. *	split lockwasher,#4	MOU	572-00649	4
13	J 1-4,6	BNC jack	RS	278-105	5
14	J 5	RCA phono jack	RS	274-346	1
15	L 1	inductor, 4.7 mH	MOU	434-1120-473K	1
16	L 2	inductor, 1.5 mH	MOU	434-1120-153K	1

17	L 3	inductor, 470 uH	MOU	43LR474	1
18	L 4	inductor, 150 uH	MOU	43LR154	1
19	L 5	inductor, 47 uH	MOU	43LR475	1
20	L 6	inductor, 15 uH	MOU	43LR155	1
21	M 1,2	PH-A phase card	>>>	see Table PL-3	2
22	R 1,2,3	pot., 1K, linear	MOU	31CN301	3
23	R 4	pot., 50K, linear	MOU	31CN405	1
24	R 5,6,7	resistor, 15 ohm	CS	RA15	3
25	R 8	resistor, 33K	CS	RA33K	1
26	RFC 1,2	RF choke, 2.2 mH	TA	900-4895	2
27	RFC 3	RF choke, 10 mH	MOU	434-1120-104K	1
28	S 1	switch/3pole/4pos.r	MOU	10YX034	1
29	S 2	switch,3PDT,on-off-on	CS	8305	1
30	S 3	switch/4pole/6pos.r	MOU	10WR046	1
31	S 4	switch,DPDT,on-on	CS	8011	1
32	T 1	RF transformer,1:1	MCL	T1-6-X65	1
33	U 1	voltage reg., 10 V	MOU	511-L78M10CV	1
34	- *	knob (0.94" dia.)	MOU	45KN013	6
35	-	chassis box 5X4X3"	MOU	537-TF-779	1

Misc. items: hook-up wire, buss wire, solder, labels "AS REQUIRED"

notes -

\*Item 7: Motorola MVAM109 or Siemens BB112 may be substituted directly. NTE618 may be substituted if the maximum control voltage is raised from +10 VDC to approximately +11 VDC.

\*Item 11: one each for M1, M2 mount; two for A1 mount

\*Item 12: one each for M1, M2 mount; two for A1 mount

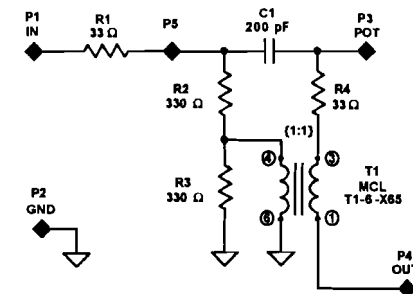
\*Item 34: one each for R1, R2, R3, R4, S1, S3

Table PL-PH-A  
PH-A Phase Shift card parts list

Item	Designator	Description / Value	Vendor	Vendor Stock #	QTY
1	BD	perfboard:1.0"X0.8"	RS	276-1396 (cut)	1
2	C1	capacitor, 200 pF	CS	DM10-201J	1
3	H1	screw, 4-40 X .25"	MOU	572-01880	1
4	H1	spacer, 4-40 X .5"	MOU	534-1450C	1
5	H1	solder lug, #4	MOU	534-7311	1
6	P1-5	flea-clip / .042 hole	MOU	574-T42-1/100	5
7	R1,4	resistor, 33 ohm	CS	RA33	2
8	R2,3	resistor, 330 ohm	CS	RA330	2
9	T1	1:1 RF transformer	MCL	T1-6-X65	1

plus buss wire, solder "as required"

PH-A PHASE SHIFT CARD  
FIGURE 1: SCHEMATIC





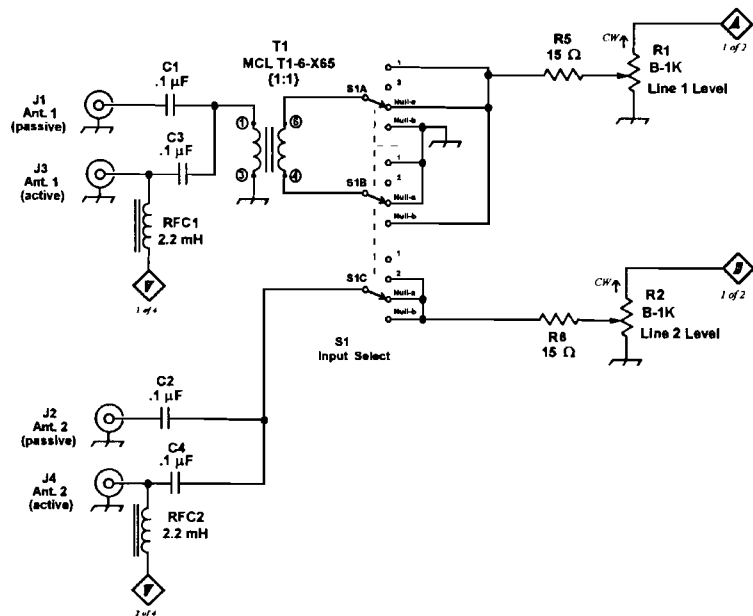
**Table PL-BUF-B**  
BUF-B Buffer Amplifier card parts list

Item	Designator	Description / Value	Vendor	Vendor Stock #	QTY
1	BD	perfboard:1.4"X2.4"	RS	276-1396 (cut)	1
2	C1,5,9	capacitor, 0.01 uF	MOU	539-CK05103K	3
3	C2,3,4,7,8	capacitor, 0.1 uF	MOU	539-CK05104K	5
4	C6,10	capacitor, 10uF tant	MOU	581-10K35	2
5	H1,2	screw, 4-40 X .25"	MOU	572-01880	2
6	H1,2	spacer, 4-40 X .5"	MOU	534-1450C	2
7	H1,2	solder lug, #4	MOU	534-7311	2
8	P1-9	flea-clip/ .042"hole	MOU	574-T42-1/100	9
*9	Q1	MOSFET, NTE222	MOU	526-NTE222	1
10	Q2	NPN, 2N5109	MOU	511-2N5109	1
11	R1	resistor, 330K	MOU	29SJ250-330K	1
12	R2	resistor, 51 ohm	MOU	29SJ500-51	1
13	R3,8	resistor, 270 ohm	MOU	29SJ250-270	2
14	R4	resistor, 100K	RS	271-1347	1
15	R5	resistor, 47K	RS	271-1342	1
16	R6	resistor, 680 ohm	RS	271-021	1
17	R7	resistor, 1K	RS	271-1321	1
18	R9,11,12	resistor, 4.7 ohm	MOU	295-4.7	3
19	R10	resistor, 39 ohm	MOU	29SJ500-39	1
20	RFC1	inductor, 2.2 mH	MOU	434-05-222J	1
21	T1	RF transformer, 4:1	MCL	T4-6T-X65	1

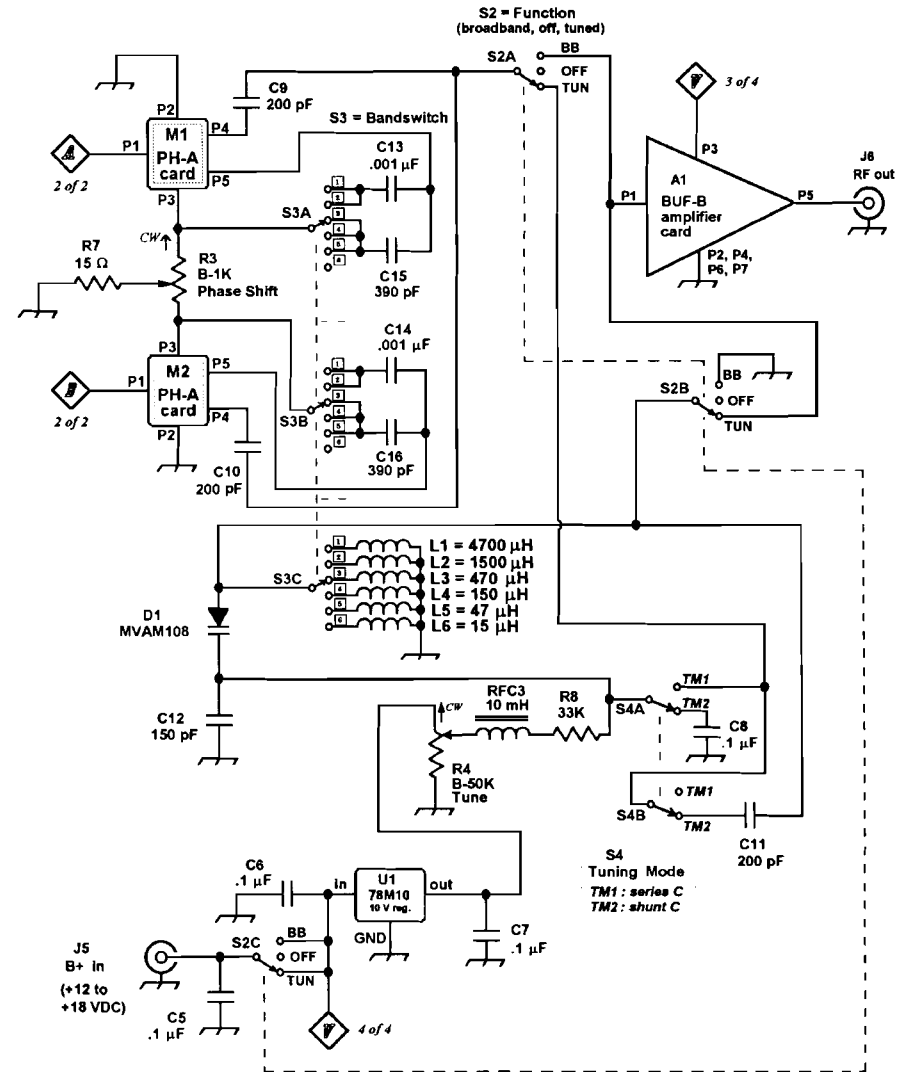
+ buss wire, solder - as required

\* Item 9 - 3N201, 40673, or NTE454 may be substituted (Q1).

**DXP-1**  
DXpedition Phasing Unit  
Figure 1 : Input Section



**DXP-1**  
DXpedition Phasing Unit  
Figure 2 : Output Section



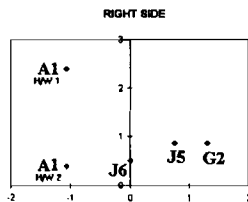
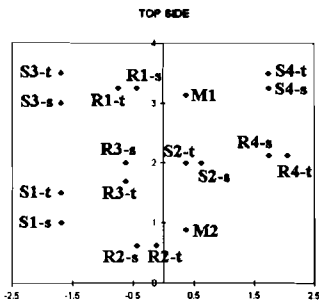
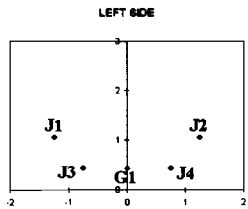
Please preserve these QSL's for future display! Do not discard these items. For preservation information contact the:  
National Radio Club  
P.O. Box 118  
Poquonock, Connecticut 06064

**If you are interested in helping preserve the history of our hobby through preserving your collections, you should consider ordering a supply of these free 3-inch-square stickers to place on your veries, recordings, etc. Specify the number you need, and order from Ron Musco - P. O Box 118 - Poquonock, CT 06064-0118. Include an SASE. Don't wait until it's too late - order now.**

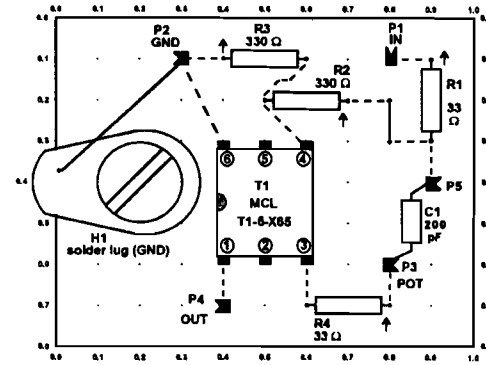
# DXP-1

## DXpedition Phasing Unit

Figure 3 : Chassis Pictorials



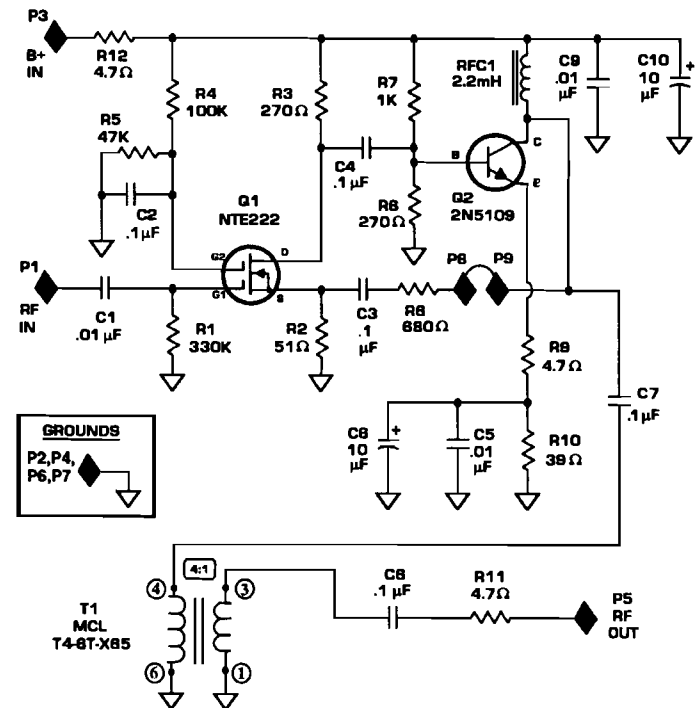
PH-A PHASE SHIFT CARD  
FIGURE 2: ASSEMBLY



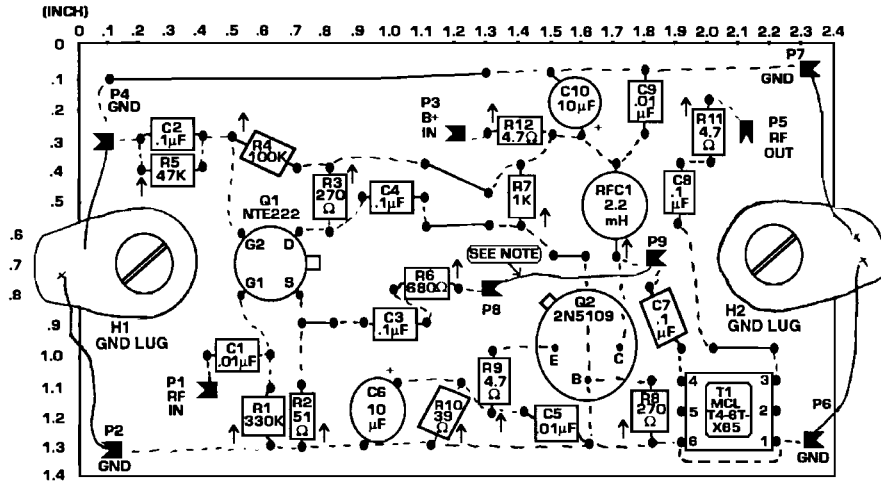
**NOTES**

↑ = long-lead side of vertically-mounted component  
For schematic, see Figure 1.

SCHEMATIC: BUF-B BUFFER AMPLIFIER CARD



ASSEMBLY: BUF-B BUFFER AMPLIFIER CARD



Notes

- ↑ = Long lead side of vertically-mounted component
- - - = Buss wire on solder side of board
- = Buss wire on component side of board
- Wire from P8 to P9 should be insulated.
- ⊞ = "Flea clip" terminal pin OPEN SIDE

Professional  
**Sports**  
Networks

**Barry S. Finkel** bsfinkel@ANL.gov  
10314 S. Oakley  
Chicago, IL 60643-2409  
Network listings for team sports stations

Here is one more NHL network list. The Ottawa Senators FF station is 1150 CJRC-ON; there is no FF network.

Ottawa Senators 1998/99 (from Media Guide [via Bob Galerstein])

960 CFFX-ON	1220 CHSS-ON m	---	C___-ON b
1200 CJJB-ON*	1290 CJBK-ON m		

b = The Senator's Media Guide lists a station "Star 96" on the EE network. Bob Galerstein and I can not determine which station this is.

m = This station broadcasts most games.

The Major League Baseball season is beginning with spring training. It might be too early for network lists, but send me any that you may find (or pointers to URLs).

As for the "Ad-fest" trivia from my last column — It is an advertisement festival when the *Chicago Tribune* has two feature columns the next day detailing and rating the various commercials from the Super Bowl telecast. The total playing time was 5:16 for Denver, 6:21 for Atlanta. That amounts to slightly over 11.5 minutes. During the course of the game I timed 32:15 minutes of commercials, 3:50 minutes of Fox promos, and 0:50 of NFL messages. This does not count local commercials during the game nor any commercials during the pre-game, halftime, or post-game. The end result is that the commercials won by a long shot!

**Radio Station 40 or more years old in 1962**

Broadcasting, May 14, 1962

By Jeff Miller

(full text on <<<http://members.aol.com/jeff560jeff.html>>>

The following compilation has been made from records of the FCC, FRC, Bureau of Navigation, station reports, and files of past issues of Broadcasting. Since much pioneering in broadcasting occurred before official and complete records were instituted, this listing may be incomplete in certain respects.

**WEW** St. Louis, Mo. - Jesuit St. Louis U. was licensed for WEW on March 23, 1922. The school operated WEW until 1955, when the license was assigned to the Barrington Co. WEW, Inc., controlled by Franklin Broadcasting Co., became licensee in 1961. WEW operates on 770 kc with 1 kw.

**WIL** St. Louis, Mo. - On the air since February 1922, WIL was licensed on April 5 of that year. The license was assigned to Missouri Broadcasting Corp. in 1928. The station changed to 1430 kc with 5 kw in 1949. Balaban Stations acquired WIL in 1957.

**KFBB** Great Falls, Mont. - The F. A. Buttrey Co. was the first licensee July 11, 1922. The outlet operated on 1090 kc with 50 watts until 1928, when it went on 1360 with 250 watts. The station began on 1280 kc with 1 kw in 1930, and on 1310 kc with 5 kw in 1941. J. P. Wilkins assumed control of the licensee in 1952, and in 1954, the licensee changed its name to Wilkins Broadcast Inc. KFBB Broadcasting Corp. became licensee in 1960.

**WJAG**, Norfolk, Neb. - Publisher of the *Norfolk Daily News*, the late Gene Huse, was granted WJAG's first license on July 26, 1922. The original power of 100 watts on 833 kc was increased to 200 watts on 1110 kc in 1926, and to 1 kw and 1060 kc in 1929. It was assigned 780 kc in 1944.

**KMEO** Omaha, Neb. - Omaha Grain Exchange founded the station as WAAW in February 1922. The 15 watt operation was changed to 100 watts later in the year and to 500 watts by 1924. WAAW switched from 830 kc to 1080 kc in this period. In 1928, it was assigned 660 kc. The station was purchased by the Omaha World Herald Publishing Co. in 1939 and call letters were changed to KOWH. Mid-Continent

Broadcasting Co. bought the station in 1949 and sold it to National Weekly Inc., in 1957. At that time the station became known as KMEO.

**WLNH** Laconia, N. H. - WKAV received its license on Aug. 22, 1922.

The station had 750 watts on 360 meters. It was owned by the Laconia Radio Club. In 1934, the station began operating with 5 kw, and the licensee changed its name to Northern Broadcasting Co. Present licensee, WLNH Inc., was formed this year. It currently operates on 1350 kc with 5 kw.

**WHBI** Newark, N. J. - Licensed Mar. 11, 1922,

to May Radio Broadcasting Corp., the station was called WGCP. FRC records show the station on 1070 kc with 500 watts in 1927. Later in the year the station was on 1250 kc with 250 watts. The station was granted 1 kw in 1934 and became WHBI in 1935. It broadcasts with 2.5 kw day and 1 kw night sharing time on 1280 kc with WADO New York, owned by Bartell Broadcasters. Bartell took over WHBI this year and closed it down to permit WADO full occupancy of 1280 kc.

**KOB** Albuquerque, N. M. - The early experimental predecessor of KOB began in 1920 as 5XD. The station, which was built by Dr. Ralph Goddard, received the KOB call letters with his license on April 5, 1922. The station went through a series of frequency changes, and finally in 1941 it received a temporary permit to operate on 770 kc, where it is today. That same year power was increased to 50 kw. The station, which had been purchased by the *Albuquerque Journal* in 1936, was sold to Time-Life Inc. in 1951. KSTP Inc. purchased the outlet in 1957.

**WGR** Buffalo, N. Y. - WGR went on the air May 22, 1922. The late I. R. Lounsbury was president and general manager. During the 30's and 40's, WGR was part of the Buffalo Broadcasting Corp. Transcontinental Television Corp. acquired the station in 1957. WGR is on 550 kc with 5 kw.

**WHCU** Ithaca, N. Y. - Cornell U., the present owner, received its license for station 8YC on May 16, 1916. This station preceded WEAI, which was licensed on Jan. 30, 1923. The new station had 500 watts power. Frequency was changed from 1050 kc to 1180 kc in 1924. The station was operating on 1270 kc with 1 kw in 1930. It was leased to the *Elmira Gazette* from 1932 to 1940. The frequency was changed to 1040 kc in 1934, and to 850 in 1939. The station, which is now known as WHCU, operates on 870 kc.

**WABC** New York, N. Y. - As WJZ Newark, station went on the air on Oct.

1, 1921. Licensee was Westinghouse Electric and Mfg. Co. WJZ in 1926, under new ownership of RCA, became the New York key of NBC's Blue Network. WJZ was sold in 1943 to Edward J. Noble. American Broadcasting-Paramount Theatres Inc. acquired WJZ in 1953 and the WABC call letters were assumed. WABC is 770 kc with 50 kw,

**WHN** New York, N. Y. - Originally licensed to George Schubel on March 18, 1922, the station broadcast with 250 watts on 760 kc. In 1923 Marcus Loew Booking Agency bought the station and operated it for 39 years. In 1932, WHN merged with WOAO, WPAP and WRNY from the area and began broadcasting with 500 watts. Two power boosts in the next three years brought WHN to 5

kw and in 1940 the FCC granted WHN 50 kw on 1050 kc. In 1948, call letters were changed to WMGM, but when Storer Broadcasting Co. purchased the outlet early this year, call letters WHN were restored.

**WNBC** New York, N. Y. - As WEAJ, operating with 500 watts, the station went on the air Aug. 16, 1922. W. E. Harkness was manager. The station was sold to RCA in 1926. Call letters WNBC were adopted in 1946, but were changed to WRCA in 1954. Then in 1960 the station resumed WNBC. It is on 660 kc with 50 kw.

**WOR** New York, N. Y. - Licensed as a 250 watt outlet on Feb. 22, 1922, WOR was located in Newark. By 1931, the station had 5 kw power. On 710 kc, the station began using 50 kw in 1935. initial licensee Bamberger Broadcasting Service Inc. became controlled by R. H. Macy & Co. in 1948, and the following year the license was assigned to General Teleradio Inc. The license was assigned to Don Lee Broadcasting System in 1952, to RKO Pictures Inc. in 1955, RKO Teleradio Pictures Inc. in 1956, and finally to RKO General Inc. in 1959.

**WHAM** Rochester, N. Y. - The U. of Rochester put the station on the air July 11, 1922. Power was 100 watts. Stromberg Carlson Co. became licensee in 1927, and power was raised to 5 kw. It was increased to 25 kw in 1933 and later the same year to 50 kw. The current owner, Genesee Broadcasting Corp., acquired the outlet in 1959. Operation is on 1180 kc.

**WGY** Schenectady, N. Y. - The station went on the air Feb. 20, 1922. WGY was assigned 790 kc in 1923, and by 1925 was experimenting with 50 kw. The station received authorization to use 50 kw in 1926, and the following year to experiment with 100 kw, then 200 kw in 1930. The original owner, General Electric Co., still broadcasts with 50 kw, now on the 810 kc allocated under NARBA in 1941.

**WFBL** Syracuse, N. Y. - Operation began in February 1922 with call letters WLAH. The station was previously in amateur and experimental activity dating back to 1912. The late Samuel Woodsworth owned the early station. Through the years power has gone from 100 watts to the present 5 kw, and frequency is 1390 kc. Present call letters were adopted in 1924. The outlet was purchased by Samuel H. Cook, Oscar F. Soule and Robert G. Soule in 1932. Present owner, First Broadcasting Corp., acquired the station in 1956.

**WSYR** Syracuse, N. Y. - At the home of its founder, Clive Meredith of Cazenovia, the station as WMAC began operating on Sept. 15, 1922. The 250 watt outlet was purchased by Col. Harry C. Wilder and his father Mark S. Wilder in 1932. Power was increased to 1 kw in 1936 and to 5 kw in 1941 on 870 kc. Col. Wilder sold the station to S. I. Newhouse in 1948, but continued to direct operations.

**WHAZ** Troy, N. Y. - After several months of testing, WHAZ went on the air Sept. 11, 1922. The

station, owned by Rensselaer Polytechnic Institute, has had the same call and licensee ever since. It is 1 kw on 1330 kc.

**WBT** Charlotte, N. C. - Early station operations were under the call 4XD at the home of Fred Laxton. WBT was licensed to Mr. Laxton, Fred Bunker and Earl Gluck in April 1922. The station was purchased by Carolina States Electric Co. and Jim McMillan in 1925. It was sold to C. C. Coddington Jr. in 1926. The present owner, Jefferson Standard Life Insurance bought the outlet in 1945 and operates on 1110 kc with 50 kw.

**WDAY** Fargo, N. D. - Earl C. Reineke founded WDAY on May 22, 1922. Mr. Reineke operated the station with 50 watts on 360 meters (834 kc). The power was increased to its present 5 kw in 1935. In 1961, Forum Publishing Co. became the owner of WDAY Inc., corporate licensee, when Mr. Reineke disposed of his majority stock. The station operates on 970 kc.

**WLW** Cincinnati, Ohio - On March 3, 1921, 8CR was started in the home of PowelCrosley Jr., with 20 watts. Licensed to the Crosley Manufacturing Co., the station became WLW on March 2, 1922, operating on 360 meters with 50 watts. The following September, power was increased to 500 watts, and in 1925 to 5 kw. The Federal Radio Commission assigned WLW to 700 kc in 1927 and the following year WLW moved from Northside to Mason, Ohio, and installed a 50 kw transmitter.

**KYW** Cleveland, Ohio - This Westinghouse station was first licensed on May 15, 1922, to the Willard Storage Battery Co. It was operated on 770 kc with 1 kw. When the Federal Radio Commission came in in 1927, power was increased to 5 kw. In 1928, the license was assigned to WTAM and WEAR Inc. Power was increased to 50 kw in 1929. The licensee name was amended to WTAM Inc. in 1930, and later in the year the station was acquired by NBC. In 1941, KYW was assigned to its present 1100 kc. Westinghouse Broadcasting Co. bought the station in 1955.

**WHK** Cleveland, Ohio - As a 500 watt commercial outlet, WHK went on the air on March 5, 1922 on 830 kc. The original licensee was Warren Cox. In 1934, the *Plain Dealer* bought the station. Metropolitan Broadcasting Stations (a division of Metromedia Inc.) purchased WHK in 1958. Station is on 1420 kc with 5 kw.

**WCOL** Columbus, Ohio - As WMAN, M. A. Pixley went on the air in 1922 with 5 watts. His station became known as WSEN in 1928. WCOL letters were adopted in 1936. The outlet was purchased by Air Trails Inc. in 1952, and in 1960 the power was increased to 1 kw on 1230 kc.

**\*WOSU** Columbus, Ohio - An experimental license granted on April 20, 1920, authorized Ohio State University to operate on 200 and 375 meters with 1.8 watts. The station was assigned call letters WEOA on June 3, 1922, and raised to 650 watts. In 1933, the outlet was given permission to broad-

cast with 1 kw as WOSU. In 1941, on 820 kc, the station began broadcasting with 5 kw, limited to local sunset at Columbus.

**WING** Dayton, Ohio - Licensed for 5 watts on May 24, 1921, to Stanley M. Krohn Jr., the station carried the call letters WXAX. The station was known as WDBS in 1922, WSMK in 1926 and WING in 1940, Mr. Krohn was the owner until 1940, when he sold the station to Charles Sawyer, the present owner. It assumed its present 1410 kc, 5 kw operation in 1941.

**WSPD** Toledo, Ohio - Going on the air in 1921, the station was acquired in 1928 by Fort Industries (now Storer Broadcasting Co.) which has retained the license since. WSPD operates on 1370 kc with 5 kw.

**\*WNAD** Norman, Okla. - In September 1922, Maurice Prescott, a student of engineering at the U. of Oklahoma, interested a group of students in building a station. The outlet went through several frequency and power changes; down to 50 watts, up to 100 watts and finally was granted 1 kw in 1934, and 640 kc in 1940.

**WKY** Oklahoma City, Okla. - Operation began when Earl C. Hull started broadcasting with an experimental 20 watt transmitter as SXT in January 1920. Mr. Hull was licensed for WKY in April 1921 on 1040 kc. The Oklahoma Publishing Co. bought WKY in 1928 and began broadcasting with a new 1 kw transmitter on 900 kc. In 1956 corporate licensee was changed from WKY Radiophone Inc. to WKY TV System Inc. The station operates on 930 kc with 5 kw.

**KAST** Astoria, Ore. - Going on the air in 1922, KAST operated as a 100 watt daytime outlet in its earlier years. The station was purchased by Astoria Broadcasting Co. in July 1935. It now operates on 1370 kc with 1 kw.

**\*KOAC** Corvallis, Ore. - On Dec. 7, 1922, the Federal Radio Commission designated KFDJ for Oregon State U. The station placed a 500 watt transmitter in operation in 1925. Call letters were changed to KOAC in 1926. Power was increased to 1 kw in 1928 and the station received its present 550 kc. In 1940, it was granted 5 kw.

**KMED** Medford, Ore. - In October 1922, as KFAY, station went on the air with 50 watts. It went through several power changes until 1948 when it began operating with 5 kw and 1 kw at night. The original owner, William Virgin, died in 1927 and his wife Blanche assumed station ownership. Mrs. Virgin sold the outlet to the present owner, Radio Medford Inc., in 1950. The station operates on 1440 kc.

**KGW** Portland, Ore. - The Oregonian Publishing Co. went on the air on March 25, 1922. In November of that year KGW went on with 500 watts and increased to 1 kw in 1926. The station was granted permission to operate with 5 kw in 1933. King Broadcasting Co. acquired the station in 1953. KGW is on 620 kc.

**WSAJ** Grove City, Pa. - Amateur station 8CO was licensed with 1 kw to Grove City College in the fall of 1914. This station was the forerunner of WSAJ. In 1921, the outlet was licensed as WSAJ. Dr. Herbert W. Harmon built the station's first transmitter. The present 100 watt transmitter first operating on 1340 kc was installed in 1950.

**WKBO** Harrisburg, Pa. - Station went on the air in 1922. The Keystone Broadcasting Corp. purchased the outlet in 1935. It is operated on 1230 kc with 250 watts.

**WGAL** Lancaster, Pa. - WGAL has been operating since June 1922. The original licensee, WGAL Inc. (Steinman Stations), still operates the station. The original 10 watt station now operates on 1490 kc with 1 kW

**WCAU** Philadelphia, Pa. - WCAU began broadcasting with 250 watts from Philadelphia in 1922. It was using 500 watts by 1924. The station was acquired by Dr. Leon Levy and Isaac D. Levy in 1925. They increased power to 1 kw in 1928, and to 10 kw a year later. The outlet was finally given 50 kw in 1932. It was purchased by the

*Philadelphia Record* in 1946, and re-sold to the Philadelphia Bulletin Publishing Co. the following year. CBS bought the station in 1958. WCAU is on 1210 kc.

**WDAS** Philadelphia, Pa. - WIAD went on the air in 1922 from the living room of Howard Miller with a power of 100 watts. Call letters were changed to WELK a few years later. The station was purchased by Alexander W. Dannebaum and Maurice Steppacher in 1932 and changed to WDAS. William Goldman of the Goldman Theatre chain bought the station in 1947. Max M. Leon, present owner, acquired the station in 1950. It operates on 1480 kc with 5 kw and 1 kw at night.

**WFIL** Philadelphia, Pa. - WFI began as a 250 watt station on March 17, 1922. The original owner was Strawbridge and Clothier department store. In 1934, the station combined with WLIT and WFIL assuming the WFIL call letters. The Albert M. Greenfield interests was owner of the new station. Triangle Publications Inc. purchased the outlet in 1946 and the following year power was increased to 5 kw. The station operates at 5 kw.

**WIP** Philadelphia, Pa. - With call letters WIP picked from a hat, Gimbel Brothers' Department Store became licensee on March 17, 1922. The power was the same as it is today, 5 kw. Benedict Gimble, the station's first manager, bought the station prior to its sale to Metropolitan Broadcasting, division of Metromedia Inc., present owners. WIP currently operates on 610 kc.

**KDKA** Pittsburgh, Pa. - This station carried its first regularly scheduled broadcast on Nov. 20, 1920. It was first licensed to Dr. Frank Conrad with the call 8XK in August 1916. Dr. Conrad's license was cancelled just after World War I commenced, along with all amateur licenses, but was renewed in 1920. Dr. Conrad transferred his station to Westinghouse Broadcasting Co. in 1924. KDKA operates on 1020 kc with 50 kw.

(To be continued in a future DXN)