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CPC Test Calendar							
WJIB	MA	740	Dec. 20	0000-0020			
KSTN	CA	1420	Jan. 1	0300-??			
WFIF	СТ	1500	Jan. 9	0030-0045			

From the Publisher ... Not only did I go back to bed after finishing up #9, I went to the doctor the next day and, after antibiotics, feel just fine, even good enough to whip up this little 48-pager you now hold in your hands.

The elves in Aurora, Bridgeport, and Mannsville have conspired to provide many, many hours of reading for you if you so choose to order from Catalog 2000, herein. Just in time for the Christmas season, should you need to leave a marked copy in a conspicuous place!

For those of you planning ahead, please note that the "skip" period is not very far away; there's a two-week hiatus between #12 and #13, partly to give the editors and the publisher a little time off, but mostly because mail travel times are so slow as to render useless up-to-date breaking news printed in the magazine. Actually, the best place to keep up-to-the-minute news is on [NRC], the DXAS reflector. See the back page for directions on how to join.

DXChange ... Sid Steele - Charleston, IL, 217-345-5779, would like to sell some of his collection of DXN's: V.61-654, October 1993 through September 1998, for \$10 plus shipping.

As you can see from the note in "DX Time Machine", Sid certainly is consistent in cleaning out his collection periodically! In his letter that accompanied the above item, he said that he started collecting veries in 1931 and has been a member of the NRC since 1934. He added, "I recently found a membership card dated October 19, 1934, and signed by then-president Robert H. Weaver."

I know the NRC has a number of members who have been members for over 60 years ... but I'm not sure who all would be listed, were we ever to do such a list. Perhaps, if you joined before 1940, you'd care to write a little of your experiences and send them in to Dave Schmidt, whose theme Musing idea this time around, your best all-time catch, might just fit right in.

More CPC tests are on the way ... why not send a few choices for targest as well as stamps to Blaine Thompson - P. O. Box 15762 - Fort Wayne, IN 46885-5762 << phredd@indy.net.>>

DXN Publisbing Schedule, Volume 67										
<u>lss.</u>	<b>Deadline</b>	Pub. Date	<u>lss.</u>	Deadline	Pub. Date					
11.	Dec. 3	Dec. 13	21.	Feb. 25	Mar. 6					
12.	Dec. 10	Dec. 20	22.	Mar. 3	Mar. 13					
13.	Dec. 31	Jan. 10	23.	Mar. 10	Mar. 20					
14.	Jan. 7	Jan. 17	24.	Mar. 24	Apr. 3					
15.	Jan. 14	Jan. 24	25.	Apr. 7	Apr. 17					
16.	Jan. 21	Jan. 31	26.	May 5	May 15					
17.	Jan. 28	Feb. 7	27.	June 2	June 12					
18.	Feb. 4	Feb. 14	28.	July 7	July 17					
19.	Feb. 11	Feb. 21	29.	Aug. 4	Aug. 14					
20.	Feb. 18	Feb. 28	30.	Sept. 8	Sept. 18					

#### DX Time Machine

#### From the pages of DX News:

50 years ago ... from the December 3, 1949 DXN: Stan Morss, Bradford, MA, commented on the poor DX season – new stations logged were much less-distant than last year, and TA reception had occurred on only one morning when Rabat and a BBC station were heard ... from the Dec. 10 DXN: Publisher Hal Wagner, No. Girard, PA, summed up the DX season thus far: LA's were all over the dial in the evenings, but trying to sift out the Cubans from the good stuff was a hopeless task, while mornings produced either no noise and no signals or lots of noise and fair signals.

25 years ago ... from the December 16, 1974 DXN: The NJPC was pleased to announce that the NRC membership had risen to 622, thus qualifying them for another ANARC representative. They planned to add Bob Stonier to the list of currrent reps: Russ Edmunds, John Sampson, and Page Taylor... Musings editor Ernie Cooper's address changed from Brooklyn to Provincetown.

10 years ago ... from the December 4, 1989 DXN: Sid Steele was selling off some of his old DXN's, Volumes 45 through 53 ... CKO, the moncy-losing all-talk network in Canada, was shut down.

## AM Switch

lerry Starr w8jy@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>
1200	WBZY	PA	New Castle	WKST
1280	WKST	PA	New Castle	WBZY

**APPLICATIONS / GRANTS FOR NEW STATIONS** None

#### APPLICATIONS FROM EXISTING FACILITIES None

GRANTS TO EXISTING FACILITIES

1040 KCBR CO Monument: 15000 D1

#### OTHERNESS

- 630 CFCO ON Chatham: CP for 10000/6000U4 is on
- 900 KREH LA Oakdale: station is SILENT while moving to Pecan Grove, TX
- 920 KBAD NV Las Vegas: CP for U4 is on
- KSOO SD Sioux Falls: CP to relocate transmitter is on 1140
- 1150 KSRB WA Seattle: CP for 10000/6000 U2 is on
- 1280 WBZY PA New Castle: CP for 1000/1000 U3 is on
- 1420 WKCW VA Warrenton: CP to relocate transmitter is on
- 1500 WDEB TN Jamestown: CP to relocate transmitter is on
- 1660 WWRU NJ Jersey City: CP to move here with 10000/9000 U2 is on Sing & BKF

THANKS: Ed Krejny, Les Johnson and MSJ 73 and Good DX, Jerry Starr & Buffalo K. Foonman

## AM Station Location Maps

5th edition - \$12.00 to members (\$17.95 non-members), postpaid." Compiled by Bill Hale, this must-have companion to the AM Radio Log and Nighttime Pattern Book shows the location of all U.S. and Canadian broadcast stations (except TIS/LPRT) as well as latitude/longitude coordinates, plus instructions by Dave Sundlus enabling users to calculate distance and bearing to any station. This book is three-hole punched for a letter-size ring binder. Order from NRC Publications - Box 164 - Mannsville, NY 13661. NY orders, please add sales tax.



#### The NRC AM Radio Log. 20th Edition. is compiled from both

members' reports and from official sources so that it is the most accurate listing of U.S. and Canadian AM stations available - and it includes Expanded Band stations. Cross-referenced, 3-hole punched for standard binders. Still only \$16.95 to U. S. and Canadian members: \$22.95 to U. S. and Canadian non-NRC members. Airmall 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).



## Domestic DX Digest

West: Bill Hale phantom2@eaze.act

(Division line is between East and Central time zones)

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-br. ELT

### **DDXD-West**

#### MEDIUM WAVE RAMBLINGS

- Terry Jones of the Dakota Territory passes this on, concerning KSTP-1500: "I used the Maplewood Drive address, per the Log. I received a reply, but with an another address on both the envelope and the letterhead. The 'other' address is: 3415 University Avenue, St. Paul, MN 55114. So, possibly use both addresses. Also, a new phone number is indicated on the letterhead: 651-647-1500. I used that number and it is good."
- TIS-chaser Gary Jackson of Sacramento, California relates: "I have both Cerritos Community College-1700 kHz and the TIS/HAR CalTrans-1700 at I-405 and I-105 (no call letters listed, although it has been on since before October, 1998) verified. Roger Douglas was head of

CalTrans Communications for that area and I used to be able to call him, but he has retired due to illness. So far, no replacement, and nobody in Sacramento could tell me if that is the same station testing, or can they tell me who to call in Los Angeles. And ... no one answers Roger's phone. I can hear Cerritos College this AM (11/23/99) and the TIS/HAR station in the still testing in the background. Suspect same station, but over a year of testing???"



- The Graveyard updates appearing below are a correction to a couple which appeared in Issue 7. Although the records remain with Don Trelford, he failed to tell me he was in Jamaica at the time of reception.
- Good DX conditions are here. Let's mop up!!

#### REPORTERS

- FA-ID Frank Aden Boise <N7sok@aol.com>
- SA-MB Shawn Axelrod Winnipeg Icom ICR-70 & Drake R8 + 4 Foot Unamplified Box Loop/ Quantum Loop, 145' outdoor wire, 100' indoor wire, MFJ 1026 Phasing Unit <saxelrod@mb.svmpatico.ca>
- RD-AZ Ragnar Danneskjold Mesa GE Model 3-5280C; GE Superadio <lwdxer@juno.com>
- GH-KS Gary Houdek Munden GE Superadio
- TRH-CA Tim Hall Chula Vista ICF-2010, Kiwa Loop
- TRH-CA1 DXing in Beverly Hills and around Los Angeles Delco car radio <halls@inetworld.net>
- GI-CA Gary Jackson Sacramento FRG-8800 + Kiwa Loop
- AK-WA Andy Kahn Camas Superadio II, no loop <aalwest@aol.com>
- BK-CA Bob Karchevski Sunnyvale R8-A/SM-1 amplified ferrite loop <karchev@nortelnetworks.com>
- CR-IL Christos Rigas Wood Dale R-2000, ICF-2010, Kowalski Loop <crigas@birinc.com>
- John Rieger South Milwaukee FRG100, Kiwa loop, MFJ959B Tuner-Preamp, DSP-JJR-WI 599zx Audio Noise Reduction Filter <iohnirieger@webty.net>
- **RR-UT** Rocky S. Robello, KA7EII Sandy Sangean ATS-909 with Select-A-Tenna <KA7EII@webtv.net>
- JT-MO John Tudenham somewhere in the Show-Me State Superradio 2 <jotud@juno.com>
- John Wilkins Wheat Ridge Drake R-8, 4-foot box loop <peakbagger3@juno.com> IW-CO
- Ed.-TX Editor North Richland Hills

#### **STATION NEWS & NOTES**

- KOMJ NE Omaha 11/22 0101 ABC News, followed by ID of Magic 590. (JT-MO) 590
- CKVL? PQ Montreal 11/23 0005 Fair, with loop tape with FF language announce-690 ments. (CR-IL)
- 1220 WKRS IL Waukegan - 11/20 0430 - Poor, with Jim Bohannon Show and News 1220 WKRS IDs. Used to sign off at 2300. Now 24 hours. (JIR-WI)

-3



4			
-			UNIDs and UNID HELP
760	UNID	??	- 11/22 0113 - With beautiful music, under KFMB. The antenna was null-
			ing KFMB to the NW/SE. (RD-AZ)
1270	UNID	??	- 11/15 0253-0257 - Fair in WKBF null. Male announcer in SS with Radio
	-		Munto or Punto or similar. Noted again on 11/17 at 1847-1906 tune out, with
			no ID heard. Florida? Help! (JJR-WI)
			······································
			DX AND EQUIPMENT TESTS
1660	WMIB-	FL	Marco Island - 11/21 0335-0348 - Faint music soon became stronger. Then
			KXOL VID. 1 kW? Also time check in MST. No sign of any other station.
			KXOL playing oldies e.g. Ray Charles, Neil Sadaka, Four Freshmen. (BK-
			CA)
1660	WMIB-	FL	Marco Island - 11/21 0000-0100 - Nothing heard under KXOL. (FA- ID)
			<u>TIS &amp; OTHER STUFF</u>
620	TIS	CA	Inglewood - 11/18 1140 - Inglewood TIS noted with announcements about
			Inglewood Forum and local construction projects. Over unID CalTrans HAR
			station. (TRH-CA1) [I'm surprised they put this on 620 So close to KFI-
			640! - Ed.] [Halfway between 640 and KOGO-600, which puts a strong signal
			into LA, too -pls.)
810	WPLX517	CA	Santa Monica - 11/18 1137 - UCLA "Emergency station" noted testing with
			tape loop and using these calls. Good audio quality, and got out really well.
		~.	Noted later this afternoon along I-5 as far as Anaheim. (TRH-CA1)
1500	TIS	CA	Beverly Hills - 11/14 2055 - City TIS noted with good signal. Tape loop
			didn't really say very much. Noted signs along La Cienega Boulevard. (TRH-
1/10	0 TIE	<b>C A</b>	CA1) Semante 11/18 0520 Two Col Trans TIS /HAPs giving conditions for
1610	2 x TIS	CA	Sacramento - 11/18 0530 - Two Cal Trans TIS/HARs giving conditions for Sacramento & San Joaquin Valleys (it was foggy). No location or call letters
			given. Called CalTrans about this today. So far no call back. Will report
			location when I find out. (GJ-CA)
1620	HAR	C۵	Los Angeles - 11/14 1930 - CalTrans HAR located along I-10 near Western is
1020	11.11	CA	active. Signs noted near Western off-ramp. Station listed at I-10/I-110 inter-
			section was not active. Don't know about the one at I-10/I-405 junction as I
			never got that far west. Another planned station on 1510 kHz, which was to
			give traffic information for surface streets in the so-called "smart corridor",
			does not appear to have ever come on. (TRH-CA1)
1630	TIS	CA	Los Angeles - 11/14 1940 - There is indeed a new station here for the LA
			Convention Center and Staples Center. Pretty good signal. No signs noted (I
			was here for 5 days attending a convention at the Convention Center). Tape
			loop does not mention any call letters. This will be tough at home due to
			XEUT OC and mixing product of Tijuana stations on 1470 and 1550. (TRH-
			CA1)
1630	TIS/HAR	CA	Los Angeles - 11/22 - Los Angeles Convention Center, in fair with ID and
			mention of coming events. (GJ-CA)
1690	TIS	CA	Culver City - 11/14 2037 - City TIS has moved here from 1650. Noted with
			good signals with info about city council meetings and so forth. Still haven't
1500	TIC	~	logged it from home. (TRH-CA1)
1700	TIS	CA	LAX area - 11/14 2030 - Noted testing with good signals. Still uses slightly
			geeky-sounding announcement about "testing field strength intensity" and so forth. LAX sta-
			tion on 530 was noted with good signals too.
			(TRH-CA1)
1700	WPPP201	CA	A state 3P in (NF-CC-O P. Janual Aductional) (11)
			21 0350-0357 - ID: WPPP201 NASA/Ames Infor-

17 21 0350-0357 - ID: WPPP201 NASA/Ames Information radio: This is John Peterson . . . we are just now beginning to test here at Moffett Field ... lots of talk about tours, etc. Gave

several phone numbers with local area code. After about seven minutes, he was repeating himself. Loud and clear, as I am only about one mile south. (BK-CA)

WPMD956 CA Norwalk - 11/18 1705 - Cerritos College station noted several times with talk 1700 programming. This station really gets out, especially for a station at the top of the dial. Audible midday along I-5 much of the way through LA. (TRH-CA1)

#### 

	MIDNIGHT TO MIDNIGHT ELT							
610	KFRC	CA	San Franci	sco - 11/23 0208 - With I	D and oldies music, or at least o	oldies being		
			used as bu	mper music. (RD-AZ)				
620	KMKI	TX	Plano - 11/	19 1940 - Disney stuff,	occasional local inserts; legal II	) at <b>1959:40</b>		
			by kid: AN	1 620 KMKI Plano-Dalla	s-Fort Worth. Generally fair. (J	N-CO)		
670	KIRN	CA	Simi Valle	y - 11/25 0054 - With A	Arabic music. Presumed to be	in Iranian.		
				g signal. (RD-AZ)				
950	KMER	WY	Kemmerei	- 11/15 1818 - Ad for <u>F</u>	ox News Channel and singing	jingle Wyo-		
					5, then into light rock music. (			
980	KSVC	UT			eather and a forecast of snow :	for the next		
			three days	(RD-AZ)				
980	KSVC	UT			y detailed with funeral arrang	ements, etc.		
				d ads at 1015. Fair, ove				
1100	KCCF	AZ			-fair, under KFAX-CA, with K			
			Computer S	show. Local spots with	mentions of Eastgate Shopping	New hore		
				a. Lost them at 2000 d	ue to a power/pattern change.	new nere.		
		~ •	(AK-WA)		M null and Cuban station QR	M with SS		
1180	WSAF	GA	Irion - II/	22 2554 - Fair, in Will?	nention of Georgia at 2300. (CI			
1200	WOAI	TV	San Antor	$\frac{11}{14}$ MOAF ID and I	of <u>Art Bell</u> program, then ABC	'News At		
1200	WOAL	1.	0405 appo	uncoment said they we	ere concluding broadcast activ	ities Gave		
			station add	Irress Nothing else hear	rd on channel after their sign-ol	f. (GH-KS)		
1260	коіт	CA	San Franci	isco - 11/18 0100 - ToH	announcement: KOIT 96.5 FM	. 1260 AM -		
1200	KOII	CA	KOIT light	rock less talk. Fair sign	al, in jumble. (RR-UT)	,		
1260	KPOW	WΥ	Powell - 1	1/15 1843 - C&W mus	ic and announcement: All new	country and		
1200	NI O		vour all-tin	e favorites, you get them	all with Twelve-Sixty Country, K	POW. (RR-		
			UT)		5 U.			
1300	KPTL	NV	Carson Ci	ty - 11/16 2345 - Nice st	rong signal. Oldies music with	announce-		
			ments: All	the great oldies, KPTL. W	/ere they on daytime power / pa	ttern? (RR-		
			UT)	·				
1330	KJLL	AZ			n Imus in the Morning and ad fo	or <u>Milligans</u>		
			Auto Repa	<u>uir</u> on 14th St. near Broa	dway. New. (RD-AZ)			
1410	KWYO	WY	Sheridan -	11/15 1750-1800 - Spot	for Rush: Rush Limbaugh weeka	lays on 1410,		
			KWYO, Sh	eridan. Nostalgia mus	ic and ToH ID: Good songs and	great memo-		
			ries, 1410,	KWYO followed by AB	C News. Nice sunset skip sign	al. (RR-UT)		
1460	KENO	NV	Las Vegas	- 11/16 2358 - With On	e-on-One Sports. ToH ID: The	Football Sta-		
					s Vegas followed by CNN New	ws. Nice to		
		~ .		oop up instead of fade o		<b>.</b>		
1670	WRNC	GA	Warner Ro	DDINS - 11/22 0500 - Str	ong, with C&W music. (GJ-CA			
1680	WTIR	FL			th weather for Florida, and ad	s. (GJ-CA)		
1500	KOW	τv		se are the correct calls a	g, with Mexican music. (GJ-CA			
1700	KQXX	17	brownsvi	ne - 11/22 0/00 - 5000	g, while intextcall infusic. (GJ-CF	.,		
				GRAVEYARD DX UP	DATE			
1240 kH	7.			SAME AND DA UT		Miles		
WTWA	GA	Thor	nson	Don Trelford	Runaway Bay, Jamaica	1090		
	<u></u>							
1450 kH	Z:							
WWNT	AL	Doth	an	Don Trelford	Runaway Bay, Jamaica	1019		

Deadlines are Tuesdays through December 7, then December 21 (a week early because of holiday travel plans), then resuming weekly from January 4.

Sheldon Harvey of CIDX is sending us Montreal 690/940 updates, with this information coming from Ricky Leong and Neal Ford in Montreal on November 22: "CKVL, the French language sister



station of CIQC in Montreal, has begun running a French language tape loop on their new frequency of 690 kHz. AM. Unlike the tape on 940 kHz. in English, the French service is not giving any call letters. It is simply IDing, in French, as 'Info Six Quatre-Vingt Dix' (translated

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Info six-ninety). Also, unlike the English service, there is no mention of a relationship with CNN and Bloomberg. They simply indicate that this is a station owned by MetroMedia CMR in Montreal. They also are claiming to be the first and only French language, all news service in 'America.' Finally, unlike the English service on 940 kHz., they are not indicating an official start-up date for regular programming. The description of the service is very similar to that of the English service, with a half-hour rotation of news, weather, traffic, sports, business news, etc. In a follow-up to the new call letters being

used by 940 kHz. 9-40 News CKNN, I have checked with the CRTC in Ottawa. They have had no official request from CIQC 600 to acquire the call letters of CKNN. The CRTC is looking into this matter and has promised to advise me directly of any further developments. Whoops! Just as I am about to click on the SEND button, the tape loop on 690 kHz. has just stopped and the transmitter has shut off at [1525] but keep an ear tuned to this one. It should be back soon, I would think."



And now for some personal news ... I will be taking a new job in the spring, which will be a great opportunity for me but that will involve moving, some heavy hours and possibly a good deal of travelling. With that in mind, I think it is time to hand over the DDXD-East editing duties to a new editor. If you are interested, please send your inquiries to Paul (though I'll be happy to answer any questions that prospective applicants might have); access to e-mail and the ability to prepare the column and send it to Topeka by e-mail are a must! Once a new editor has been chosen, we can work out a date to hand over the column. Until then, please keep sending all of your DX logs here, where I will continue for the time being happily compiling the DX News of the week!

#### STATION NEWS

- 640 CFYI ON Toronto 11/19 1620 ID's as "Talk 6-40," call-in show with Warren and a professor from McGill University discussing the connection between Pokémon and gambling. New calls not heard at any break. (JR-NY) [Ex-CHOG. DY]
- 940 CKNN PQ Montreal 11/21 1800-1815 New station here with information loop about new facility, "News 940, Montreal's first all-news station," "Going live on December 14," promos for Bloomberg Net and CNN, mostly weak but strong on peaks. Sounds like about 1,000 watts. (HJH-PA)
  - + 11/21 1807-1820 Loud and clear with long tape loop promoting the new "9-40 News" to begin on 12/14. Included endorsements from various CNN personalities such as Wolf Blitzer. One call letter ID noted, numerous "9-40 News."
     WADV noted underneath. Heard on car radio in Natick. The open channel was nice while it lasted! (MD-MA)
  - + 11/230545 Tape loop announcing arrival of their new frequency, calls. (GM-VA)
- 1430
   WNSW
   NJ
   Newark 11/13 2015 FF talk, call-in program, calls and "Sunny 14-30" slogan 2030, into Slavic language program. Maybe brokered on weekends? (JEK-MD) [Probably left-over contracts from the WNJR era. - DY]

#### DX TESTS

560 WGAI NC Elizabeth City – 11/7 0100-0130 – Heard quite well with code and spoken ID's. (JR-NY)

#### UNID AND UNID HELP

- 740 UNID 11/20 1820 Lots of non-ID's as "Groovin' Oldies" and many national ads, but no local clues, lots of Motown music. Does CHCM do this program? (JR-NY) [No, but WIRJ-TN does; see last issue. DY]
   1020 UNID 11/15 1732 After WRIX sign-off, end of "Family Workshop" program, GOS music, then suddenly gone 1734, leaving KDKA. (JEK-MD)
- 1110 UNID —— 11/20 1803 End of SSB, an unusual soft piano rendition. (JR-NY)
- 1230 WCWA OH Toledo Re: SK-PA's unID in #8 ("just off 1-75 in Northwood"): The only Northwood I found in states in which I-75 travels is just outside Toledo. (BF-IL)
  - + Same suggestion; though there is also a Northwood near Gainesville FL, home of WGGG-1230, Toledo is closer. (BT-IN)
- 1300 UNID 11/11 1606 Ad for business on Main St. in Joplin. KMMO-MO is in Marshall, which isn't very close to Joplin, so who? It's not WJFK referring to Joppa, MD, since it was also heard with Don & Mike Show in progress. (SK-PA)

- 1560 UNID <u>11/16 1620 G. Gordon Liddy program mixing with WAGL</u>, lost to WQEW. (JEK-MD)

#### LOGGINGS

- 540 WETC NC Wendell-Zebulon 11/13 2307 SS talk program, initially with discussion about Sandanistas, ID only as "5-40 AM," managed to catch a single "WETC" ID in EE at 0000, new! (JR-NY)
- 560 WVOC SC Columbia 11/70105 Caught ID at the end of the news, then Art Bell. First time with these calls. (JR-NY)
  - + 11/20 1619 Gamecocks football game, "This is the Football Network," followed by SID "W-V-O-C" into a local ad break. Very strong until local QRM took over. (CW-VA)
- 670 WWFE FL Miami 11/18 1930 Huge signal with EE ID "WW..., Miami," the "FE" letters blocked. No mention of "Radio Fé." (JEK-MD)
- 690 KGGF KS Coffeyville 11/12 1951 Women's basketball game, ID. At night this frequency is lately dominated by Cuba. (JR-NY)
  - + 11/170712 Ad for Quality Motors, followed by ID. Fair signal, mixing with WJOX at times. (RCP-IN)
- 720 WGCR NC Pisgah Forest 11/14 1657 USA Radio News followed by North Carolina weather report, "Presently it's 51 degrees is Pisgah Forest, time now 5:00." Then into a country gospel song, followed by "You're listening to Anchor Broadcasting, Pisgah Forest." Terrific signal way over usual WGN. (RCP-IN)
- 740 WPAQ NC Mount Airy 11/20 1632 Traditional bluegrass music, including "Turkey Buzzard," news for western North Carolina at 1630, call ID, new (finally!). (JR-NY)
  - KRMG OK Tulsa 11/15 1800 Fair, numerous call ID's, area traffic report, all news. Haven't heard for a while even with CBL gone. (JEK-MD)
  - WJIG TN Tullahoma 11/15 1745-1800 Good/poor, "Southern gospel 740" slogan, // WWGM 93.1? Heard first holday music, "Away in a Manger," country female vocal. New. (JEK-MD)
  - CHCM NF Marytown 11/5 1800 Strong signal with "Million Dollar Music" slogan. ([R-NY)
- 760 WLCC FL Brandon 11/19 1750 SS music, ad for Ybor City. My previous report ID'ed the station at WBDN, although I had only heard the "Mega" slogan. Now I notice in the new NRC Log that the calls have changed. I heard no calls at all on this one at the top of the hour. (JR-NY)
- 770 WEW MO St. Louis 11/15 1719 Tentative, NOS atop WABC until jumped over by WLWL. Stayed in, but didn't rise up again. Only NOS station listed in the new Log. (SK-PA)
  - WLWL NC Rockingham 11/15 1717-1800 Heard DJ Randy at 1719, at 1800 sign-off "WLWL studios are located at 275 ...," mostly heard occasionally during WABC fades, briefly over them at 1719. (SK-PA)
- 780 WZZX AL Lineville 11/14 1722 C&W format, ad for Yazoo mowers, local Alabama weather followed by several C&W songs back to back, often used slogan "Real Country" and mentioned 95.5 FM. No ID, but format and locale fits. Great signal until 1740 power cut, new for me. (RCP-IN)
- 790 WAEB PA Allentown 11/11 0654 Fade up from under WSKO with "... on WAEB AM 7-90" following an AgWay spot. Fading in and out until solid at 0700. Local news, traffic, and morning chatter. (CW-VA)
- 810 WHB MO Kansas City 11/5 1746-1750 For the second night in a row, seemed to cut power at 1750. This time, however, I did hear an ad for Blue Cross/Blue Shield of Kansas. (JR-NY)
- 840 WVPO PA Stroudsburg 11/5 1710-1730 News program, with concluding sign-off announcements 1730, only second time heard. (JR-NY)
- 860 WACB NC Taylorsville 11/15 2108 Local seat belt safety PSA, "Miss Guardian Angel Pageant" promo, good. (JEK-MD)



7

- 870 WKAR MI East Lansing - 11/13 1635 - Mention of NPR news followed by discussion of ethics in business and cheating in school, host of program was Forrest Boyd. Good signal with no sign of WWL. (RCP-IN)
  - WFLO VA Farmville 11/14 1658 Sign-off mentioning "870 kilocycles," sunrise to sunset and will return at 7 a.m. "This is Tommy(?) speaking for the entire staff of WFLO in Farmville, Virginia. Thank you for listening and good night." It took 5 vears to positvely ID them. (SK-PA)
- WMAC GA Macon 11/21 1706-1715 Excellent way atop channel with numerous sta-940 tion promos using "News-Talk 9-40" slogan, one call letter ID into Ken Hamblin Show at 1707. Heard on car radio while at local laundromat! An hour later the channel belonged to new CKNN Montreal. (MD-MA)
  - WCPC MS Houston 11/16 1730 Booming in atop all with GOS, ID. (RJE-PA)
- 950 WGOV GA Valdosta - 11/18 1900 - They're back! It's Thursday, so who else but WGOV with UC:RAP, mixing with Cuba. (JEK-MD)
  - WSPA SC Spartanburg 11/11 1717 Good with calls, mention of an organization that wouldn't come on the air with them. Sports format. (JEK-MD)
- WFIR VA Roanoke 11/21 1840 Strong with Redskins football coverage, ad for Vir-960 ginia state lottery, ID. (HJH-PA)
- WFSR KY Harlan  $\frac{11}{14}$  1757 Clear ID in a jumble of signals, almost like the only 970 signal sent on 5 kW was the ID ... what a change! Also legal ID at 2000. (JEK-MD)
  - WESO MA Southbridge 11/14 1806 Presumed with C&W, "New England Country" slogans, good but couldn't pull out an ID. Only one that fits. (JEK-MD)
  - WFUN OH Ashtabula 11/16 2104 ID "Right now, it's 34 degrees at WFUN, AM 97." Then OLD. Alone, never heard at night before. (SK-PA)
  - WWYO WV Pineville 11/14 1756 Fair, full sign-off announcement, seldom heard. (JEK-MD)
- WAAA NC Winston-Salem Date? Time? UC music, ID. Poor with various QRM, 980 "Rainbow 980 Triple A" slogan. (JEK-MD)
- WRIX SC Homeland Park 11/25 1727 "Power of the Gospel" slogan, full sign-off (no 1020 SSB) giving Homeland Park-Anderson ID, promo for FM 103.1 (same calls). Excellent signal. (JEK-MD)
- WWGP NC Sanford 10/30 1744 Wolfpack vs. Georgia Tech football game, "WWGP 1050 America's best country 10-50," strong in WKDL null. (CW-VA)
  - WADC WV Parkersburg 10/30 1735 In null of very strong SS local WKDL, "WADC, we're your original hits station," into "Ebb Tide." (CW-VA)
- WAPI AL Birmingham 11/15 1718 Sudden fade up from under WFLI with SID "W-1070 A-P-I Birmingham," then lost in clutter. (CW-VA)
  - KNX CA Los Angeles 11/16 0353 News story about NFL football player shot by San Diego police, female voice saying "KNX news time is 12:54," very steady way under local WIBC. This represents my farthest logging thus far this season. (RCP-IN)
  - WSCP NY Sandy Creek-Pulaski 11/18 1600 Presumed, fading up out of the jumble with two men discussing an upcoming Patsy Cline tribute show and the fact that it had been moved from another location into Oswego County, where both these cities are located. Into a series of Patsy Cline numbers. (CW-VA)
  - WGOS NC High Point 11/18 1552 Fading up under WFLI with "Join us here at WGOS 10-70 every afternoon," C&W with "It's Just a Matter of Time" and Patsy Cline's rendition of "Faded Love," weak fading in and out. (CW-VA)
  - WHYZ SC Sans Souci 11/20 1956 Presumed, fading up under WIBC with ad for local lawn service, area code matches that for WHYZ as listed in the Log. (CW-VA)
- ĿΫ́Γ

KENR TX Houston - 11/20 1747 - Tentative under a dominant WIBC with Indiana Pacers basketball, WSCP signed off for the day, in null with a non-native EE speaker delivering commentary over a background of ethnic music that sounded Middle-Eastern. Lost to KYW-1060 splatter after several minutes. ALL YOU NEED TO KNOW KENR is listed with ETH format. (CW-VA)

- CBA NB Moncton 11/18 1958 Radio drama from CBC One, extensive weather for separate Maritime Provinces, ID. Clear despite very strong auroral conditions. (JEK-MD)
- CHOK ON Sarnia 11/20 2004 Dominant with hockey game, "Home Town 10-70,

1100



- CHOK." (CW-VA)
- WCGA GA Woodbine 11/10 1705 Excellent signal, Michael Medford [Medved? DY] program, Geico Insurance ad, web address of www.wcga.com. No WTAM. (IEK-MD)
  - + 11/17 1700 Non-legal ID "If you're listening to Michael Medved, you're listening to News-Talk 1100 WCGA," then USA News, alone and fuzzy. Finally a positive ID on this! (SK-PA)
- IL Chicago 11/6 1723-1730 "Just for kids on WMBI Chicago," sign-off at 1730. WMBI 1110 New! (IR-NY)
  - WJML MI Petoskey 11/6 1708 With "oldies for northern Michigan." (IR-NY)
- WKOW PA Oil City 11/16 1717 Extensive weather report for Pittsburgh and western 1120 Pennsylvania. ID at 1731. (JR-NY)
- RI Providence 11/13 1718 SS program, one advertisement mentioned Provi-1220 WRIB dence several times, no ID. (IR-NY)
- WGAY DC Washington 11/16 0635 News, MYL jingle, music, ads, ID and MYL jingles. 1260 (RIE-PA)
  - WZBO NC Edenton 11/12 2116 Part of promo "Get to know our personalities on the music of your life, right here on WCNC, WZBO." Return to football game. (SK-PA)
  - WNXT OH Portsmouth 11/17 2221 Good while in with calls, C&W (Hall, Williams) music, new. (MB-IN)
  - WPHB PA Philipsburg 11/16 0630 C&W, many local ads and ID's. Format change? (RIE-PA)
- WSPR MA Springfield 11/15 1825 Fair with NOS QRM, presumed with SS talk, many 1270 mentions of Springfield. (JEK-MD)
  - WHLD NY Niagara Falls 11/15 1855 Ad for 2060 Auto Parts in Buffalo, Ronnie D. polka show ending, next was Fiesta Latina. Never heard at night before. (SK-PA)

WMPM NC Smithfield - 10/30 1706 - End of weather report, frost warning for area, followed by ID "WMPM 12-70, Smithfield, North Carolina," fading in and out for a C&W religious number, "The King and the Beggar," but stronger for a rare (for George Jones) bluegrass number, "Steal Away and Pray." (CW-VA)

- WDLP FL Panama City Beach 11/12 1700 Disney, ID, into CBS news. New, FL #87. 1290 (IEK-MD)
  - WYAL NC Scotland Neck 11/16 1530 Black gospel music, 1556 ads for Floral Creations, Joe's Corner Market in Hogdon or Royal Oak, Roanoke Cinema, then "You're listening to 1280 WYAL in Scotland Neck, serving ... " and fade. Heard only once before during a middle-of-the-night test. (SK-PA)
  - WHIO OH Dayton 11/16 2106 In CJBK null with return from commercial into "... Radio 12-90 WHIO," back into talk show with topic of how historians will look back on the Clinton presidency 20 years from now. Fading in and out. (CW-VA)
  - CIBK ON London 11/16 2104 Dominant for a few minutes with ID of "CIBK Sports Radio 12-90." (CW-VA)
- WJDA MA Ouincy 11/11 1603 Presumed with ad for business in Warwick, Rhode 1300 Island. (SK-PA) [Actually, Warwick isn't all that close to Quincy. Maybe WLIR, which isn't all that far from Warwick NY? - DY]
  - WOOD MI Grand Rapids 11/12 1722 Ad for Michigan National (Bank?), then live remote, in big mix. (SK-PA)
- WBTM VA Danville 11/18 1615 Atop WWRV with "Virginia lottery results are broad-1330 cast pretty much regularly on All News 1330, WBTM." Format change? (RJE-PA)
- WMSA NY Massena 11/18 0000 Partial ID mixing with WKGJ, "serving central New 1340 York," then CBS news. Has to be this, completing NY 1340's. (SK-PA)
- WTAB NC Tabor City 11/12 1913 Finally caught ad for business in Tabor City at 1370 halftime of football game, Notre Dame vs. the Wildcats. Signal rapidly rising and falling. (SK-PA)
  - + 11/19 0637 Promo for East Carolina football broadcast, ID. (RJE-PA)
- 1380 WAMS DE Wilmington - 11/18 1640 - Classical and march music, the 100 watts actually makes it up here under WBNX! (RJE-PA)
- WRSC PA State College 11/190645 Promo for Penn State football broadcast, weather, 1390 ID in WZHF, WEOK, WLAN, WDCW mess. (RJE-PA)

	WXTC	SC	Charleston – 11/18 1630 – Drowning even WLAN this early, with GOS mu- sic, local ads, weather, "Charleston's new gospel station, Heaven 1390." (RJE- PA)
1430	WNAV	MD	Annapolis – 11/20 1723 – Ad for new Swing-Out Show, Sunday nights at 11. Not commonly heard. (HJH-PA)
	WTTT	MA	Amherst – 11/14 0700 – End of PBS program produced in the UK, // WNRC(FM) or WNRI-RI? Calls not yet WPNI. (JEK-MD)
1440	WVMG	GA	Cochran - 11/13 1820 - C&W music, calls and mention of middle Georgia
			(calls stand for Voice of Middle Georgia). Logged only once before for a DX
			Test on Nov. 16, 1967. Again on 11/18 1844 with "Central Georgia's hitching post, WVMG 96.7," ballad-type C&W, poor but steady signal. Programs were
			not GOS as per new Log. (JEK-MD)
	WJJL	NY	Niagara Falls - 10/17 1956 - Fade up into ID "Fun Time Oldies 14-40 WJJL,"
	WRBP	лu	into OLD music. Frequently heard here during winter months. (CW-VA)
	WRDI	ОП	Warren – 10/19 2045 – Monday Night Football (Giants vs. Cowboys), ID as "WRBP Warren-Youngstown, Power 1440." Very strong for several minutes,
			then fading into clutter. (CW-VA)
1460	WBRN		Big Rapids – 11/7 0159 – Sign off announcement for AM and FM. (JR-NY)
	wvox	NY	New Rochelle – 11/22 0640 – Weather, traffic, ID in and out with WWKL. (RJE-PA)
1470	<b>WTKO</b>	NY	Ithaca – 11/14 2030 – Rapid fading, but caught ID of "Oldies 14-70 WTKO,"
			"Mighty Quinn (the Eskimo)" by Manfred Mann clearly audible for most of
	MATAIRC	NC	song, but lost near the end. (CW-VA)
	WWBG	NC	Greensboro – 11/22 0641 – DJ chatter, "Literary Corner" and "Strange But True," local ads, ID,
			weather. Not UC: GOS. (GM-VA)
1490	WMRN	OH	Marion – 11/23 0600 – ID, news and talk, though
	<b>WVGB</b>	SC	not your typical syndicated talk show. (GM-VA) Beaufort - 11/22 1713-1722 - Many "V-Victory 14-90 ¥50 AM 99.3 FM
	m t G B	50	WVGB" ID's, several local announcements, ads,
			Gospel music. Quite strong. (GM-VA)
1530	WLSP	MI	Lapeer – 11/16 1654 – Presumed, with very strong signal, Sports Fan Radio Network. (JR-NY)
1570	WYTI	VA	Rocky Mount – 11/14 0634 – Legal sign-on, into some real down-home C&W. (IEK-MD)
1580	WSMO	NC	Jacksonville – 11/18 1725-1735 – Local ads, call letters, old bluegrass and
1500	WOOT	NG	country music. New with these calls. (JR-NY)
1590	WCSL	NC	Cherryville – 11/16 1900 – Fair with WLON Lincolnton ID into ABC news, ad for (car?) dealership in Gastonia, then ESPN. New. WLON was heard a
			few minutes later on 1050 with local ads, CHUM QRM. (JEK-MD)
	WHPY	NC	Clinton - 11/12 1630 - Good with "Going Home" religious program, ad-
	WARV	RI	dress given on air agrees with NRC Log. (JEK-MD) Warwick – 11/12 1624 – Good with calls, ad for PAX TV program. The NE
			longwire works! (JEK-MD)
1600	WOKB	FL	Winter Garden - 11/22 1734-1748 - Gospel programs "Gospel Insider" and
			"What to do when you don't know what to do" (Give up?!), several local spots, traffic. Strong. (GM-VA)
	WCPK	VA	Chesapeake – 11/17 1900 – Religious talk, ID, into news atop channel, in-
			cluding WWRL. (RJE-PA)
1620	WHLY	IN	South Bend – 11/12 1634 – Good, calls and "Radio Hollywood" slogan, ad for Mitchell Office Furniture. Not often logged here with WPHG-AL and the
			local college "WMCR" pretending to be a radio station on 1620. (JEK-MD)
1700	КТВК	ТΧ	Denison – 11/6 2340 – Weak under WAFN with "AM 1310" slogan and sports
			stuff. (JR-NY)
			TIS AND MISCELLANEOUS
1610	House	IN	Terre Haute – 11/16 2248 – Talking house at 2248 Locust Avenue, about half
1630	KNAAS	5 NY	a mile away. Usual fare, call 238-9996, Wayne Collins Realtors. (MB-IN) New York (Jamaica) – 11/15 1837 – Good with JFK parking info, no calls in
1000	1017A.JO		tane loon

1640 UNID NY \_\_\_\_\_ Date? Time? - Marine and New York weather, some computer and real voice, advisory on Hurricane Lenny, relay of KWO35 (162.550 MHz). May have been a second weather station in there. (JEK-MD)

#### INTERNET UPDATES

News from *Scott Fybush*'s "Northeast Radio Watch," used by permission: WMEX-1060-MA is testing the 40 kW daytime transmitter, which it expects to put on the air in



regular service in January. WBZY-1200-PA is switching formats with co-owned WKST-1280; WBZY takes OLD and WKST will now be TLK. WARE-1250-MA has not finished switching to the SS format; the former OLD format and dead air alternating for now. WIPS-1250-NY has joined the "Radio Lake Placid" network with WIRD-920, WRGR-102.3, and WLPW-105.5. WHLD-1270-NY has relocated from

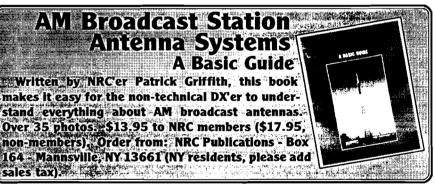
its Grand Island studio, transmitter site to 225 Delaware Avenue in Buffalo. WRTK-1390-OH will be exchanging calls and formats with WNIO-1540. WXKS-1430-MA has returned to satellite standards in morning drive; the former Bloomberg morning show has moved to WBNW-1120 and WPLM-1390.

#### ADDRESS UPDATES

1360 WCHL NC Chapel Hill - Address in new Log is no longer valid. (SK-PA)

#### REPORTERS

MB-IN	Mark Burns	Terre Haute – R8, Kiwa loop, 80' LW
MD-MA	Marc DeLorenzo	Auburndale – NRD-525, Quantum loop
RJE-PA	Russ Edmunds	Blue Bell – Car radio, whip
BF-IL	Barry Finkel	Chicago – UnID help
HJH-PA	Harry Hayes	Wilkes-Barre – TransOceanic, Kiwa pocket loop
SK-PA	Steve Kennedy	Coal Township – Superadio III
JEK-MD	Joe Kureth	Uniontown – SW8, 950' NE LW
GM-VA	Greg Myers	Richmond –
RCP-IN	Robert Pote	Greenwood – R8A, Quantum loop
JR-NY	Jim Renfrew	Rochester – R8, Radio West loop
BT-IN	Blaine Thompson	Fort Wayne – UnID help
CW-VA	Chuck Wood	Woodbridge – R8B, Kiwa loop, ICF-7600G





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#### 11

#### 12 **International DX Digest**Jim Renfrew JimRenfrew@delphi.com 61 Wilcox Street Rochester, NY 14607-3832

Foreign DX Catches. Times are UTC; for ELT, subtract 5 brs.

PLEASE NOTE my new e-mail address: <renfrew@localnet.com>. The old address is no longer working.

Well, the 690 free-for-all is over. Tonight, NOV 23 at 0157, I tuned into a promotional tape loop for "Info Six Quatre-Vingt Dix, La Radio de Nouvelles en Montreal". Looking back, since JAN 23 when CBF went off the air, I've had some good ones: R. Recuerdos, Bogotá (letter sent); R. Progreso/R. Reloj, Cuba (letter sent); WZAP-VA (now verified), WOKV-FL (now verified), WPHE-PA; WJOX-AL, KFXN-MN (new, verified); KGGF-KS (new, verified); WELD-WV (now verified); WTIX-LA (letter sent); CBU-BC (new, verified); Caribbean Beacon, Anguilla (now verified), XEN-DF (new, letter sent); XEMA-ZC (new, letter sent); and finally Info 690-PQ. Saturday night/Sunday morning was a last gasp listening marathon, up until 0930 UTC, and I was rewarded with XEMA as a final new one. I won't soon duplicate that final listening experience, with Bogotá, Mexico City and Fresnillo all coming in strong with each spin of the loop. Curiously, I only had TA signals once on 684 and 693 back in March. A footnote: on NOV 25 the Canadian station was not on the air, soo it's not too late to try for some distant receptions here. I noticed that the new 940 station is on the air, too, with what seems to be an English language parallel to the 690 station, identifying itself as "940 News". This frequency was less rewarding to me here in Rochester due to my local station on 950.

Y2K Department: I heard Harold Camping on a Family Radio call-in program debunking in detail the idea that the world was created by God in 4004 BC, as some creationists have claimed. I almost thought that Camping had embraced evolution, but then his follow-up statement was that the earth was created 13,000 years ago instead (which I am sure is important news to some of the millions of years old fossils!). Camping did make one point I agreed with: anyone who thinks that God will do something dramatic to end the second millenium should look back to the year 1993, because most Biblical scholars have determined that Jesus was born around 7 BC, not the year Zero. This has been determined because the known dates of historical King Herod would have had to have happened earlier than Year Zero. Well, if you missed the end of the second millenium seven years ago, you have only nine hundred ninety three years until the next opportunity. Hopefully, 690 will be open to us for another fruitful season before that long!

#### TRANS-ATLANTIC DX

orld/Radio

Tran

FRANCE RFI Allouis, NOV14 0015 - Music and talk in FF [Mantiboa-DX]

162

- 183 GERMANY Europe 1 Saarlouis, NOV 14 0345 Poor signals with music and talk. [Manitoba-DX]
- 189 ICELAND Rikisutvarpid Gufuskalar, NOV 13 1940- Fair to good signals in and out mostly in all the time until 0430 with music and Icelandic talk. At time it was easy copy without any preamp. Best European signal on LW. [Manitoba-DX]
- 198 ENGLAND BBC Various sites, NOV 14 0010 Poor with news and talk. [Manitoba-DX]
- 252 IRELAND Atlantic 252 Clarkeston, NOV 14 0352 Poor signals with rock music and ID [Manitoba-DX]
- 531 FAROA ISLANDS Utvarp Foroya Akraberg, NOV 14 0002 Man doing the news, got partial ID. This one faded in and out for about an hour; new country! [Manitoba-DX]
- 1134 CROATIA HRT Zadar, NOV 14 0030 Poor signals with talk and local music. [Manitoba-DX]
- 1314 NORWAY Norsk Rikskringkasting, Kvitsoy, NOV 13 2318 Fair to Good signals with music and talk. Strongest of three Europeans heard on MW. [Manitoba-DX]

Shawn speaks: "The first DX'pedition of the season and the last one for this century is now come and gone. We managed to drive across the farm field for the first time in 6 years it was so dry. The usually walk of 1200 feet dragging toboggans of equipment was not had this time. Thought we had it made until we got to the door of the bus. We have converted an old school bus to a DX listening post. The lock was broken and when we opened the door it was obvious that someone had been there. We leave no radio equipment behind but do leave the wire sleeping bags, lanterns, heaters, dishes, etc. Every box had been gone through. The place took an hour to clean up. Only thing missing were half the stuff from the first aid kit, flash lights, and big knife. My sleeping bag had been used (it is going to the cleaners) as was the wood stove but no other damage. I suppose all considered we got off lucky as no real damage done. We took home the lanterns, sleeping bags, heaters, etc., so if the return they will have nothing to use. This is the first time in 10 years we ever had a problem so I guess we were due. After cleaning up we put our some wires and settled into DX'ing. As you see some good stuff heard especially the 531 Farce Islands station and 610 CHTM. Never though we would hear this one as it often fades out 25 or 30 miles out of Thompson on some days. Hope the season continues to be good...will go out again after Christmas and put on new lock on the bus. Such is the life of a DX'er in the Great White North."

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#### PAN-AMERICAN DX

- 690 MEXICO XEMA Fresnillo, NOV 19 0913 heard with "oompah" music, and numerous ID's as "MA", under/over XEN; new. [Renfrew-NY]
- 690 MEXICO XEN Ondas del Lago, NOV 22 0745 heard ID in Info 690 null, strong enough that I wonder if Montreal is using reduced power at this time. [Renfrew-NY]
- 740 UNID, NOV 14 0055 Lots of Spanish talk about Cancún and Radio Fórmula. [Manitoba-DX]
- 840 UNID, NOV 14 0117 Mexican music and Spanish talk. [Manitoba-DX]
- 860 MEXICO R. Caribe, Cancun YC, NOV 15 0620 I finally replayed the tape of this unID reception from last week, and heard a clear ID as "Radio Caribe ... La Mexicana ... Cinco mil wats de potencia", just before the Mexican anthem. This sign-off was heard at 0620, not 0600 as listed. Good at times in CJBC's null. A new one, and a first from Yucatan! [Renfrew-NY]
- 880 MEXICO XEPNK Los Mochis SI, NOV 22 0755 with stereo in null of KRVN with woman announcer in slick ID with sound effects "Ocho Ochenta, XEPNK" and then male announcer ID also announcing "Ocho Ochenta XEPNK" and "con cinco mil watts de potencia". If US stations had a stereo signal and sound effects like this, AM stereo would be a lot better off than today. [Danneskjold-AZ]
- 1220 MEXICO XEB Mexico, DF, Oct 28 0233 Program featuring the life and times of Armando Mantanero, with several of his songs played. Nice ID at 0259:30 "XEB, La B Grande de Mexico, 1220 de amplitud modulada con cien mil wats de potencia, canal libre internacional, transmitiendo desde Mayorazgo 83, Colonia Xoco, Codigo Postal 03330, Mexico, Distrito Federal, Mexico. Una estacion del Instituto Mexicano de la Radio". Also gave a web page, partially copied: <www.???.com/IMER/XEB.html>. Local KLVZ still silent. [Wilkins-CO]
- 1290 MEXICO XEQIN San Quentin BCN, NOV 14 0200 with legal ID and ad mentioning futbol; new. [Danneskjold-AZ] (Tim Hall tipped me off that this one signs off in the early evening when I was visiting California one time - Jim)
- 1410 MEXICO XEAS Nuevo Laredo, TAM, NOV 16 0400 with SS ID given 4 times then "Mambo #5" by Lou Bega. [Danneskjold-AZ]
- 1420 MEXICO XEXX Tijuana BCN, NOV 14 0145 with phone in talk and ID "Doble Equis"; new. [Danneskjold-AZ]
- 1530 CUBA Radio Moron, Moron, NOV 14 0042 fair signals with talk of Cuba. [Manitoba-DX]
- 1630 MEXICO XEUT Tijuana, BCN, Nov 8 0100 Gal with ID: "Ésto es Radio Universidad, de la Universidad Autonoma de Baja California, 1630 kHz de amplitud modulada. XEUT transmitiendo con diez mil wats de potencia. Oficinas, estudios, y planta de transmisiones en la Universitaria, Calzada Tecnológico, Mesa de Otay, Tijuana, Baja California, Mexico," then announcements of UABC events, PSA, & a poem by Oscar Bonaparte. Signed off later at usual time (0230). Very good signal on top of usual dominant KCJJ. New catch for XE #154, BCN #19. Wilkins-COJ

#### **INTERNATIONAL NEWS**

CLANDESTINE: An unknown transmitter relaying AFN (Armed Forces Network, USA) heard last night (NOV 13/14) by me here in the middle of Europe on 1503 kHz. Sport (game) programming // AFN 873, 1485. The signal was very strong at night - S9 + 20 dB, almost no fading. In the morning (NOV 14) there was still a strong signal at 0640 UTC, strong in peaks but with deep fade outs. Then within ca. 10 minutes (0650) the station faded out completely! It returned briefly with a very weak signal at 0658 UTC but faded out again within less than a minute. At that time there were the following stations audible on the frequency: 1503.00 Radio Crna Gora (Monte Negro) - several ID's; 1503.04 Radioteleviziya Zavidovitchi (Bosnia Hercegovina) - news at 0700, ID at 0715. Although their signals were quite weak, fading in and out, I do not think that AFN was relayed by Zavidovitchi (although some SFOR or foreign services are relayed by this site). At one moment there were 3 signals audible - 2 stations speaking Serb/Croat and the AFN. There was also Beograd 202 on this frequency before the war, but it is inactive, I am quite sure. It seems - from my location - that the AFN transmitter is independent of those mentioned and that it broadcasts from a site situated more easterly than (former) Yugoslavia. By the way, I have not noted such strong signal on 1503 kHz before. I would like to mention also something else - and it has nothing to do with the AFN - one phenomenon for which I like the MW band (you never know what is waiting for you over there): - still on 1503 kHz, at 0730 UTC I suddenly noticed that BBC Radio Stoke-on-Trent faded in! The station was not audible for the last hour at all, suddenly it came in, weak but I could hear the BBC news at 0730. Maybe the Sun was coming up at that time in Stokeon-Trent? It was 1h 15min after the Sunrise in my location. After I heard the station for the first time last night (NOV 13/14) - see my previous report - I have done some direction findings tonight (NOV 14, 1800 UTC). The signal is coming from the azimuth of ca. 140 degrees. It is not precise, because I am limited by our concrete/metal house and outside it is raining. So I would bet for Macedonia or Albania. Or a high power transmitter from a more easterly country like Turkey or one of Arabic countries. The transmitter is quite strong, it is strange, they are using this frequency where two stations from the former Yugoslavia are broadcasting: Podgoritsa (Monte Negro, in fact still part of YUG) and Zavidovitchi (Bosnia Hercegovina). AFN left 1503 kHz after a ca. 24 hours long usage of this frequency from somewhere in southeast Europe. A summary of my monitoring: Night 13/14 November - strong signal. Morning 14 November 0630 UTC - fair signal, later faded out at 0650 UTC. Evening 14 November 1800 UTC - fair signal. Evening 14 November 2315 UTC - NO SIGNAL. Morning 15 November 0600 UTC - NO SIGNAL. Maybe the station has been testing and we can hope to hear it again. Maybe it is searching for another frequency (1503 kHz is used by low power transmitters in Crna Gora (Monte Negro) and Bosnia Hercegovina). [Karel Honzik, three reports via Medium Wave Circle e-mail list]

- CUBA: Osvaldo Rodriguez of Radio Reloj provides the following complete list of all Radio Reloj stations in Cuba in Conexion Digital #24: 570 Santa Clara (ciudad), Villa Clara, 610 Trinidad, Sancti Spíritus, 760 Caney de las Mercedes, Granma, 790 Pinar del Rio (ciudad), 830 Hulguín, 850 Nueva Gerona, Isla de la Juventud, 860 Baracoa, Guantánamo, 870 Sancti Spíritus (ciudad), 910 Bolondron, Matanzas, 930 La Jaiba, Matanzas, 930 Cienfuegos (ciudad), 930 Ciego de Avila (ciudad), 930 Santiago de Cuba (ciudad), 940 Central España Repúblicana, Matanzas, 940 Mayarí Arriba, Holguín, 950 Ciudad de la Habana, 960 Guantánamo, 1010 Jobabo, Las Tunas, 1270 Camaguey. [via ARC NOV 15] (Note, this list includes a location for the 830 outlet that many have been inquiring about. Also, remember that some stations use the Reloj feed after 0600 UTC which are not listed here, e.g., 690 kHz. Our members in south Florida are encouraged to comment on the accuracy of this list Jim)
- LITHUANIA: Extreme budget cuts have brought the state-financed Lietuvos Radijas into troubled waters. Among the consequences that are being discussed is a complete (though temporary) closure of LR2 and LR3 and a shutdown of all MW and SW transmitters. A final decision will be expected soon. [Bernd Trutenau, Lithuania, in FM DX WebList via Piet Pypers in *Medium Wave Circle* e-mail list]
- NETHERLANDS: Faulty generators are the reason 1224 Q the Beat (location: 'MV Communicator', Almere) has been on and off the air the last few weeks. Nozema is looking into the matter and this is why \*Q\* is missing. The 'MV Communicator' used to be the location of offshore stations 'Laser 558', 'Laser 730' & 'Laser Hothits'. [Source: "Mischa" in newsgroup nl.media.radio. via Piet.Pypers in *Medium Wave Circle* e-mail list]
- RUSSIA: What follows are LW and MW schedules; the SW is omitted here: 171K 500 ND 0400-2100 Radio-1; 1985 150 ND 0300-2200 R.Mayak; 234S 1200 ND 0400-2100 Radio-1; 549S 1200 ND 0300-2300 R.Mayak; 684S 10 ND 0600-0800 R.NERRS (Narodnoye R.); 684S 10 ND 1500-1800 R.NERRS (Pravoslavnoye R.); 684S 10 ND 1800-2000 R.NERRS (R.Radonezh); 801S 600 ND 0200-2200 R.Rossii; 828S 10 ND 0000-2400 RL/VOA; 1053S 10 ND 0000-2400 R.Mariya; 089S 20 ND 0400-2000 R.Teos; 1125S 150 ND 0300-2100 R.Orfey; 1143K 150 ND 0400-1630 R.Mayak; 1143K 150 210 1700-1800 VOR Germ; 1143K 150 210 1800-1900 VOR Poli; 1143K 150 210 1900-2000 VOR Engl; 1143K 150 ND 2030-2400 R.Mayak; 1188S 10 ND 0300-2300 DW; 1215K 1200 245 0200-0400 VOR Russ; 1215K 1200 245 1000-1300 VOR Germ; 1215K 1200 245 1300-1500 VOR Russ; 1215K 1200 245 1500-1600 VOR Engl; 1215K 1200 245 1600-2000 VOR Germ; 1215K 1200 245 2000-2200 VOR Russ; 1260S 10 ND 0330-2200 BBC; 1386K 1200 275 1000-1300 VOR Germa; 1386K 1200 275 1500-1600 VOR Engl; 1386K 1200 275 1600-2000 VOR Germa; 1386K 1200 275

2000-2200 VOR Engl; 1386K 1200 275 2200-2245 Special (We); 1440S 10 ND 0300-2100 RFI; 1494S 600 258 1600-1800 VOR Engl; 1494S 600 258 1800-1830 VOR Finn (Tu,Fr); 1494S 600 258 1800-1900 VOR Engl (We,Th,Sa-Mo); 1494S 600 258 1830-



1900 VOR Norw (Tu); 1494S 600 258 1830-1900 VOR Swed (Fr); 1494S 600 258 1900-2200 VOR Engl. Note: K = Kaliningrad, S = St. Petersburg, RCS = Radio Chechnya Svobodnaya. All times in UTC. Note: our transmitter on 1494 kHz has used a new wide-beam diagram aerial system from November 25th (1600 UTC). [From the British DX Club, originally posted by Mikhail Timofeyev NOV 26, *Medium Wave Circle* E-mail List]

TURKS & CAICOS: 530 Radio Vision Cristiana still on the air from South Caicos. I have visited the transmitting site. It is located at an old Coast Guard Loran station. The place once housed the Atlantic Beacon. The power is 50,000 watts using a Nautel transmitter and a 540 foot stick. Non-directional. Super 1020 is off the air for good. It used an old GE transmitter circa 1961 - a real junker. It's been off for two years. [Saul Nowich, Bridgeport CT via HCDX in ARC NOV 15]

ATTIC AN: Vatican Radio has just announced that Rome will have two new radio services of music and information for the 2000 Jubilee. One will be in Italian, French and English on 527 and FM, the other in Spanish and German on 1260 and FM. The use of 527 means that Rete Romana/Studio A local service will be suspended at the end of the year. [Valianti in BDXC via TL in ARC NOV 22]

#### E-MAIL QSL'S

"As for the comments regarding E-mail reports/veries, how does one obtain stations' E-mail addresses to send reports to? In any event, I would use E-mail only as a last resort. E-mail veries have no "personality," i.e., no letterhead, no station logo, no exotic stamps on envelope, in the case of foreign veries, etc. I'd hate to have my verie notebooks filled up with pieces of computer paper all looking the same." [Wilkins-CO] (DXer's get e-mail addresses from other DXer's and from station web pages -Jim)

#### CONTRIBUTORS

@Shawn Axelrod, DX'ing from Valhalla Beach MB; two ICOM ICR-70's, 5 long wires 600 to 2000 feet long W, S, E, N, two MFJ 1026 phasing units.

@Ragnar Danneskjold, Mesa AZ; Kenwood R-1000 with a Vobbe Superloop; the 1410 log heard on a GE Model 3-5280C. <lwdxer@juno.com>

@Jim Renfrew, Rochester NY; Drake R8, Radio West Loop. <renfrew@localnet.com> @John Wilkins, Wheat Ridge, CO; Drake R-8, 4-foot box loop. <peakbagger3@juno.com>

#### NEW NOAA SPACE WEATHER SCALES MAKE SOLAR MAX EFFECTS MORE PREDICTABLE

November 9, 1999 — As the sun revs up for Solar Max, a time of intense solar activity, we can look forward to increasingly turbulent space weather. Today NOAA introduced the first-ever scales designed to characterize the severity and impact of upcoming solar storms on public safety and services. (Click images for larger view.)

"NOAA's new scales are the Richter scales of space weather. For the first time, we can predict the impact of solar storms, and these storms may be a real Y2K problem," said Dr. D. James Baker, under secretary for oceans and atmosphere and NOAA administrator. "When Solar Maximum occurs, the sun bursts at its seams with explosive power, and as it churns there is potential for electrical power outages, radio problems, and the disabling of satellites. This can disrupt communications, including broadcast transmissions and pagers," Baker said.

As the period during the 11-year solar cycle when the sun is most active, Solar Maximum brings an increase in the number and intensity of solar storms and their effects. Space storms, radiation showers, aurora borealis, and affects on power grids and Global Positioning System navigation and other systems are all expected during the upcoming Solar Max period, which is expected to last about three years.

Already there is an increase in solar activity as the world approaches another Solar Maximum. As we get farther into Solar Cycle 23, expectations are that the sun will continue to rev up. Each time there is a solar event, NOAA's National Weather Service includes information on the event in its transmission of weather data.

Working like the Richter scale for earthquakes, NOAA's new space weather scales describe the intensity and frequency of three kinds of solar events: geomagnetic storms, solar radiation storms and radio blackouts. "The scales are a giant step forward in informing the public about the severity of these events and their expected consequences," said Dr. Ernie Hildner, director of NOAA's Space Environment Center in Boulder, Colorado. Hildner said that physical measurements on the scales will help the scientific and operations communities consistently identify the intensity of solar events. Solar storms can vary, with some equivalent to a thunderstorm on Earth, while others may be more severe, with intensity similar to a hurricane or tornado.

Satellite expert David Desrocher, a senior engineer at The Aerospace Corporation in Colorado Springs, Colorado, said that, "NOAA's new space weather scales will significantly aid the space industry in anticipating events, understanding effects, and developing more robust satellite designs and mitigation strategies." John Kappenman, a senior engineer at Metatech in Duluth, Minn., explained that space storms can impact the operational reliability of electrical transmission systems world-wide. "The previous solar cycle demonstrated just how seriously the power industry needs to consider the potential impacts of geomagnetic storms," Kappenman said.

One of the strongest impacts occurred during the last solar cycle in 1989, when the entire Province of Quebec went dark because a geomagnetic storm caused power lines to overload.

NOAA's Space Environment Center in Boulder is responsible for issuing warnings, watches and forecasts of the space environment and potential impacts on Earth. The Center continuously monitors the solar environment with a complex array of ground-based observations and satellites operated by NOAA and its national and international partners. [NOAA via Al Quaglieri e-mail]

## Thrill is Gone The 'Local' Has Gone Out of Local Radio

By SUSAN KENT

After reading the letter by Perry Crabill that was in The Star last Friday, I feel I must write as well.

First of all, I too am saddened to hear that the "John & Joe Show" on WNTW (also not be left out is the "Charlie & Max Morning Buzz" show on the now-defunct 99.3 The Frog) is no more. Another reason for people to turn off local radio.

However, as long as the FCC allows these big, out-of-town broadcast companies (like Capstar) to come into small markets like Winchester and gobble up stations, more local radio programs will be biting the dust. I would not be a bit surprised that in five years, there will be only one local DJ left in the Winchester area.

I agree with Mr. Crabill that AM (and FM too) should maintain local programming, but with so many stations around here turning to automation and satellite, that's not the direction local radio is going and it's not good. As I recall, someone wrote in about a year ago stating that 92.5 WINC-FM is the only local station around here that is "live" 24 hours, a situation that has not changed at all one year later. It shouldn't be this way.

As far as the FCC goes, that broadcasting is a "service," most radio stations around here failed in that department long ago.

I ask, how can the local stations around here serve the public when in most of them, no one is there late at night or on weekends? Call a station around here at 3 a.m. and odds are good no one will take your call. I myself tried calling six area stations one night to try to get a cancellation on the air (Q102, The Fox, WAPP, WK-MZ, WFTR/Real Country, and WXVA). Nobody answered the phone. In Q102's case I tried for three hours before I got someone, and then they told me they couldn't air my cancellation. Local radio aerving the public? Hah, that's a

**OPEN FORUM** 

good laugh. All of this is so sad. Very sad. I am only 35 years old, and even I can remember radio's good old days. Pam Bell, Mike Bell, Keith Lupton, Wendy Robbins, Kevin Owens, John Bloom, Frank Mitchell, and, of course, Joe Pasquali, all bring back fond memories to me.

I miss stations like WHPL [I am sorry about hearing the recent passing of WHPL's Johnny Bell, WFFV, and Music 105 (Winchester's first full-time FM rock station). Then you had those hig 50,000-watt, clear-channel radio stations coming into Winchester late at night, like Chicago's WLS and WCFL (The Voice of Labor), New York's WABC, 1220 WGAR (Cleveland), and WKBW out of Buffalo, a station that was so big here that I remember many stores at Ward Plaza playing it for background music.

As the song goes, the thrill is gone, long lone. Winchester radio in 1999 is nothing but garbage — satellite, automation, unfunny DJs, no variety, misleading commercials. An example ia the McDonald's and that is airing on some stations around here; it ends with "not in Winchester, Virginia." Doesn't the same company that runs McDonald's in Winchester also run the ones in Boyce, Front Royal, and Charles Town? Shouldn't those towns be listed in the ad as well? Even the few local DJs who are still on the air around here - I can't listen to most of them either. Why must I sit through aick, put-down humor or the latest "Cigar" joke, or hearing "Jerry Springer" stories? Thank goodness for Adelphia Cable 6, even though most of the time I find myself turning down the audio every afternoon.

This bring up another question: Now that we have ratings for TV and movies, why not radio? It makes no sense — people complaining about ser in films and on TV — but it's OK if a DJ talks about sex. My 6-year-old daughter now knows what the word "biserual" means, not by TV, but because her bus driver had the radio turned to a local station and the DJ on the air talked about "biserual fantasies." Do we need this? No!

I am the last one for boycotts; however one may be needed here. Radio lives by advertising dollars. I am advising that we, the listeners, boycott all local radio stations who don't broadcast locally. Then maybe they will understand and do away with this automation/satellite trash they give us I don't want to bear someone who is "live from Hollywood, or in Phoenix" "pretending" to be in Winchester. "Mhen I turn on the radio, I want to hear someone who is "live from Winchester." That's the purpose of local radio in the first place, the word local.

Maybe a boycott can send a message to these big radio companies that the listener should come first, and not "saving bucks" or "ratings. Then, one would hope, the listener would benefit.

Open Forum is a column available to Star readers to address a subject of their choice. Susan Kent is a resident of Winchester.

Perry Crabill sent in the above clipping from the Winchester (VA) Star, adding "Earlier this year WNTW-610 in Winchester canceled the "John & Joe Show", a local morning talk program starring John Schreiner and Joe Pasquali ... and replaced it with an inane satellite feed with no local significance. I wrote a letter of protest to Capstar and the station manager and sent a copy to the Star. The publication of the latter prompted Susan Kent, a local listener, to respond with the enclosed article, which the newspaper published a few days later."

## Professional Barry S. Finkel bsfinkel@ANL.gov Sports Networks Network listings for team sports stations

Here is 1999/2000 National Basketball Association (NBA) flagship information from the "Sporting News NBA Guide" via Ken Onyschuk. Also is one NBA network list. Please send me any network

lists	you may have. Thanks.				-
	nta Hawks	750	WSB-GA	Steve Holman	
Bosto	on Celtics	850	WEEI-MA	Howard David	, Cedric Maxwell
Char	lotte Hornets	1110	WBT -NC	Bob Licht, Mike	e Gminski, Gil
				McGregor, Gar	y Vaillencourt
Chica	ago Bulls	1000	WMVP-IL	Neil Funk, Joh	
	eland Cavaliers	1100	WTAM-OH	Joe Tait	
Dalla	s Mavericks	570	KLIF-TX	Matt Pinto, Bra	d Davis
Denv	ver Nuggets	950	KKFN-CO	Jerry Schemme	1
Detro	oit Pistons	950	WWJ -MI	George Blaha, I	Larry Henry, Vinnie
				Johnson	
Gold	en State Warriors	680	KNBR-CA	Tim Roye	
Hous	ston Rockets	950	KPRC-TX	Gene Pederson	, Jim Foley, Jeff
				Hogedom	
		920	KYST-TX (SS)	Adrian Cavarri	
India	na Pacers	1070	WIBC-IN a		b "Slick" Leonard,
				Kevin Lee	
_			WSYW-IN a		
	Angeles Clippers	1150	KXTA-CA	Ralph Lawlor, 1	
Los A	Ingeles Lakers	570	KLAC-CA	Chick Hearn, S	
Mian	ni Heat	610	WIOD-FL (EE)	Mike Inglis, Ed	Pinckney
		830	WACC-FL (SS)	++	
	aukee Bucks	620	WTMJ-WI	Ted Davis	
	esota Timberwolves	1130	KFAN-MN	Chad Hartman	
	Jersey Nets	710	WOR-NY	Bob Papa, Albe	
New	York Knickerbockers	660	WFAN-NY		ouis Johnson, John
0.1	4. 16 1	500		Andariese	
	ndo Magic dolabio 760-0	580 610	WDBO-FL WIP -PA	Dennis Neuma Tom McGinnis	nn, jerr Turner
	delphia 76ers nix Suns	620			Erickson
rnoe	iux suits	1480	KTAR-AZ (EE) KPHX-AZ (SS)	Al Mcloy, Keith Fred Morales	LETCKSOT
Dort	and Trail Blazers	1190	KEX -OR	Mike Rice, Bria	n Whoeler
	imento Kings	1140	KHTK-CA	Gary Garould	II WHEELCI
	Antonio Spurs	1200	WOAI-TX (EE)	Jay Howard	
Jun	anoillo Spuis	1350	KCOR-TX (SS)	Paul Castro	
Seatt	le Supersonics	950	KIR-WA	Kevin Calabro	
	nto Raptors	590	CICL-ON		, Jack Armstrong
Utah		1320	KFNZ-UT	Rod Hundley,	
	ouver Grizzlies	980	CKNW-BC	Don Poier, Jay	
	ington Wizards	980	WTEM-DC	Dave Johnson	
	diana Pacers 1999/2000				[e-mail])
86	0 WGOM-IN	148	0 WRSW-IN	100.1	WFLQ-IN
93			WTHI-IN	103.5	WAWC-IN
123		155		103.9	WIMC-IN
128		100	WMDH-IN	100.7	WRBI-IN
		0		104.0	
133			3.9 WZBD-IN	104.9	WWWY-IN
134			4.3 WREB-IN	106.5	WWBL-IN
	WXFN-IN		5.3 WNDI-IN	107.1	WSYW-IN *a
135			5.7 WLRX-IN	107.7	WMRS-IN
137			5.9 WKUZ-IN		Radi 🕅
144	0 WPGW-IN	9	6.7 WORX-IN		

\* Flagship station

++ I do not know the names of the announcers.

a Ken Onyschuk's list has the Pacers' flagship 1070 WIBC-IN; the Media Guide has 107.1 WSYW-IN.

# 18Paul SweetInternational DXPaul SweetAchievements2840 SE IllinTopeka, KS (ControlTopeka, KS (Control

Paul Swearingen plsBCBDXER@AOL.com 2840 SE Illinois Avenue Topeka, KS 66605-1427

International DX verie/taped totals listed by continents

Year			Last			Total						
Started	DX'er	Location	Update	Oceania	Ctries		Foreign	NA	SA	Eur	Af	As
1952	McIntosh, Eric	NZ	1965	253	63	686	635	301	2	45	4	81
,	Dellit, Sam	Australia	1978	80	37	362	218	109	0	5	1	23
	Geary, Kermit	PA	1993	61	107	6190	988	512	243	147	23	2
1938	Anderson, Roger A.	VA/NY/PA	1993	48	105	1448	514	227	78	128	28	5
1947	Luton, Relfe	NC	1973	33	23	1049	142	102	4	3	0	0
1963	Scrimgeour, Gray	CA/ON	1971	31	47	526	440	354	10	18	1	26
<b>)</b>	Callarman, John	?	1970	20	50	740	138	72	20	17	3	6
1958	Dangerfield, Ben	PA	1999	8	127	431	332	85	44	151	33	10
1946	Moore, Ray	MA	1993	8	104	245	245	95	52	59	24	7
1931	Steele, Sid	IL	1998	8	36	3101	299	104	12	2	Q	1
1933	Cooper, Ernest	NY-MA	1980	7	79	4142	760	528	131	88	6	0
1958	Wesolowski, Ernie	NE	1998	7	24	2003	80	53	7	0	1	1
1950	Krejny, Edward	OH	1996	6	76	2733	441	208	126	91	10	0
969	Karchevski, Bob	MA/CA	1975	6	24	204	141	112	0	0	0	0
1964	Whatmough, Dave	ON	1994	6	13	1014	15	6	1	2	0	Q
958	Merriman, Alan	VA	1994	3	93	1615	368	212	47	88	14	4
1954	Starr, Jerry	OH	1974	3	51	1209	194	134	34	20	3	0
1958	Phillips, Dan	TN/AL	1974	3	26	567	40	21	9	5	1	0
1964	Heinen, Wayne	NY/CO	1996	2	38	1470	38	26	3	5	0	2
1955	Palmer, Richard D.	IL	1993	2	33	822	94	77	4	10	1	0
1964	Reynolds, Bruce	MO	1977	2	28	1103	121	111	6	2	0	0
931	Wheeler, Frank	PA	1993	2	25	1885	78	68	7	1	0	0
1966	Bruner, Jesse R.	KY	1966	2	23	132	27	17	3	5	0	0
1931	Holland, George B., Jr.		1996	2	22	885	58	46	5	5	0	1
1969	Falconer, Jeff	ON	1999	2	22	1064	20	14	2	2	0	0
1965	Kadet, Jeff	MD	1969	2	12	703	41	39	0	0	0	0
1952	Schiller, Ron	NJ	1999	1	86	2103	254	136	34	72	8	3
1940	Morss, Stan	MA	1993	1	84	3922	424	218	65	221	14	
	Sampson, John	NJ	1965	1	54	445	72	23	6	38	3	1
1976	Froemming, Gary	AZ	1994	1	17	338	92	85	7	0	Ó	0
1960	Rugg, Andy	QC	1999	0	71	1747	208	87	48	66	6	1
1973	Sgrulletta, John	NY	1998	0	54	64	64	24	24	19	3	3
1962	Musco, Ron	CT	1999	0	49	1283	54	40	5	10	2	1
1962	Edmunds, R. J. (taped)		1998	0	43	897	56	50	37	14	0	1
1976	Renfrew, Jim	NY	1998	0	40	400	67	44	7	0	0	0
1965	Long, John	CT	1968	0	29	101	0	0	Ó	0	0	0
	Fela, Joseph	NJ	1965	0	24	738	35	19	4	11	1	0
975	Swearingen, Paul (tape		1999	0	22	772	95	43	16	0	0	0
1964	Sorensen, Morris	ON/MB	1975	0	13	537	385	375	1	9	0	0
1977	Wolfish, Niel	ON	1977	0	11	397	20	14	4	2	0	0
1968	Bytheway, Phil	W/A	1982	0	9	457	20	0	0	0	0	0
1960	Lynch, Don	MA	1980	0	9	0	157	0	0	0	0	0
1962	Edmunds, R. J. (paper		1998	0	7	266	13	10	3	0	0	0
1973	Mount, Paul	NJ	1995	0	6	230	25	22	2	0	0	0
10//	Edmunds, R. J	NÝ	1999	0	3	76	1	1	0	0	0	0
1964 1975	Bartek, Daniel, Jr.	NE	1976	ŏ	2	23	ō	ō	ŏ	ŏ	ŏ	ŏ

Feel free to send in your updated totals in time for the next IDXA, which has a track record of showing up about every other month in DXN, but don't hold me to that. Remember, only taped or paper veries are counted, and mainland U. S. and Canadians are not included in NA totals. Include your best catch from each continent and all other totals when reporting. Our next column will feature South American totals.





This special pull-out section will allow NRC members to have access to ordering information for current reprints, other products, and all publications from NRC Publications. If you need any information on products that may still be available but are no longer listed in this catalog, please order ZAL (NRC Archived Publications List). This list includes all items which are dated or have been superseded, including bandscans and early technical articles.

#### Remember, each purchase benefits your non-profit National Radio Club

#### Publications

20th Edition is the 1999-2000 DX Season's edition of the hobby's original BCB reference for the U.S. and Canada. Packed with the quick reference station data that you've always loved, it includes cross references by city and call letter.

NRC Night Pattern Book - 4th edition - Order ltem NPB

200+ pages with patterns for stations in the U.S. Canada and parts of Mexico! Three-hole punched. LAM This book is designed to be used with the AM RADIO LOG.

AM Station Location Maps 5th Edition - Order Item SLM

Revised Spring 1999. Edited by Bill Hale. Contains maps for all frequencies with locations noted tenna. Serves as a enhancement to Antenna Referfor every station in the USA and Canada. 8 1/2 X ence Manuals Volume 1 and 2. 8 1/2" X 11" bound 11 format, three hole punched. Now INCLUDES book format. Latitudes & Longitudes for every station in the U. S. A. and Canada. Large type with formula and instructions by NRC'er Dave Sundius. Designed for use with the AM RADIO LOG.

FM Atlas - Order Item FMA

18th Edition From Dr. Bruce Elving. Contains listings by frequency and alphabetical listings by state state by state location maps. Translators are Skywave Signals listed by state. Entries include power, antenna height and format.

AM Broadcast Station Antenna Systems - A **Basic Guide** 

Order Item ABA

with the non-technical DX'er in mind; it includes a complete description of AM antenna systems antenna tuners for longwire and beverage antenwith over 35 photographs. Now, it's easy to un- nas and antenna couplers. This is the original book derstand how the patterns in the NRC's Night Pat- which has been available for several years. 8 1/2" tern Book are produced.

Getting Started in Medium Wave DX'ing -Order Item NMB

Updated in 1995. This booklet is designed to assist the novice DX'er in pursuit of the hobby. It includes introductory articles on foreign and domestic DX'ing. Articles on QSL'ing, safety and DX gear are also included. (This book is FREE with a new membership in the National Radio Club)

Beverage and Longwire Antennas Design and Theory - Order: BAM

(Currently in production; availability TBA) This manual is a compilation of numerous articles on the subject of design and theory of the beverage and longwire antennas that have appeared

through the years in DX News. Some articles are AM Radio Log 20th Edition - Order Item ARL available as reprints. This book gives details infor-Over 9000 updates since the 19th edition!!! This mation on the theory of operation, construction and maintenance of a beverage antenna. Serves as an enhancement to Antenna Reference Manuals Volume 1 and 2.51/2" X 81/2" booklet format.

Partial Contents: Analysis of the Beverage Antenna Part 1- Basic Theory Part 2- Two-Wire Phased Antennas

Loop Antenna Design and Theory-Order Item

Revised and updated in 1996. This manual is a compilation of numerous articles on the subject of design and theory of the loop antenna that have appeared through the years in DX News. This book gives detailed information on the theory of operation, construction and maintenance of a loop an-

Partial Contents:

Multi-Rod Ferrite Loop Antennas Roll Your Own! (Loop) Loop Antenna Theory and Practice Long Wave Converter Detail BFE-C Loop Amplifier Card The Hot Rod- Ferrite Loop Antenna High Precision Direction Finding of MW

#### Antenna Reference Manual Volume 1 - Order Item ARM1

Revised and updated for 1996. This manual is a compilation of numerous articles on the subject of antennas for medium wave DX'ers. Originally NRC'er Patrick Griffith has written this book published between 1969 and 1974 in DX News. Includes articles on air-core and ferrite core loops,

X 11" bound book format. Partial Contents: NRC FET Altazimuth Loop **Balanced FET Amplifier** NRC Two Foot Loop Tips on Loop Construction One Transistor Loop amplifier Balanced and Unbalanced Loops Direct Coupled Loops A 'Collapsible' Loop for Travel BCB DX'ers Beverage Antenna Tuning Devices for Longwires on MW Alternative Methods of Air Core Loop Amplification

Antenna Reference Manual Volume 2 - Order Item ARM2

Revised and updated in 1996. This manual is a compilation of numerous articles on the subject of antennas for medium wave DX'ers. Originally published between 1974 and 1981 in DX News. Some articles were formerly available as reprints. Includes articles on air-core and ferrite core loops, antenna tuners for longwire and beverage antennas and phasing units for use with beverages and LGS (20 sheets) longwires. 8 1/2" X 11" bound book format.

Partial Contents:

A Good Loop is Easy (and Cheap) to Make Antenna Coupler for Portable Receivers AC Power Supply for FET Loop Amplifiers Antenna Phasing FET Loop Amplifier with Coaxial Output

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Phasing Unit Construction and Use

Floor Stand and Mounting Arrangements for C-10 cassettes Audio Cassette Magazines Loops

NRC County Cross Reference - Order Item CCR.

Compiled by Bill Hale. This handy reference has a complete lists of counties in the USA and Canada. These are listed alphabetically and cross referenced by state. A great way to ID those unID'ed stations that mention a county name! Also a complete list of counties listed by state and/or province. A perfect reference for Amateurs too.

der Item CCS

This interesting booklet shows you how to build a "modern" crystal set, just like the one your parents or grandparents might have built and used many years ago. The 40-page booklet is full of illustrations and excellent diagrams.

The DX'pedition Handbook - Shawn Axelrod - Order Item DPH

DX'pedition. Includes the results of the 1991 and 1993 Newfoundland DX'peditions. Recommended for those interested in exotic DX and using Bever- more! age and mini-Beverage antennas

Order SDP

Complied by Chuck Hutton, Bruce Conti and Mark Connelly. An exciting compilation of DXpedition loggings and comments from around the World during the Bottom of the Sunspot cycle.

#### DX'ers' Accessories and Aids

Sunrise/Sunset Maps - Order Item SSM A set of 12 maps (8 1/2" x 11") with instruction sheet showing the average monthly sunrise/sunset times for the United States. An invaluable aid for DX'ing sunrise and sunset skip.

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After Dark Volume 10 - Order ADC10

A Visit to WODI-1230" About small market ra-The Season of DXpeditions - Autumn 1996 dio. "Radio from L.P.B." (Low Power Broadcasting lnc.

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Articles Reprints List

der forms, which should no longer be used. The number of pages in each article is indicated by ( ).

#### **ANTENNAS**

- Many articles formerly in this section are in the
- LOOP. T. Holmes. If you're having trouble obtaining sharp nulls with a standard loop, this simple device may help. (1) A3 A VERSATILE LONGWIRE ANTENNA COU- A36\_LOOP-LONGWIRE COMBINED AN-
- PLER. R. Foxworth. How to get the maximum mount of signal from your longwire. (3)
- A9 DOWN TO EARTH GROUNDS. G.P. Nelson. How to make low resistance ground connections for terminating a Beverage (2)
- A10 A CALIFORNIA BEVERAGE. Fr. Jack Pejza. Results obtained at this Beverage site. (2)
- A12 THE VERTICAL PICKUP PATTERN OF THE MW LOOP ANTENNA. G.P. Nelson. Informa- A39 SIMPLE PASSIVE LONGWIRE TUNER. Mark tion for those doing horizon blockage experiments with a loop antenna. (4) A13 USING TWO ANTENNAS TO GENERATE A40 AMPLIFIED PHASED SHORTWIRES. Mark
- ASYMMETRICAL RECEIVING PATTERN. M.Levintow. Shows a simple way to skew your loop's pattern to effect a null that will permit A41 THE KOWALSKI LOOP. Neal Perdue with reception of a station impossible to receive on a figure-8 loop antenna by itself. Reprints A5 and A6 are a requirement for understanding this technique. (3)
- A14 A NEW MÉDICAL BREAKTHROUGH FOR A42 THE MWT-1 FAMILY OF ANTENNA TUN-LONGWAVE TA'S. C. Clayton. Instructions on how to build an inexpensive loop antenna for LW. (1)
- A15 REVIEW OF THE DYMEK DA-3 ANTENNA. A43 RT-1 REMOTELY-TUNED ANTENNA Pete Taylor, with notes by R. J. Edmunds. Evaluation of this MW antenna. (4)
- Boyd. Beverage antenna theory and application.
- A17 MORE FERRITE LOOP ANTENNA INFO. Dallas Lankford. Inconsistencies in ferrite-core A45 THE MWDX-4 FAMILY OF PHASING loop antenna theory. (3) A19 NEBE: THE NEBRASKA BEVERAGE. D.
- 9 NEBE: THE NEBRASKA BEVERAGE. D. of two similar series of phasing units. (25) Fischer, C. Dabelstein, R. Mitchell. Results at the A46 WIND A COMPLETE-COVERAGE COIL Nebraska Beverage site. (7)
- A20 THE LSCA-1. Ron Schatz. Construction plans for the Loop Sense Cardioid Array. Should operated properly. (10) A25 A NOVEL APPROACH TO BUILDING
- YOUR OWN BCB LOOP. M. Maloney. Ideas for improvements in operation and sturdiness of loop antennas. (4)
- A27 SEVEN PASSIVE TUNERS. Mark Connelly. This article will introduce you to many different tuner designs and how they are used (10)
- A29 REMOTELY-CONTROLLED ANTENNÁ tion to the design of remote tuning for loop or wire antennas from distances of 50 feet or more. Use w/ A43 (7)
- A30 REMOTELY TUNED DIRECTIONAL LOOP ANTENNA. E.L. Cummins. Loops ideas for A53 IMPORTANT LOOP, TUNER AND PHASER building where interior mounted loops will not work. (11)
- A31 SIMPLE CHEAP AND EFFECTIVE PRESELECTOR LONGWIRE TUNER-AMPLI-FIER. B. Sherwood. Schematic and brief instruc-

#### tions are given. (3)

- This list supercedes all previous lists and or- A33 ANTENNAS FOR AM BROADCASTING. Steve Kennedy. A brief history of early and current station antenna systems. (4)
  - A34 SOME ANTENNA EXPERIMENTS PART 1. W.R. McIntosh. Ever heard of a Helical longwire? This article deals with compact an-
- Loop and Beverage Manuals. A2 A ZERO SHARPENING DEVICE FOR A BCB A35 THE PHASE ONE A Delay Line Phasing Unit. Gerry Thomas. Description of an improved phasing unit design that can be built or
  - TENNA. P. Swain. "Sensing" antennas for DXing and direction finding. (3) A38 EXTREMELY LINEAR ELECTRICALLY TUN-
  - ABLE ACTIVE RECEIVING ANTENNA. Hopf and Lindenmeier. Technical discussion of an antenna system that is the optimum solution towards allowing undisturbed reception near transmitters. (5)
  - Connelly. A basic tuner that can eliminate mix-
  - Connelly. Construction article. Utilizing an SM-2, phasing unit and short wire antenna. (8)
  - comments from Paul Kowalski. A first-hand account of this ferrite core loop antenna. A nontechnical review, with comparisons to the SM-2. (2)
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    - provement ideas. (6) A48 YAD ANTENNA GIZMO Jerry Starr. A simple-to-build antenna switching device. Will ground the antenna not in use while using the other; designed for 2 antennas and 1 receiver. (1)
  - TUNER RT-1. Mark Connelly. An introduc- A52 COMPUTER-AIDED ANTENNA TUNER DESIGN. Mark Connelly. This BASIC computer program determines which component values are used in your antenna tuner. Tuner schematics included. (7)
    - DESIGN CONSIDERATIONS ("O" DEMYSTIFIED) Mark Connelly. Technical article. The importance of "Q" and a BASIC program to find antenna tuner component values in light of the "Q" (7)

- TUNER IMPLEMENTATIONS. Mark Connelly. Technical article. Tuner circuits using this amplifier. Reference also A47. (5)
- A55 HOTRODDING THE MINI-MWDX-3 PHAS-ING UNIT.Mark Connelly. Technical article. More on the Mini-MWDX-3. Requires reprint A44. (3)
- A57 MICRO-MWDX-4A LOOP VS WIRE PHASER. Mark Connelly. Connelly. Technical Construction Article. (11)
- A59 LIL-1. Dallas Lankford. Construction plans for a new circuit for combining a loop and inverted Lantenna to generate a cardioid pattern. (3)
- A60 MEDIUM WAVE, A PRACTICAL AP-PROACH. Graham Maynard. This is a consolidation of articles that were first published by the Medium Wave Circle of England. It outlines the authors construction of his MW DX receiving set-up. (12)
- A61 MWDX-5 PHASING UNIT. Mark Connelly. The latest the series of Phasing Units. Construction article. (11)
- A62 MINI-MWDX-5. A SIMPLE PHASING UNIT. Mark Connelly. Construction article. Similar to the MWDX-5 but simpler. A61 recommended
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- Connelly. A new ferrite core loop. Reviewed and modified. (9)
- A66 SUPER BOOSTER BAR. Gerry Thomas. For portable receivers. (2)
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- A69 NOISE & INTERFERENCE REDUCING AN-TENNAS. Wraight, Lankford & Connelly. (10)
- A70 REMOTELY TUNED LOOP RTL-1 & RTL-1A. Mark Connelly. Also Contains the latest BBA-
- Connelly (21)
- A75 BEVMATCHER. A broadband Antenna Matching and combing Unit. Mark Connelly.
- A77 The RTU-1. Mark Connelly. A remote tuning unit for active antennas. (11)
- A78 Coupler & Upgrades for the Quantum Loop. G. Thomas (2)
- Connelly. Upgrade of Reprint A61 (16)
- A80 ANOTHER LOOK AT NOISE REDUCING ANTENNAS by Mark Connelly (3)
- A81 ONE CHIP ACTIVE ANTENNAS by Mark Connelly (3)
- A83 THE RTL-2 REMOTELY TUNED LOOP by Mark Connelly (24) A84 THE DCP-1 DUAL CONTROLLED PHASER
- FOR REMOTELY TUNED ACTIVE ANTEN-NAS by Mark Connelly (12)
- A85 DL-1 DELAY-LINE PHASE UNIT by Mark Connelly (9)
- A86 THE MWT-3 REGENERATIVE TUNER CON-TROLLER by Mark Connelly A passive and Active broadband amplification control of remotely tuned loops and whips. (21)

- A54 THE MITCHELL LEE AMPLIFIER: TWO A87 ULTRALINEAR 2N5109 AND 2N3053 AM-PLIFIERS. D. Lankford. Technical article with instructions/schematics. (15)
  - A88 ULTRALINEAR AMPLIFIED ONE METER WHIP ANTENNAS. Dallas Lankford. 1994 complete instructions & diagrams for 2 one meter antennas. (19)
  - A89 THE FULL-SIZE, FULL-PERFORMANCE LOOP. R. Moore. A history & explanation of Loops & the author's current design. (10)
  - A90 ANTENNA EXPERIMENTS summer 1994. Mark Connelly. Tests to help you choose for your needs. (5)
  - A91 KIWA/QUANTUM LOOP COMPARISON by Elliot Straus.(1)
  - A92 PHASED NOISE REDUCING ANTENNAS by Russell Scotka (7) A93 THE QUANTUM (OR Q-STICK). A PASSIVE
  - ANTENNA BOOSTER PLUS ADVANCED Q-STICK DXING TECHNIOUES by Gerry Thomas(8)
  - A94 THÉ MWDX-6 PHASING UNIT by Mark Connelly(24) A95 DL-2 DELAY LINE PHASING UNIT by Mark
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- A63 RIBBON CABLE LOOPS. Mark Connelly. A A97 INVESTIGATION OF REGENERATIVE TUNER DESIGN THE MWT-3S by Bruce Conti -edited by Mark Connelly(6)
  - A98 TEST RÉPORT THE JPS ANC-4 ANTENNA NOISE CANCELLER by Mark Connelly(3)
  - A99 LOOP SHOWDOWN KIWA VS RSM-105 by Mark Connelly(4)
  - A100 BBL-1 BROADBAND LOOP ANTENNA & BA-1 AMPLIFIER by Mark Connelly: Construction, details, and use (11)

#### DOMESTIC DX

- D2 IT TAKES TWO TO VERIFY, PLUS HELPFUL HINTS. J. Murley and R. Schiller respectively. Article on the station's attitude toward reception reports and veteran DX'er Schiller's tips
- C1 Amplifier Card. (20) A73 THE MWT-2 REGENERATIVE TUNER. Mark D3 THE DX TEST FROM A STATION'S VIEW-POINT. Bill Croghan. Hints from a broadcaster arranging DX tests and obtaining more verifications. (1)
  - D4 WHAT IS A PRE-SUNRISE AUTHORIZA-TION ? R. J. Edmunds. An Explanation of psra's. (3)
  - D5 LONG DISTANCE RECEPTION OF DX TESTS. F. Dailey. Proven techniques. (1)
- A79 SUPER MWDX-5 PHASING UNIT. M. D6 MAKING THE BEST OUT OF PREPARED-CARD VERIES. Kelly Andrews. The verie collector's last resort, with numerous samples. (3)
  - D9 THE NSP SITUATION. J. Starr. A look at this problem from the broadcaster's side of the fence. (2)
  - D10 DX FROM THE TWILIGHT ZONE. P. Sullivan Sunrise and Sunset Skip explained (4)
  - D11 GRAVEYARD DX, R. Foxworth, with additions by M. Levintow. DX'ing the local channels with results. (15)
  - D12 CANADIAN FAMILY LIFE...IT'S TWINS. J. Oldfield. Explains station "families" in Canada. List of Station groupings as of 1980 (3)

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- info. includes pre-sunrise authorities (psra), station allocations on clear channels and auroral effects. (7)
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- ing veries from your local stations. (1) D19 HOW TO "UP" YOUR TOTALS! John J. Rieger. An antidote to "DX burnout" and proof that there is DX after the first 1000 catches! (3)
- D20 WHO'SON FIRST? Bruce Conti. Who was the first broadcasting station in history...? (4)
- D21 WHAT MAKES FOR A DX TEST? Wayne Heinen. A look at what happens at a radio station during a DX test (1)
- D22 FORMAT FUTURES. Chris Cuomo. What radio formats may look like in the 1990s. (2)
- D23 SATELLITE PRÓGRAMMING. Ed Ryan. A look at how it works. (2)
- D25 A SEVENTEEN-POINT PLAN FOR AN IM-PROVEMENT. Doug Smith. A fix to the AM broadcasting service as we know it? (3)
- D26 ONCE UPON A TIME. Ben Dangerfield. What hap-pened years ago in DX, the NRC, and the
- world! 1963 was an amazing year. (3) D27 THE STEVENSON LOG. Gene Martin. The Broadcast Band in February 1926. (1)
- D28 SUNSET DXING FROM THE WEST COAST. Guy Kudlemyer. Becoming a pro at catching stations at sunset.(6)
- D29 DXing Tips Using Satellite Services. D. Schmidt (2)
- D30 TRAVELERS INFORMATION STATIONS. Rules and Regulations governing these numerous low-power broadcasters. (2
- D32 U. S. A. DIGITAL RADIO (IN-BAND, ON-CHANNEL). Official descriptions. (6)
- D33 BAD WEATHER! USE IT TO YOUR ADVAN-TAGE. by Dave Schmidt. (2)
- D34 PIRAČY ON THE MĚDIUM OR HIGH FREQUEN-SEAS (AND NOT WALK THE PLANK) by John D. Bowker. (5)

#### FOREIGN DX

- F1 DXING CENTRAL, SOUTH AMERICA AND THE CARIBBEAN. Mark Connelly. Listings, by frequency, of the best bets from these areas, along with the original Connelly, DeLorenzo, Kazaross article DXing Latin America and the Caribbean. (9)
- F2 TA TIPS FOR BEGINNER. Dave Yocis. Your first Trans-Atlantic receptions ! (2)
- F3 PORTUGUESE FOR DX'ERS. R Schatz. Describes the important features of this language
- F4 TA DX'ERS GUIDE TO SUNRISE-SUNSET TIMES. Mark Connelly. Reference to SRS-SSS times with extensive tables for many locations.
- F5 HUNTING LATINS BY MUSIC. R.Schatz. Describes types of LA music from various countries and how to ID stations using this information.(5)

- F6 ZONAL-ANALYSIS APPROACH TO TA DX. Mark Connelly. A systematic method of grouping TA countries to help the DX'er recognize different types of openings and improve TA re-
- ception. (4) F7 ZONAL-ANALYSIS APPROACH TO PAN-AMERICAN DX. Mark Connelly. Similar to F6, with the emphasis on the Eastern U.S. loggings of LA and South American stations. (5)
- F8 STATION IDENTIFICATION. Tips on how to ID stations in nearly 50 languages! (2)
- F9 SOME EASY TA'S. Dallas Lankford. (2)
- F10 ID'ING JAPANESE BROADCAST STATIONS. Charles Taylor. Hints to help, without actually knowing the language! (2)
- F12 COMMON SENSE TA DX STRATEGY. Mark Connelly. Practical hints are given for hearing Trans-Atlantic stations. (2)
- F13 THE ODDS ON EVEN TA'S. Mark Connelly. The possibility of hearing TA's on channels shared with domestic stations (10)
- 14 YOUR FIRST 30 COUNTRIES IN ENGLISH. Mark Connelly. Listed by country. (3)
- F15 CARIBBEAN MW DX GUIDE. Mark Connelly. Listed by country. (4)

#### HOBBY REFERENCE LISTS

- Some reprints formerly in this section are found in Station Location Mapbook (SLM)
- HRL1 National Radio Club Common Abbreviations List (6)
- HRL2 Cuban Medium-Wave Broadcast Stations (This list recently revised) (4)
- HRL3 U.S. Postal Service 3 digit ZIP codes (2)
- HRL4 North American Time Zones to UTC Conversion Chart. (1)
- HRL5 Frequency and Power Relationship Chart. Shows average coverage radius for various powers at BCB frequencies. (1)
- HRL8 NRC Countries List edited by Al Merriman (2)

#### MISCELLANEOUS ARTICLES

- M1 LOCAL SIDEBAND SPLASH: HOW MUCH IS TOO MUCH? G.P. Nelson. This article describes FCCregulations on sideband radiation on the Medium Wave band and types of station-originated spurious radiation (1)
- M2 MODULATION ARCING J. Starr. Describes a frequent but rarely discussed cause of medium wave interference originating at the station. (1)
- M3 SUNRISE-SUNSET TABLES. G.P. Nelson.
- These charts allow determination of accurate time of sunset and sunrise at any point in the world on any date. (9)
- 14 RF INTERFERENCE AND THE HOME COM-PUTER. Bill Krause, ANARC. Home computers will cause interference on your DX rig unless precaution are taken; solutions are discussed. (2)
- M5 UNRESTRICTED RADIATION. G.P. Nelson. Discussion of carrier current stations and how to hear them. (3)
- M6 RF POLLUTION. G. Hauser. General discussion of the radio interference problem and steps necessary to control it. (2)
- M7 PATTERNS, PARTS I, ÌLA, IIB. P. Hart. These articles explain in detail what patterns mean and understanding their relationship to DX'ing! (34)

- M9 MORE ON HOW DIRECTIONAL ANTENNA PATTERNS ARE PRODUCED. Wes Boyd. Supplementary information to the articles contained in the 1980 edition of the NRC Night Pattern Book. (1)
- M10 SUPERMODULATION AND EFFECTS ON DX'ING. Steve Kennedy. Discussion on the problem and its affect on DX'ing. (3)
- MI1 TERRAIN CHARTS FOR PROPAGATION PREDICATIONS. M. Connelly. This article details how to prepare a chart of a DX'ers surrounding terrain which can help enhance or diminish reception. (3)
- M12 NOISE LEVELS AND USABLE RECEIVER SENSITIVITY. C. Hutton. Technical Discussion of the effect of noise on receiver sensitivity. (5)
- M13 GREAT CIRCLE CALCULATIONS REVIS-ITED. Mike Tuggle, with an addendum by R.N. Allen. An explanation, how to figure distance and direction of stations mathematically, with a computer program to figure the Great Circle paths. (4)
- M17 SOME THOUGHTS ON INTERFERENCE. noise from light dimmers.(1)
- M18 MANMADE INTERFERENCE ON THE tion in terms of man-made noise levels. (3) M20 THE LOG BOOK. John J. Rieger. Organizing
- your log book . (3) M23 WBBM RADIO: YESTERDAY AND TODAY.
- Chuck Schaden. A book review (1)
- Reviewed by Armand DiFilippo. (1) M30 THE GOLDEN AGE OF DX'ING. John
- Clements. Were the years 1969 thru 1975 the Golden Age of DX'ing? You decide. (4)
- M31 ALL ÅBOUT WÄVELENGTH. John D. Bowker. Wavelength versus frequency. An explanation. (2)
- M32 STANDARDS TIME AND FREQUENCY. via Pete Kemp. Time and frequency stations located
- on longwave. List by frequency. (3) M33 AM RADIO IN HIGH FIDELITY. John D. Bowker. Find out the reason why AM sounds so bad and what can be done to fix it. (1)
- M34 MYSTIQUE OF THE THREE-LETTER CALL. Thomas White, via CompuServe, via Pete Kemp. The Historic Roll Call and Current Status. (12)
- M37 NOISE Some Causes and Some Cures. Wayne Heinen (4)
- M39 FOUR SOFTWARE PIECES FOR MW DX'ers G. Kudlemeyer. Review of programs for P14 SKYLINE BLOCKAGE Fr. Jack Pejza. Math-Macintosh Computer Owners. (6)
- M40 PIONEER BROADCASTING STATIONS IN THE US. Thomas White A comprehensive history of U.S. Radio including the oldest 127 stations still in operation with starting dates. (12) M41 RFI FROM HOUSEHOLD ELECTRONICS by
- Perry Crabill, Jr (2)
- M42 AN INTRODUCTION TO LONGWAVE DXING by Shawn Axelrod (3)

#### PROPAGATION

- P1 MEDIUM WAVE SIGNAL PATHS, PARTS I, II, III, AND IV. G. P. Nelson. Discusses Great Circle paths, seasonal absorption patterns, auroral effects and the Mid-Winter Anomaly. (29)
- P2 SOLAR CONTROL OF DAWN E-BLANKET-

- ING ON THE MW BCB. G. P. Nelson. Explains how the position of the sun controls the fadeout time of TA's and TP's. (3)
- P3 EAST-WEST SYMMETRY AND THE FADE-IN PROBLEM. G. P. Nelson. Explains how the sun controls the fade-in times for MW stations. (2)
- P4 SUMMER RECEPTION ON THE BROAD-CAST BAND. G. P. Nelson. First article describing the seasonal patterns in solar terminator location which makes summer MW reception from deep South America and Africa possible. (3)
- P5 METEÓROLOGICAL EFFECTS ON MW GROUNDWAVE RECEPTION. R. J. Edmunds. Short term variations in groundwave propagation at MW frequencies and their relationship to weather conditions. (7)
- P6 AURORAL EFFECTS AND THE 1969 TRANS-ATLANTIC LISTENING TEST. G. P. Nelson. A description of how the geo-magnetic and auroral phenomena control TA reception from various stations. An introduction to auroral effects. (5)
- P7 THE ÀÚRORA OF NOVEMBER 6-9, 1970. G. P. Nelson. Traces a classic auroral attack from its origin on the sun to its effect on MW reception. (3)
- P8 COMPÁRATIVE MEASUREMENTS OF GEO-MAGNETIC INDICES. R. J. Edmunds. A three month comparison of A-index measurements as reported by several major observatories as they relate to each other. (3)
- M25 MUSIC IN THE AIR, by Philip K. Eberly. P9SKYWAVE OR GROUNDWAVE RECEPTION? G. P. Nelson. How to tell whether the signal from a station is arriving via ground wave, skywave, or both. (3)
  - P10 A BEGINNER'S GUIDE TO THE IONO-SPHERE. Fr. Jack Pejza. This article explains the processes which change the ionosphere and the effects of these changes on radio wave propagation. (10)
  - P11 THE LIMITS OF MIDDAY MW DX. G. P. Nelson. Comprehensive article describing the factors which influence radio wave propagation and reception during the late morning and early afternoon hours. (16)
  - P12 LIMITATION ON THE USE OF THE A-IN-DEX. G. P. Nelson. An explanation of the Aindex as a DX'ers tool . (3)
  - P13 BCB RECEPTION DURING PERIODS OF HIGH AURORAL ACTIVITY. G. P. Nelson. Describes research into the effects of the aurora on MW propagation. (8)
  - ematical derivation of the formulas needed to calculate the effect which terrain has on signals. (10)
  - P15 SKYLINE BLOCKAGE, SOURCES OF UN-CERTAINTY. G. P. Nelson. Takes into account the possibility of signal propagation by some less common modes which are subject to blocking by the horizon. (9)
  - P16 HORIZON BLOCKAGE: CAN FRESNEL DIF-FRACTION BE IGNORED? G. P. Nelson. This article shows how signals that should be blocked by the horizon can sometimes be heard. (10)

- - Skip Arey. A simple modification to eliminate
  - BCB. Dallas Lankford. A systematic approach for evaluating a current or future DXing loca-

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- P17 TRANSPOLAR DX RECEPTION. R. J. P36 M.F. PROPAGATION: A WAVE-HOP Edmunds. This technical article relates to the trans-polar reception of central and eastern Asiatic stations at sunset in North America. (27)
- P18 OBSERVATIONS OF TRANS-ATLANTIC MW RADIO SIGNALS. C. W. Bailey. The results of P37 BEAMIAC-A -DELUXE+ GREAT CIRCLE a lengthy survey of TA receptions made over a one-vear period. (3)
- P19 PRÓPAGATION ÁT MW FREQUENCIES. P. which control signal reception on the BCB. (6) P20 FACTORS OF MW PROPAGATION. F. Din-
- gation. (6)
- P21 DOMESTIC PROPAGATION-ANSWERS TO FREQUENTLY ASKED QUESTIONS. R. J. Edmunds. A discussion on some of the propagational factors that affect domestic reception. (1)
- MW DX'ER. R. J. Edmunds. An explanation of the Fredericksburg A-index as well as its use in R1 SPURIOUS SIGNALS & SPURIOUS SIGNALS the hobby. (2)
- P23 MEDIUM WAVE IONOSPHERIC PROPAGA-TION PLUS THE SEQUEL TO R.Schatz. These articles take a different approach to propagation and presents new terms and theory. (11)
- P24 TERMINATOR TRANSIT MECHANIX. R.Schatz. Parts I, II, III, IV AND IV-A of a series which the author states features practical techniques to hear new stations; techniques never before available. (33)
- P25 SUNSPOT CYCLE 21 THE PEAK HOW MUCH AND WHEN. O. Oklehen, H. R. RE-PORT. This article, through careful predictions, 21) shows how the next peak in solar activity will R3 SUBAUDIBLE HETERODYNES ON THE MW be one of the most severe in recent history: Includes additional comments by R. J. Edmunds.
- P26 ATMOSPHERIC AND GALACTIC NOISE ON THE BCB. Dallas Lankford. A discussion on the amounts of various types of noise, Compared to receiver sensitivity (3)
- P27 ON THE NATURE OF SCIENCE AND THEO-RIES OF BCB PROPAGATION. Dallas Lankford. Discussion of several theories, concentrating on the controversy concerning the degree of the arrival angle of signals propagated
- Thomas. One DX'er's experiences during this rare DXing opportunity. (3)
- P29 ON OBLIQUE PRÓPAGATION. Dallas theory of oblique incidence nighttime ionosphere at BCB frequencies. (12) P30 MEDIUM-WAVE OBLIQUE PROPAGATION
- ANOTHER VIEW. Randall J. Seaver. Some R10 UP THE CARRIER. W. Bailey. Dig the weak different interpretations are presented on this subject, as well as examples of MW propagation analysis using the Knight Wave-Hop method. (9)
- P32 RELATIONSHIPS BETWEEN SOLAR ACTIV-MW DXING. Randy Seaver . General characteristics of geophysical phenomena are addressed, in order to understand relationships high-latitude DX. (15)
- P33 SEA GAIN. Randy Seaver A discussion of the propagation phenomena. (11)

- METHOD FOR IONOSPHERIC FIELD STRENGTH PREDICTION. P. Knight. A method for calculating the strength of mediumwave frequency sky-wave signals at night. (9)
- BEARING DISTANCE COMPUTER PRO-GRAM. Mark Connelly. A "basic" computer program. (6)
- Sullivan. Discusses some aspects of the factors P38 THE EFFECTS OF WEATHER ON THE IONOSPHERE. Jack Woods. A discussion on weather and MW propagation. (2)
- ning. Discussion of the nature of MW propa- P39 GROUND WAVE, SKY WAVE. John D. Bowker. A simple explanation of these term. (1) P40 TRACKING THE 1994 SOLAR ECLIPSE BY RADIO by Ken Chatterton (3)

## RECEIVING EQUIPMENT AND TECHNIQUES

P22 REVIEW OF SOLAR ACTIVITY FOR THE Some articles previously in this section are avail-

- REVISITED. R. J. Edmunds and G. P. Nelson. Many DX'ers hear stations on frequencies where they don't belong. Article describes causes and cures of spurious MW signals. (10)
- **R2 SINGLE SIDEBAND RECEPTION ON THE** BCB WITH MECHANICAL FILTERS. G. P. Nelson. Few commercial receivers covering the MW band have adequate selectivity to cope with MW interference-particularly in the presence of powerful local stations. Explains how to add mechanical filters to an existing receiver for the ultimate in adjacent channel rejection. (
- BCB. G. P. Nelson. Details on a technique to permit the MW DX'er to detect and characterize signals too weak to hear at the time; allows the DX'er to count the number of stations on a channel—even if no programming is audible and permits direction-finding on channels with several stations present. (6)
- **R5 THE TRACKING PROBLEM AND HOW TO** CURE IT. G. P. Nelson and T. Holmes. Many excellent receivers are poorly designed for MW DX operation. This article describes one of the most common design faults and how to cure it.
- over long distances. (3) (4) P28 DXING THE 1984 SOLAR ECLIPSE. Gerry R6 ELECTRONIC VERNIER TUNING. R. Moore. Detailed instructions on how to fit a varactor to a MW receiver to provide fine bandspread.
  - Lankford. Very technical discussion on the R9 RECEIVER/ ACCESSORY INTERFACES MADE SIMPLE AND CHEAP. R.J. Edmunds. A discussion of methods of interconnecting DX equipment. (7)
    - DX out of the mud with this form of exalted carrier reception. (1)
    - R11 PRECISION FREQUENCY MEASUREMENT. R. Schatz. How to use the frequency counter. (3)
  - ITY, THE EARTH'S MAGNETIC FIELD, AND R13 SINGLE SIDEBAND RECEIVING ADAPT-ERS. T. Sundstrom. How to sharpen your receiver's IF bandpass using a B&W 370 receiving adapter. (2)
  - between the sun, the geomagnetic field, and R14 REVIEW OF THE AUTEK Q-BOX. T. Sundstrom. Describes the uses of this noise filtering device and its applications in MWDX. (3) R17 BUILD YOUR OWN AUDIO FILTERS. P.

- article on inexpensive homebrew audio filters.
  - R19 A BRIEF REVIEW OF THE AUTEK QF-1 AUDIO FILTER. C. Hutton. A non-technical review of this noise and interference filter. (2)
  - **R20 A FREQUENCY COUNTER FOR RECEIVER** TUNING. R. Foxworth. A very thorough paper on digital readouts and what to look for in various models. Discusses technical theory and provides circuitry to enable the Experimenter to build a counter for use as a "digital dial" (13)
  - R22 THE LYNODYNE CRYSTAL WIRELESS RE-CEIVER. R.W. Tuggle. The concepts of vintage crystal radio are incorporated in these construction plans for a simple receiver, offered as a sporting alternative to modern receivers; yet it has the potential for real DX. (4)
  - R23 DIVERSITY RECEPTION. C. Hutton. Using more than one antenna and receiver in an effort to reduce fading and interference on one frequency. (1)
  - R24 TIPS ON REMOTE TAPING. R. J. Edmunds. This article explains several methods you can use to turn your receiver and recorder on while you are otherwise occupied. (2)
  - R25 STRONG SIGNAL HANDLING. C. Hutton. This technical article explains that sensitivity and selectivity are not the only, nor the most important, considerations in a receiver. (6) R26 RECORDING JACKS FOR RECEIVERS. Dave
  - Arbogast. A simple step-by-step procedure is outlined for adding a tape jack to almost any receiver. (1)
  - R27 TAPE RECORDING HINTS. Mark Connelly. A complete method of radio-to-tape interfacing for portable radios is detailed, complete with schematics and parts lists for construction. (4)
  - R28 CONVERTING THE R-390A POWER SUP-PLY TO SOLID STATE. Charles Taylor. A conversion process to change the older high voltage tubes to solid state diodes is described stepby-step. (7)
  - R29 R-390A ALIGNMENT CHART. Charles Taylor. A step-by-step procedure for aligning the R-390A. (5)
  - R30 MCKAY-DYMEK DP-40 PRESELECTOR. R. Foxworth. A non-technical description of this useful filter accessory plus some modifications to improve its performance. (2) R31 THE SUPER HQ-180. Dallas Lankford. Add
  - a Collins mechanical filter to your "180". While not a "how-to" article, problems and results are discussed. (4)
  - R32 HQ-180A ALIGNMENT WITHOUT A 60 KHZ SOURCE. Dallas Lankford. Although most RF signal generators do not tune below 100 KHz., the HQ-180A's 60 KHz IF can be aligned with a 455 KHz RF source. (4)
  - R33 K-390A/URR PTO ALIGNMENT. Dallas Lankford. The alignment procedure to achieve exact end-point alignment in the R-390A PTO tuning is detailed. See R34, (3)
  - R34 INSIDE THE R390A PTO. Dallas Lankford. An in-depth article that explores the PTO tuning in the R-390A and shows how to improve its performance up to specifications. See R33. (4)

- Sullivan. A technical theory and construction R35 THE R-390A ON LONGWAVE. Craig Healy. A simple and inexpensive method to modify the R-390A effective amplifier for loops to tune below 500 KHz. (2)
  - R36 THE BBA-1 BROADCAST AMPLIFIER. Mark Connelly. A simple and other antenna. Complete construction details. (11)
  - THE GENERIC HQ-180 IF ALIGNMENT. William Marvin. A non-technical procedure
  - that requires no test equipment. (4) 38 VARACTOR DIODE APPLICATIONS FOR DX'ERS. Mark Connelly. Discussion of the Advantages and disadvantages of substituting the varactor diode for the variable capacitor in
  - various DX projects. (10) R39 A"KNOCK-YOUR-SOCKS-OFF" REGEN-ERATIVE PREAMP. Ray Cole. A simple-tobuild preamp that promises to nearly double your receiver's ability to dig weak signals out of the noise. (1)
  - R41 THE DX TIMÉ-MACHINE. Craig Healy. Use your VHS VCR to record all or part of the AM Band for later listening! It may have started as an April Fool's joke, but with the modifications described, it really does work!! (3)
  - 42 NOISE AND SIGNAL LEVELS ON THE BCB. Marc Bergman. How much sensitivity does a receiver need? A practical view of signal level vs. BCB noise levels (15)
  - R43 CERAMIC FILTERS. Marc Bergman. A listing and description of the most commonly available ceramic filters, with data from tests.
  - R44 THE HQ-180 SERIES RECEIVERS SENSITIV-ITY TEST. Dallas Lankford. A simple diagnostic test (2)
  - R46 SURPLUS MECHANICAL FILTERS. Marc priced and available mechanical filters. (3) R47 ADD A TUNING AUTOR TO THE AUTOR Bergman. Test results of several reasonably-
  - ADD A TUNING METER TO YOUR RE-CEIVER. Ray Cole. Shows how to add a meter to your radio for accurate tuning. (1)
  - R50 R71A SPEAKER MODIFICATION. Herman Plew. Throw that sound in the right direction with this modification. No technical knowledge needed! (1)
  - R51 SELECTIVITY VS. FIDELITY FOR THE DO-MESTIC BCB DX'ER. Neal A. Perdue, What is selectivity? What is fidelity? Why do you need both? (1)
  - **R52 YET ANOTHER USE FOR THE AUTEK RE-**SEARCH QF-1A ACTIVE AUDIO FILTER. Neal A. Perdue. Clean up your DX catch tapes, even old records with these techniques. (1)
  - R53 THE RBL AND THE R-392/URR, A SYMBI-OTIC RELATIONSHIP OR NEW USES FOR TEST POINT E203. John H. Rose III. Technical article using these receivers in a series of experiments. (3)
  - R54 COLLINS 51J4 REVIEW. Dallas Lankford. A detailed review (3)
  - R55 COLLINS 5114 TECHNICAL NOTES. Dallas Lankford. A comprehensive technical review. (10)
  - **R56 MORE COLLINS 5114 TECHNICAL NOTES** Dallas Lankford. A continuation of Reprints R 54 and R 55 (4)
  - R57 COLLINS R390A, THE WORLD'S BEST RE-CEIVER? G.S. Mayard. This review gets into the details of another fine DX receiver. Technical. (6)

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- R58 A SIMPLE HIGH-PASS AF FILTER. Gerry RR2 QUALITATIVE REVIEW OF THE YAESU Thomas. Hear those "in-the-mud" stations better on that speaker. (1)
- Peter Kemp . (3) R60 COMMENTS ON G. MAYNARD'S SYN-
- CHRONOUS DETECT. Wayne Heinen. This
- R390A. Wayne Heinen. (1)
- R62 PHASING UNIT DESIGNS: SIMPLE TO COMPLEX. Mark Connelly. (5)
- R63 HQ-180 AGC MOD. Dallas Lankford. AGC overshoot on the HQ-180 can be cured. (1)
- R64 51J/R-388 BAND 1 MOD AND AGC MOD. Dallas Lankford Increases MW sensitivity. (1)
- R66 R390A AGC/BFO MODS. Dallas Lankford. Technical article. (4)
- R67 R390A KHZ FILTERS FOR THE HO-180. Dallas Lankford. How to use Collins DB filters in your HQ-180 receiver. (2)
- **R68 R-390A AUDIO OUTPUT IMPEDANCE** MATCHING. Dallas Lankford. Improve the RR16 NRD515 Review by Bob Foxworth. (7) audio quality of your R-390A. (2)
- R69 COLLINS Ř390A THE ORIGINAL "WORLD'S BEST". Graham Maynard. More tips and modifications. (7)
- R70 NRD-525 AGC Mod. & AGC Mod 2 Dallas Lankford (6)
- R71 DRAKE R-8 MW ATTENUATOR MOD. Dallas Lankford. (1)
- R. Tow (5)
- Ray Cole (1)
- FOR THE R-390A. D. Lankford (7)
- R75 DRAKE R-8 TYPE B SPURS ELIMINATION. RR23 IČOM IC-R70, A QUICK REVIEW, John J. D. Lankford (3)
- R76 DRAKE R-8 INCREASED DYNAMIC RR25 REALISTIC 12-625 Ray Cole, Paul RANGE. D. Lankford (4)
- R77 MODIFICATIONS FOR THE SANGEAN ATS- RR28 REALISTIC DX-440 VS SONY ICF-2010. 803A. G. Maynard (3)
- **R78 IMPROVEMENTS TO REGENERATIVE RE-**CEIVER DESIGN by Mark Connelly (2)
- R79 R-390A WON'T TURN OFF AGAIN (?) by Dallas Lankford (2)
- R80 NRD-525 FILTER MODS by Dallas Lankford
- **R81 DRAKE R-8: ENCODER SHAFT STATIC** ELIMINATION. by Dallas Lankford (1)
- **R82 DRAKE R-8: LOW HEADPHONE VOLUME** for Same! (1)
- R83 RACAL RA6790GM NOISE BLANKER NOTES by Dallas Lankford. (6)
- **R84 DRAKE R8 MORE ON IMPRÓVING IMAGE** REJECTION by Dallas Lankford (5)
- R85 R-390A FILTÉR MOD #3 by Dallas Lankford (3)
  - RECEIVER REVIEWS
- **RR1 RECEIVER COMPARISONS WHAT DO** THEY MEAN? R. J. Edmunds. Certain problems arise when comparing product summaries and receiver reviews. The author explores these comparisons with an emphasis on MW DX. (2)

- FRG-7 RECEIVER. G. Hauser. A non-technical review (3)
- R59 R-5000 MODIFICATIONS. Eric Roskos via RR3 DRAKE R7-A REVISITED. Craig Healy. Reviewed and compared to the R-390A. (2)
  - RR5 BARLOW-WADLEY XCR-30. M.Hardester. (2)
  - reprint should be used in conjunction with re- RR8 McKAY-DYMEK DR-22 J. Clements. A non-
- print R-57. (1) technical pre-production review. (3) R61 ADD A Q-MULTIPLIER & A SB-620 TO THE RR9 ICOM IC-R70 COMMUNICATIONS RE-CEIVER. Vincent Pinto. An in-depth, technical review. (9)
  - RR10 THE GE SUPERADIO-CASSETTE. Michael Sapp. The GE Superadio with an integral tape recorder. (4)
  - RR13 THE SONY SRF-A100. Greg Monti and Albert S. Lobel. Two looks at this AM-stereo
  - portable receiver. (5) RR14 THE ICOM IC-R71A RECEIVER - From the Australian DX CALLING Magazine. User re-
  - view with commentary. (7) RR15 UNIDEN CR-2021 VS. SONY ICF-6500W
  - Gerry Thomas. A Comparison. (3)
  - **RR18 SURVEY OF HAMMARLUND RECEIVERS.** Dallas Lankford. A summary of the full line of
  - Hammarlund receivers suitable for BCB DX; with comparisons, modifications and hints when purchasing one. (7)
  - RR19 KENWOOD R-5000. Don Moman. Includes performance results against the ICOM R71 and SONY ICF-2010. (5)
- R72 MODIFICATIONS FOR THE NRD-525. John RR20 THE GE SUPERADIO-PLUS. Dick Truax. User first impressions and opinions. (1)
- R73 HOTRODDING THE RADIO SHACK 12-625. RR21 THE COLLINS 51J-4 GENERAL COVER-AGE RECEIVER. Fritz Mellberg. (2)
- R74 COLLINS TORSION MECHANICAL FILTER RR22 DENON AM-FM TUNER, MODEL TU-800. Doug Allen. A great radio for FM DX'ing! (2)
  - Rieger Non-technical review. (2)
  - Swearingen, César Objío. (4)
  - Mark Connelly. An MW DX evaluation of these two popular portable receivers. (2)
  - RR29 DRAKE R-8 Reviews by Rob Keeney, John Tow, Dallas Lankford and Ronald Hunsicker. (18)
  - RR30 GE SUPERADIO III, Gerry Thomas (2)
  - RR31 The NRD 525 -A TECHNICAL REVIÉW. D Lankford (7)
  - RR32 NRD-525 FILTER LEAKAGE. Continuation
  - & BROKEN FEET by Dallas Lankford. Cures RR33 RECEIVER SHOWDOWN Comparing ICOM R-9000, R-71A / JRC NRD-525D / Drake
    - RR34 THE DENON TU-680 NAB SUPER RADIO (2)
    - RR35 RA 6790/GM: A REVIEW. Dallas Lankford -
    - 1993 (8) RR36 SONY SRF-42 AM STEREO WALKMAN
    - RR37 PANASONIC RQ-V60 REVIEW. John Hanz.
    - RR38 RAMSEY AM-1 TRANSMITTER KIT RE-
    - **RR39 REVIEW OF THE SANGEAN CC RADIO**

- of RR31 D. Lankford (5)
- R-8 and Collins R-390A by Gerry Thomas (6)
  - REVIEW. Frank Aden, Jr. (1)
- (1)
- VIEW. Christopher Cuomo. (3)
- Paul Swearingen and others (4)

#### Dave Braun dcbraun@delanet.com Target DX 863 Allabands Mill Rd. Camden Wyoming DE 19934-2132

DX'ing 'smart', with shared tips and requests by NRC members

An additional entry into the best place to DX discussion begins the column this week:

John R. Tudenham <jotud@juno.com>: The best to DX would depend on the year and location. My DX started when I was in the air force stationed near Casablanca Morocco in 1954-1955. At that time I knew nothing about the NRC or any other club. At the radar site where I worked I would spin the dials on a Collins 51J receiver when I had spare time. Just listening to the states was a big thrill hearing stations as far west as WBAP and WOAI. John Callarman reminds me of many good times at Larry Godwin's home in Amarillo TX in the late 50s and early 60s. We had many DX sessions through the night and Larry would always open the freezer and get us a TV dinner when we were hungry. DX conditions were usually good in the Texas panhandle and not that many all-nighters in those days. Of course we were all single then so our DX sessions extended well into the night. Moving to Tulsa OK in the late 60s seemed to be the same time that 24 hour stations became common, after moving to Joplin MO the BC band is even more crowded with more stations operating night time with reduced power. Some clears now sound about like regional frequencies use to and some regionals almost like graveyard frequencies. Graveyard DX here is almost impossible as we have locals or semi locals in 1230,1340,1450, and 1490. All 24 hours.

#### And now a news-type item:

Patrick Griffith, NONNK <AM-DXer@webtv.net>: Reuters and other news sources are reporting that Radio Marti boosted it's Florida AM outlet from 50,000 to 100,000 watts on or about 11/08/99. This has apparently resulted in increased jamming on it's shortwave frequencies.

Paul W. Smith, W4KNX <sunray2@gte.net>: Ye Gads. 1180 here at my QTH in Sarasota, is so jammed with the Cuban on 1180 and the back lobe of Radio Marti mixing together. Now it'll be worse, and I'm over 300 miles away from Cuba. I should record 1180 and send it to Fred for inclusion on the DXAS. P.S. I wonder if this will set a precedent, as this will be the only AM station in the US to broadcast with over 50,000 watts. I wonder if others will apply for 100 KW??

Thomas Giella <kn4lf@webty.net>: I doubt it. The FCC has been resisting that for decades. Remember R. Marti is a government station and the government can and will do what it wants!

Ragnar Danneskjold <lwdxer@juno.com>: It's an AU night here. I got them weakly but in the clear. I can't hear KYET which usually comes in with a near local signal and they are in Williams, AZ 250 miles NW. I heard them on a RS 12-655 TRF. I can't wait for AU conditions to go away.

Patrick Griffith, NONNK: Ragnar (and all)...Funny you should mention KYET/1180. They are so loud here in north Denver tonight I thought they might be on day power.

Blake Lawrence <blake@deejay.com>: I suspect the same - KYET noted L&C here in San Francisco as well (11/17). Usually only KERI heard here on 1180.

Jim Wiskow <jcwiskow@win.bright.net>: Hi Friends: I guess I live in the wrong part of the country. I have listened to 1180 for the past week and heard virtually nothing from here. Not even a carrier here in Western Wisconsin. Good DX to the rest of you.

Mark Durenberger <mrkdrnbrgr@state.net>: Count me in! I'm at a latitude on an almost direct line between Rochester and Kalispell, so I'll be able to use a pair of loops and an MFJ Phaser to null out the East-West stuff. Who knows...

Jim Wiskow: Mark: You make me look sick!! I live in Arcadia, a small town here in Western Wisconsin and can hear a bit of skywave now and then on 1180, but nothing that would be worth recording. Of course, I don't have a loop antenna, just the junky ones that come on all of my AM radios. I've even tried a dipole/Inverted v combination that a ham friend built for me and ran it into my Kenwood TS-450 transceiver. Not much luck. I think the meteor showers of last week might have hindered things, but I doubt it.

Fred Vobbe: Tonight, between 20:00 and 20:45ELT, I was listening in the car, and WHAM was getting beat up pretty bad by the Cubans. At times, there was no intelligent copy from Rochester, only Cuba. Then Cuba would go in a deep fade for about 4 minutes, then raise their ugly head for some more QRM. Who would have been doing a talk show on the space program, and China's possible entry into the space program on 990 between 2000-2045PM. Announce was female doing an interview with a man, and he kept speaking in terms of "we" as in United States, so I don't think it was MB sneaking in. Any thoughts?

Now we welcome a new member -

Nate Homier <pipcat@usa.net>: Hi, I'm new. My name is Nate Homier. Is the new solar cycle allowing me to hear Calgary Canada am stations. I'm also hearing Denver KOA. This is during the hours of noon and on. I live in Helena MT. I use the CCradio with only its built in antenna.

Thomas Giella: Hi. Domestic broadcast band skywave signals have to travel through the lowest ionized layer called the D layer, before it can be refracted from the E layer. During the high point of a sunspot cycle like we are now experiencing, the D layer is frequently over-ionized by solar flare activity and is detrimental to DX by absorption. The D layer is present in varying strengths around the clock, despite prevailing and inaccurate information passed around in books for decades. The D layer is least detrimental during winter due to shorter days and also during the bottom of a sunspot cycle, as radiation from the Sun creates it's ionization. The Canadian stations you are hearing during the day are most probably on groundwave, as the Prairies of the High Plains have very good soil conductivity. Though I have heard skywave propagation at local noontime during the winter at the bottom of the sunspot cycle, as the D layer is at it's daytime weakest.

**Bruce Conti** <BACONTI@aol.com>: In response to Nate's question regarding the sunspot cycle, Thomas said that the peak of a sunspot cycle is detrimental to DX. I disagree. Although the auroral conditions due to the peak of a sunspot cycle can shut down northern DX, low angle DX from the south is enhanced considerably. So I guess it depends upon one's perspective. I look forward to auroral conditions providing DX that wouldn't normally be heard.

Thomas Giella: I was speaking in terms of E layer propagation from point A to B being absorbed by the D layer during Auroral conditions for domestic and northern paths. But from your perspective mentioned above, I'm in total agreement with you friend. Thank the propagation God's for auroral propagation, so we can log the Central and South American stations!

Ragnar Danneskjold: Nate, Its winter time and that is one of the things that happen when the static drops, and the cool weather comes. DX gets good. You live in a good place for DXing.

Pete Taylor <taytac@worldnet.att.net>: Hello, Nate Homier, and welcome aboard. During the winter I get Calgary on 1060 and 1140 at noon while driving around in the car; at home in NE Tacoma, WA, I just get 1140 (too close to KBLE-1050 to get 1060). This is fairly normal. I also get KFBK-1530 Sacramento all day. When it's auroral, you should notice the biggest difference at night. Yes, you will notice more Mexicans, but look for Southern CA, NM, AZ and so on, too. I can't tell how "new" you are, but check out the X-band while you can. You can still get them coast-to-coast now, but it's filling up rapidly. Good luck, have fun and be sure to send your loggings in to DX News. As long as I'm here, a note for Fred the Vobster: I would love to log Florida on 1180 but KLAY and KOFI tie up the channel very effectively.

Ragnar Danneskjold: "Thank the propagation God's for auroral propagation, so we can log the Central and South American stations!" Ecch, more SS stations. No mas mi hermano. I am Spanished out here in Arizona. Bring on the Canadians.

Nate Homier: Thanks for the feedback people. I would like to send in my reception reports, do I do that by snail mail or e-mail. Any particular format. Around 1 am Thursday morning, the 18th, I logged WLS 890 Chicago as well as 710? Chicago and 720 WGN? and 780 WBBM. I'm at my public library right now and don't have access to station records. Thanks.

Ragnar Danneskjold: It's up to you, but I send my reports to this list and to Bill Hale at DDXD West. Are you east coast or west coast? I send them to the list so other DXers can see what is happening more quickly. I also am on the DX tip list for that reason as well. Use this (format-ed.): [All times for domestic DX are ET]

1710 KQXX TX, Brownsville 11/18 2330 with EE ID and into Tejano and Norteña music. Ads were both in EE and SS. Lost to KTBK at 2346. I hope you decide to put logs on the list as well as send them to theappropriate editor.

Bill Hale cphantom2@eaze.net>: Remember, in order for your DX loggings to appear in DX News, you MUST BE a member of the National Radio Club.

Nate Homier: Does any one know about any videos that show how to make a bcb loop antenna. Or maybe photo's of a loop. I always have trouble following drawings. I do much better with TV or photo's. My radios are GE super 3 and CCradio. Both come with screw terminals. Can you hook up a loop using screw terminals. Does the NRC have any titles for loop antennas. I live in Helena Montana.

John D. Bowker: There is a new passive loop on the market at Radio Shack that you can connect to your radios. It costs \$30; Catalog Number 15-1853. It is no Kiwa amplified loop, but I find it adds a lot of fun and boost to my dx'ing .. and it's as quick to get as a trip to Radio Shack!

Tom Dimeo <tjd@ezonline.com>: Does this loop work as well as the Select-A-Tenna?

Bill Hale: Nate, Go to: http://WWW.NRCDXAS.ORG/ and click on Publications to get an idea of the cornucopia of stuff the NRC has to offer.

John D. Bowker: Tom — In some ways I prefer the Radio Shack loop. It is one inch smaller in diameter so its capture area is not as great .. I am assuming that this one AND the Selec-A-Tenna are both purely air core. But, quite frankly, when it comes to DXing, a dB here or there is really not too material. The advantage of the Radio Shack loop is its stability. It is a tad heavier with a flat base and the tuning (capacitor) is in the base rather than in the middle. With the Selec-A-Tenna, you tune to the desired setting, and in the slightest windy condition, it sways a bit. The Radio Shack loop doesn't move. The Radio Shack loop is also, what, \$20 cheaper now?? Another feature of the Radio Shack loop is that it comes with a cord that can be used to connect to AM antenna terminals on radios with that feature. The \$49 Selec-A-Tenna does not provide for such connection. So I'd say there's no comparison! OH! Keep your hands away from the circular part of the Radio Shack loop .. your hands will seriously the inner opening diameter is 7.5 inches. I do not recommend doing this since the presence of the radio will lower the "Q" (selectivity) of the loop, and the loop will have a tendency to pull in the strongest station in the area rather than the one your dial is tuned to. I was surprised the first time I used it back in September to find a strong signal at 650 here near Tampa. It turned out to be WSAA-620! So I'd suggest keeping the loop about 6-8 inches away from the loopstick of the radio you're listening to.

Wayne Heinen: Hi For those who want to see a NRC air core loop made from the original Gordon Nelson Plans go to my site below and go to the NOPOH pages. You find a picture of mine. It's unamplified and If you live in an urban or suburban RF environment you probably won't need an amplifier. The plans are in National Radio Club ARM1 (check the books section of the Clubs web site for details). It's an oldie designed in 1964 I believe but it's fairly easy to build. I used a KIWA and that is an excellent loop, the trade off is the \$\$\$ and building it yourself... Have fun.

The following was in response to log by Ragnar of WTIR-1680:

John D. Bowker <wa2wen@juno.com>: Ragnar .. hello! I live just south of Tampa, Florida. Our new 1680 WTIR doesn't make it here during the day (we're about 80 miles from Winter Garden) and barely overcomes noise at night when they drop back to 1,000 Watts. That is easily explained of course; we get Miami (300 miles) better than Winter Garden. But it is interesting to note that Florida is in the process of clearing that programming on 19 stations here. No word yet about which ones or even if they will be brand new stations, or if that's just a hollow claim on WTIR. If you are a subscriber to the DX Audio Service you'll hear a close up of WTIR on the December edition .. along with a bunch of other x-banders folks sent in for that program. I used to be annoyed that the TIS station at Clearwater, FL airport (1060 kHz) came in so well here some 35 miles away. But now that you can check traffic conditions on Interstate 4 every ten minutes in Arizona? Boy, if that isn't a good use of the public airwaves! (I-4 runs from Tampa to Daytona Beach.)

Thomas Giella: Interesting that John can't hear WTIR. Here in Plant City 23 miles west of downtown Tampa, the station is full quieting day and night on my 2 foot box loop (+20 over S9), 264 long L antenna up at 64 feet (+40 over S9) and my 58.5 foot TGS antenna which end to end runs towards the NE (+30 over S9). WTIR is 56 miles to my NE (48 degrees) and very weak on my 58.5 foot TGS antenna which end to end runs SW (S2).

John D Bowker: Ah Ha! Tom hears WTIR in Plant City (same county that we're in, by the way) and we really don't hear it well enough to actually listen to .. maybe the difference is that I'm using an automobile radio .. great radio in this Buick .. but a lousy antenna. Still, it's what I'd use if I really cared about I-4 traffic! I'll just call Ragnar on my cell phone if I need an update on conditions since WTIR comes into Arizona so well .. and I usually drive at night! :-)

Ragnar Danneskjold: Howdy John. Such is life and propagational effects. I probably live somewhere near the first hop of the signal from WTIR. They had a very nice signal during their full power testing the other day. I would have never heard them had I not eaten a large amount of Kung Pao beef at the local Chinese restaurant. As you may know Kung Pao is full of hot fiery peppers and I added even more to it because I really like hot food. The unusual effect, which is most likely caused by not being as young as I once was, awakened me doing the fire dance in my innards. As usual, I took the chance to put on the cans and spin the dial. I was greeted with a sort of DX test. Life can almost be interesting sometimes. "But it is interesting to note that Florida is in the process of clearing that programming on 19 stations here. No word yet about which ones or even if they will be brand new stations, or if that's just a hollow claim on WTIR." I have heard this rumor on several different lists. Time will tell. "If you are a subscriber to the DX Audio Service you'll hear a close up of WTIR on the December edition .. along with a bunch of other x-banders folks sent in for that program." Yes, I am a member of DXAS and DXN sides of the NRC. I wonder if you got all the stations. I would probably send in things but I live very near my friend Skip Dabelstein and he sends in things all the time. I would only be sending in duplicates of what he sends. "I used to be annoyed that the TIS station at Clearwater, FL airport (1060 kHz) came in so well here some 35 miles away. But now that you can check traffic conditions on Interstate 4 every ten minutes in Arizona? Boy, if

that isn't a good use of the public airwaves!" Don't get me going on this topic. We could be here a long time. "(I-4 runs from Tampa to Daytona Beach.)" I traveled it often when I was stationed in Orlando while in the Navy. My concern about traffic on Interstate 4 has diminished considerably since I moved to Arizona. Let me know if there are any ID's you need that Skip hasn't sent in from here. I will see what I can do for you. I travel the state quite a bit and could probably get you something he hasn't sent in.

Ragnar Danneskjold: "Still, it's what I'd use if I really cared about I-4 traffic! I'll just call Ragnar on my cell phone if I need an update on conditions since WTIR comes into Arizona so well.. and I usually drive at night! :-)" Just keep it before 10PM AZ time.

Thomas Giella: "Such is life and propagational effects. I probably live somewhere near the first hop of the signal from WTIR." To be annoyingly and technically correct and precise, the maximum single hop distance for a broadcast band signal off of the E layer is approximately 900-1150 miles, so Mesa, AZ. is at/near the second hop. I think Ragnar is using cacti as ground rods to overcome that poor desert soil conductivity, yuca yuca (laugh)!

Ragnar Danneskjold: Well, you learn something every day around this place. Your sense of humor is similar to my own dear wife's. She and her sense of humor is the reason I have few hairs on the top of my noggin. I am pretty amazed that I get to hear I-4 on the fours out here. I am interested in seeing if I can pull in WMIB and their test this evening.

This came about as a result of another of Ragnar's logs:

David Hogg <NEMCO99@aol.com>: Ragnar — You mentioned that you logged KTNN —Window Rock , AZ. Have you tried to get verification from them??? and did they respond?? I think this station is sponsored by The Navajo Nation and I sent them a tape and written report last year with no response.... I just wondered if you have any confirmation from them?? The station is interesting in that they direct their programming toward the Navajo Nation... if I understand correctly. What do you know about KTNN???

Ragnar Danneskjold: Sure did. Never tried for a verie. I just tape what I hear. I have it on hand for proof. I do know that if you go to the station they are very nice there and will treat you very well. The station is indeed part of the Navajo National government. I don't know why they did not respond, but I can tell you that the people I met there are very nice to visitors and I know other people who went to the station will attest to the same. About 40% of the programming is in Navajo. The inclusion of Phoenix Suns basketball in the Dineh [Navajo] language is new. They have had the Suns since they started but this year is the first year for Navajo [Dineh] language announcers. The woman who does the games has been on KTNN for quite a while. I enjoy waking up and they have their Navajo religious chants on in the morning. The Navajo call themselves the Dineh People. I believe the name Navajo came from what the Apaches called them. There is an Apache station on 1330 out here as well. The last time I was close enough they were in AM stereo. I do know their only competition Is KGAK in Gallup, NM also in the Navajo National lands. KGAK announces "All Navajo, All the time" in its required EE ToH ID. That is the ONLY EE that is on that station. I believe KTNN is the only 50 kW night time station in Arizona.

Blake Lawrence <blake@deejay.com>: Er, if KMIK-1580 isn't, they sure sound like it here in Northern California. Tight pattern or no.

**Bill Hale:** 1580 is, indeed, 50 kW at night. Their pattern shoots 400,000 Watts ERP at 238 degrees from Tempe. Which, I imagine, makes reception a snap in Hawaii. :-)

Ragnar Danneskjold: Duh! I forgot about them and I only live 2 miles away ...

Doug Smith <w9wi@bellsouth.net>: On their auction site, the FCC has announced a closed broadcast auction for AM facilities changes. This involves five stations on 1190 which have filed for technical changes made possible by WOWO's reduction in night power. The stations in question are:

KPHN Kansas City, MO (application for 4200/4000 U2?)

WNWC Sun Prairie, WI

KEX Portland, OR

- KDAO Marshalltown, IA
- KKOJ Jackson, MN

Since WOWO's daytime facilities haven't changed, I would presume the other four changes involve only changes in nighttime facilities. KEX is the only station of the batch that \*has\* night authorization right now - so the other three have proposed to add night facilities. At least some of these applications are mutually exclusive. I guess whoever wins the auction gets the right to implement what they applied for, and then everybody else can try again with whatever remains possible after the first winner gets their way... (seems to me it's probably a safe bet KEX will win Round 1..)

Russ Edmunds: Following up on my prior post on this subject, I wonder how changes such as these

(and others, no doubt, to follow) should be categorized? Are there any differences in the facilities granted by CRTC to the new occupants of 690 & 940 from what the prior occupants had? Will the new occupants actually use the same equipment? If the answers are no & yes, then I guess these could be construed as simple

call changes. If the answer to the first is yes, then the second has to be no, and then these are either new stations or frequency changes, which to me amount to the same thing. By the way, I \*don't\* either want or intend to instigate a general discussion about how different people count or don't count call changes! And finally, will the facilities vacated by the new occupants of 690 & 940 'go away' or be reallocated? This has little or no bearing on the prior discussion, but is something that I, and probably others, don't know now, but would want to. Thanks for any input on this!

Pete Taylor: 940 represents a new frequency and a new set of call letters. Also, while I think we are all accustomed to accepting the old CBM as 50kw U-1, there were some sources which showed the new facility as U-4. That seems unlikely.

Daniel B. Cooley <danbcooley@worldnet.att.net>: Jerry Starr's latest AM-Switch lists CKXM as switch to FM - hasn't happened yet. Question: With the many Canadian AMs switching to FM, what becomes of the AM spot?

**Russ Edmunds**: In a number of cases, new applicants have appeared, and I'm not sure, but I think a few may have been granted. The FCC database still shows those few I spot-checked even though they have moved. It also shows both CBM and CKVL allocated for 940 and CBF and CIQC as allocated for 690. CBL remains on the FCC database for 740. I expect this to remain the case until Canada officially vacates the frequencies. Of course, in the case of clear channels such as the 3 noted above, NARBA treaties protect those frequencies indefinitely even if no re-allocations are made. The treaty would have to be re-opened in order to change that.

**Russ Edmunds:** Picking up on some comments in the latest DXN, I have used car radios heavily for my AM DX'ing for much of my DX career, including probably 75% of my loggings in the past 10 years. I've used a couple of resurrected old tube-types from the 1940's or early '50's in the house with either a battery or power supply, and I've used all sorts of transistor car radios over the years. In fact, in my shack right now, powered by an old VHF ham power supply, is the analog AM-FM radio from a departed '83 Nissan along with a digital AM-FM of recent vintage which is an aftermarket unit. Although I use both almost exclusively for FM, I have used them to monitor channels on AM. I have yet to hook either up to the 2' barefoot loop, but that'll come over

the winter. Owing to local FM signals slipping through the power lines here, I've done all of my FM DX from car radios, and mostly when they're in the cars, hi. I've also used car radios exclusively for FM DX at several other locations where either business, vacation or other circumstances have placed me repeatedly for a time. Because they're designed to handle somewhat challenging reception conditions, they're better than many portables and certainly better than many of today's boom boxes, console radios and table radios for both AM and FM. And I am continually surprised by some of the things I hear on them, even though I should be used to it by now.

Ragnar Danneskjold: I have 4 car radios. Two AM stereo units and two mono units. One AMFM and one as God intended radio to be heard, AM only. What are you using for an antenna? I power mine from a car battery. I charge it about once a week. Sometimes I power them with two batteries taken from a lot of stellite batteries that didn't pass. Generally the radios are pretty good on AM. I do think they are VERY good on FM. They sound good too. I have mine rigged up to use headphones with them. They are great units. I don't DX with them too much, but they do hold their own for DX. If you wanted to start AM DXing and didn't have much cash, a trip to the junkyard to pick up a car radio would be a real good start.

Ragnar Danneskjold: Guys, I have been looking for an answer to this one for a long time. I tried AMFMTVDX a long while back. I have a general idea of when this was made but would like to nail it down. I have a Zenith Royal 94 AM/FM/FMAFC/SW 5 band portable receiver. I don't

know how many transistors it has but it has about 15-20. They are interesting in that the little metal can top hat transistors are all socketed. The set is chassis built and there are no circuit cards. It runs on 12VDC from "D" cells or an outboard power source via a 3/32" jack. It covers 88 -108 mc FM and 540 - 1600 kc AM then 1.6 - 18.5 mc. This unit appears to be brushed monel with a blue gray extruded metal grill. It has a huge antenna that is mounted inside the set horizontally and it comes out the left side as you are looking at it. The big antenna will swivel once out of its mounting 360 degrees. All the band knobs, the tone knob, the volume knob and the tuning knob are in the front and the tuning knob is about 2" in diameter. Enough of the description. Here's the real data...

Zenith Model Royal 94

Chassis: 11NT4428

8 "D" batteries Sams TSM-84

All this is placed on a sticker on the bottom. I just got through aligning this old guy and the freq is set dead on with the dial readings. Everything is peaked and ready to run. It is a pretty good old unit. I need to know two things. 1. When was this beast built?

2. The dial string looks tired. Where can I get more dial string? Yeah, I got it at the junk store for \$7.

## *Geomagnetic Summary*

Phil Bytheway philip\_bytheway@mukilteo.hac.com 9705 Mary NW Seattle, WA 98117-2334

Higb "A" values indicate possible auroral conditions

#### Geomagnetic Summary September 23 1999 through November 5 1999

	GEO - Geomagnetic activity maf - major flare				pca - polar cap absorption SA - Solar Activity						
		mas - r			spe - satellite pro						
			ninor si		ss - severe storm	ion event					
		11115 - 11	innor s	lorm	35 - 3CVCIC 310111						
<u>Date</u>	<u>FLUX</u>	A	K	<u>SA</u>	GEO	<u>OTHER</u>					
9/23	137	20	1	very low	quiet-mas	-					
24	132	4	1	very low	quiet	-					
25	125	1	1	low	quiet	-					
26	123	13	5	very low	quiet-mis	-					
27	124	31	4	low	unsettled-mis	mis 2250	)				
28	126	20	4	low	quiet-active	-					
29	125	22	5	low	quiet-unsettled	-					
9/30	125	24	3	low	quiet-mis	-					
10/1	122	9	2	low	quiet-active	-					
2	126	13	1	low	quiet-active	-					
3	135	8	2	low	quiet-unsettled	-					
4	144	14	3	low	quiet-active	-					
5	146	15	4	low	quiet-active	-					
6	134	7	2	low	quiet-unsettled	-					
7	129	7	2	low	quiet-unsettled	-					
8	z	z	Z	z	Z	-					
9	143	5	2	low	quiet	-					
10	161	23	4	low	quiet-mis	-					
11	167	20	5	low	quiet-mis	-					
12	184	27	4	low	unsettled-mis	-					
13	191	22	3	low	unsettled-mis						
14	200	20	5	high	quiet-mis	maf 090	0				
15	198	25	4	low	quiet-mis	-					
16	189	22	3	low	quiet-active	-					
17	178	23	0	low	quiet-mis	-					
18	173	7	2	low	quiet-unsettled	-					
19	170	7	0	low	quiet-unsettled	-					
20	159	4	3	moderate	quiet-unsettled	-					
21	159	15	6	low	quiet-mas	-	0				
22	160	54	2	low	quiet-sev	mas 120					
23	165	19	3	low	quiet-active	mas end 0	500				
24	159	21	3	low	unsettled-mis	-					
25	179	17	1	moderate	quiet-active	-					
26	189	11	2	moderate	quiet-unsettled	•					
27	197	15	2	moderate	quiet-active	-					
28	184	18	2	low	quiet-mis	-					
29	180	12	1	low	quiet-unsettled	-					
30	169	6	1	low	quiet-unsettled	-					
10/31	160	10	2	low	quiet-unsettled	~					
11/1	151	11	2	low	quiet-active	-					
2	143	7	3	low	quiet-unsettled	-					
3	143	5	2	low	quiet	W.BCO	A				
4	148	5	2	low	quiet	WARCO	Crawford County's total radio				
5	161	5	2	moderate	quiet-unsettled	Tana Sal Millio Sitia Projekt	403 E. Renautor 21., Butyne, Chie 44620-0785 FO Sex 528, Gelus, Chie 4852				

## Graveyard Achievements

Bill Hale phantom2@eaze.aet 6124 Roaring Springs Drive North Richland Hills, TX 76180-5552

Distance records for stations logged on graveyard frequencies

## DEN ART

#### Logged from Jan 1, 1960 to Present

#### Date of Last Update: September 29, 1999 \* indicates record held by DXer from North America

Station		City	DXer	DV Location	
WAUD	AL	Auburn	Ernie Wesolowski	<u>DX Location</u> Omaha, NE	<u>Miles</u> 836
WIBB	AL	Haleyville	Steve Francis	Alcoa, TN	232
WBHP	AL	Huntsville	J.W. Bay, Jr.	Drexel Hill, PA	232 718
WHOD	AL	Jackson	Niel Wolfish	Toronto, ON	957
WNUZ	AL	Talladega	Steve Francis	Alcoa	193
WTBC	AL	Tuscaloosa	Dave Whatmough	Hamilton, ON	805
KIFW	AK	Sitka	Jack Woods	Douglas, AK	805 91
KVAK	AK	Valdez	Esa Hänninen	Lemmenjoki, Finland	3453
KSUN	AZ	Bisbee	Ernie Wesolowski	Omaha	
KAAA	AZ	Kingman	John Johnson	Sheridan, WY	1022 761
KAMJ	AZ	Phoenix	Jeff Tynan	Parker, CO	586
KATO	AZ	Safford	Ernie Wesolowski	Omaha	
KINO	AZ	Winslow	Phil Bytheway		950
KFPW	AR	Ft. Smith	Jerry Starr	Seattle, WA	1055
KBTM	AR	Ionesboro	Bruce Reynolds	Youngstown, OH	855
KGEO	CA	Bakersfield	Tim Hall	Warrensburg, MO	263
KSZL	CA	Barstow	Bruce Reynolds	Chula Vista, CA	217
KIBS	CA	Bishop		San Jose, CA	318
KXO	CA	El Centro	Nancy Johnson Carl Dabelstein	Aberdeen, WA	722
KDAC	CA	Fort Bragg	Carl Dabelstein	Tucson, AZ	271
none.	CA	Fort Bragg	Nancy Johnson	Lihue, Hawaii	2414
KGFJ	CA	Los Angeles	Bruce Reynolds	Aberdeen	*522
KPRL	CA	Paso Robles	Frank Merrill	San Jose	305
KRDG	CA	Redding		Nenana, AK	2321
KWG	CA	Stockton	Phil Bytheway	Seattle	487
KEXO	co	Grand Junction	Phil Bytheway Shawn Axel <del>r</del> od	Seattle	669
KBRR	co	Leadville	Mike Hardester	Winnipeg, MB	921
KDZA	co	Pueblo		San Marcos, CA	738
KULA	co	rueolo	Niel Wolfish	Winnipeg, MB	871
KBCR	со	Steamhoat Serie on	Shawn Axelrod	Winnipeg	(Tie) 871
KSTC	co	Steamboat Springs	Shawn Axelrod	Winnipeg	846
KGEK	co	Sterling	Mike Hawk	Omaha, NE	371
WINF	СТ	Manakastan	Ernie Wesolowski	Omaha	(Tie) 371
WGGG	FL	Manchester	Jeff Falconer	Clinton, ON	473
WONN	FL FL	Gainesville	Frank Merrill	Milan, MI	861
WMAF	FL	Lakeland	Don Trelford	Runaway Bay, Jamaica	728
WSBB	FL	Madison	Steve Francis	Alcoa	356
WNVY	FL	New Smyrna Beach	Jeff Falconer	Clinton	1009
WCNH	FL	Pensacola	Ron Schiller	Lighthouse Point, FL	519
	FL	Quincy West Palas Palas Pa	Jerry Starr	Youngstown	760
WJNO	гL	West Palm Beach	UK DXPedition	Sheigra, Scotland	4121
WOR	<b>C</b> •	• •	Marc DeLorenzo	Hyannis, MA	*1172
WCKJ	GA	Augusta	Dave Braun	Falls Church, VA	462
WBLJ	GA	Dalton	Dave Whatmough	Hamilton, ON	648
WXLI	GA	Dublin	Jeff Falconer	Clinton	771
WFOM	GA	Marietta	J.W. Bay, Jr.	Drexel Hill	657
WSOK	GA	Savannah	Jeff Falconer	Clinton	799
WAYX	GA	Waycross	Harry Hayes	Thornhurst, PA	784
KBAR	ID	Burley	Nancy Johnson	Aberdeen	578

						1						20
38 KOPT	ID	Crean goarilla	Ess Lläppinse	Lommonialii	40777	i i	KFUN	NM	Las Vegas	MB DXPedition &	Valhalla, MB	<b>39</b> 1120
KORT	ID	Grangeville	Esa Hänninen Shawn Axelrod	Lemmenjoki Swan River, MB	4277 *796		KRSY	NM	Roswell	Frank Merrill	Macomb, IL	912
KRXK	ID	Rexburg	Esa Hänninen	Lemmenjoki	4360		WECK	NY	Cheektowaga	Don Lynch	Boston, MA	391
RIVIK	ID.	Revolute	Shawn Axelrod	Swan River	+749		WENY	NY	Elmira	Bill Dvorak	Madison	644
WJBC	IL	Bloomington	Shawn Axelrod	Winnipeg	750		WBZA	NY	Glens Falls	Morris Sorensen	Milton, ON	316
WMRZ	ĩL	Moline	Esa Hänninen	Lemmenjoki	4165		WIGS	NY	Gouverneur	J.W. Bay, Jr.	Drexel Hill	303
			Shawn Axelrod	Winnipeg	*650		WHUC	NY	Hudson	Marc DeLorenzo	Hyannis	184
WHCO	IL	Sparta	Shawn Axelrod	Winnipeg	879		WLFH	NY	Little Falls	Charles Reh	Leamington	398
WJOB	IN	Hammond	Niel Wolfish	Winnipeg	773		WFAS	NY	White Plains	Jeff Falconer	Clinton	433
WSAL	IN	Logansport	Niel Wolfish	Winnipeg	855		WSKY	NC	Asheville	Steve Francis	Alcoa	84
WTCJ	IN	Tell City	Steve Kennedy	Coal Township, PA	583		WFAI	NC	Fayetteville	Jeff Falconer	Clinton	608
WBOW	IN	Terre Haute	Shawn Axelrod	Winnipeg	879		WMFR	NC	High Point	J. W. Bay, Jr.	Drexel Hill	377
KFJB	IA	Marshalltown	Ron Schiller	Monmouth Beach, NJ	994		WISP WNNC	NC NC	Kinston	J. W. Bay, Jr.	Drexel Hill	348
WHIR	KY	Danville	Ron Bailey	Shelby, NC	245		WCBT	NC	Newton Roanoke Rapids	Karl Jeter	Stone Mountain, GA	210
WHOP	KY	Hopkinsville	Steve Kennedy	Coal Township, PA	652		KDIX	ND	Dickinson	Shawn Axelrod Olle Alm	Winnipeg	1337
WANO	KY	Pineville	Steve Kennedy	Coal Township	479		RDDA	ND	DICKIISOII	Charles Reh	Abisko, Sweden Leamington	3935
KLIC	LA	Monroe	Frank Merrill	Milan	803	1	WUBE	OH	Cincinnati	Russ Edmunds	Glen Rock, NJ	*1048
WBOK	LA	New Orleans	James Dale	Rosemount, MN	1034		WCOL	OH	Columbus	Shawn Axelrod	Winnipeg	564 964
KSLO	LA	Opelousas	Steve Ponder	Bossier City, LA	168		WIRO	OH	Ironton	Shawn Axelrod	Winnipeg	1050
WQDY	ME	Calais	Morris Sorensen	Milton, ON	600 380		WTOL	OH	Toledo	Ernie Wesolowski	Omaha	651
WBME	ME	Belfast	Don Voorhies Ron Schiller	Oswego, NY Monmouth Beach	(Tie) 380	1	KADA	OK	Ada	Charles Reh	Leamington	911
WSJR	ME	Madawaska	Andy Rugg	Montreal, QU	283	L	WBBZ	OK	Ponca City	Shawn Axelrod	Winnipeg	897
WITH	MD	Baltimore	Steve Francis	Alcoa	464		KDOV	OR	Ashland	Pete Taylor	San Francisco, CA	308
WALI	MD	Cumberland	Jeff Falconer	Clinton	310		KVAS	OR	Astoria	Olle Alm	Abisko	4297
WMNB	MA	North Adams	Jim Renfrew	Rochester, NY	227					Shawn Axelrod	Vancouver, BC	*216
WESX	MA	Salem	NF DXpedition #5	Cappahayden, NF	928					Tim Hall	Vancouver, BC	(Tie) *216
WNEB	MA	Worcester	Wayne Heinen	Orchard Park, NY	355		KZZR	OR	Burns	Olle Alm	Abisko	4410
WCUZ	MI	Grand Rapids	Niel Wolfish	Winnipeg	716			~ ~		Bruce Reynolds	San Jose	*455
		•	Shawn Axelrod	Winnipeg	(Tie) 716		KOOS	OR	Coos Bay	Bruce Reynolds	San Jose	434
WGRY	MI	Grayling	Don Voorhies	Oswego	415	1	KRDR	OR	G <b>resha</b> m	Esa Hänninen	Lemmenjoki	4376
WIKB	MI	Iron River	Shawn Axelrod	Arnes, MB	496		KMUZ	OB	T .1.	Tim Hall	Manning Park Resort, BC*	
WMPC	MI	Lapeer	Bill Dvorak	Madison, WI	310	1	KQIK	OR	Lakeview	Esa Hänninen	Lemmenjoki	4576
WSOO	MI	Sault Ste. Marie	Morris Sorensen	Leaf Rapids, MB	992		KSJK	OR	Talent	Wayne Heinen	Colorado Springs, CO	*850
WSTR	MI	Sturgis	Joe Fela	Newark, NJ	588		KMUZ	OR	Toledo	Pete Taylor Bruce Pormoldo	Tacoma, WA	352
WKLK	MN	Cloquet	Bruce Reynolds	Warrensburg	556		WBVP	PA	Beaver Falls	Bruce Reynolds Bruce Reynolds	San Jose	517
KGHS	MN	International Falls	Ernie Wesolowski	Omaha	526		WEEX	PA	Easton	Denis Picard	Warrensburg Trois-Rivieres-Ouest, QU	727 411
KYSM	MN	Mankato	Morris Sorensen	Leaf Rapids	740		<b>WKBO</b>	PA	Harrisburg	Frank Merrill	Milan	379
KMRS	MN	Morris Thist Birton Falls	John Wilkins	Wheat Ridge, CO	618		WCRO	PA	Johnstown	Andy Rugg	Montreal	447
KTRF KWNO	MN MN	Thief River Falls Winona	Morris Sorensen	Leaf Rapids Coal Township	980 804		WBPZ	PA	Lock Haven	Russ Edmunds	Little Silver, NJ	188
WCMA	MS	Corinth	Steve Kennedy Joe Ku <b>r</b> eth	Uniontown, MD	706		WTIV	PA	Titusville	Steve Francis	Alcoa	465
WHSY	MS	Hattiesburg	Charles Reh	Learnington, ON	826		WERI	RI	Westerly	Denis Picard	Trois-Rivieres-Ouest	346
WSSO	MS	Starkville	Charles Reh	Leamington	683		WAIM	SC	Anderson	Jeff Falconer	Clinton	631
KODE	MO	Joplin	Shawn Axelrod	Winnipeg	880		WXAP	SC	Columbia	Charles Reh	Leamington	561
KLWT	MO	Lebanon	Carl Dabelstein	Lincoln, NE	309		WOLS	SC	Florence	Charles Reh	Leamington	560
			Bob McCoy	Lincoln	(Tie) 309	1	KISD	SD	Sioux Falls	John Johnson	Sheridan	510
KWIX	MO	Moberly	Esa Hänninen	Lemmenjoki	4336		WKCE	TN	Harriman	Steve Francis	Alcoa	52
		•	Shawn Axelrod	Winnipeg	*747		WMLR	TN	Hohenwald	Robert Kramer	Chicago	451
KOBB	MT	Bozeman	Shawn Axelrod	Winnipeg	703		WAKI	TN	McMinnville	Russ Edmunds	Glen Rock	682
KHDN	MT	Hardin	Frank Merrill	Milan	1213		KSIX KLKE	TX TX	Corpus Christi	Ernie Wesolowski	Omaha	932
KXLO	MT	Lewistown	John Johnson	Sheridan	197		KNUZ	TX	Del Rio Houston	Jim Boehm	San Antonio, TX	148
KLCB	MT	Libby	Nancy Johnson	Aberdeen	396		KERV	TX	Kerrville	Frank Merrill	Milan	1072
KTNC	NE	Falls City	Robert Kramer	Chicago, IL	423		KLVT	TX	Levelland	Bob McCoy Jim Boehm	Lincoln	757
KHAS	NE	Hastings	Frank Merrill	Milan	771	1	KEEE	TX	Nacogdoches	Frank Merrill	San Antonio	367
KELY	NV	Ely	Tim Hall	Chula Vista	475	1	KOZA	TX	Odessa	Karl Jeter	Milan Stone Mountain	945
KFUN	NV	Las Vegas	Shawn Axelrod	Valhalla Beach, MB	1370	1	KGRO	TX	Pampa	Ernie Wesolowski		1066
KLBN	NV	Reno	Nancy Johnson	Aberdeen	556	1	KSEY	TX	Sevmour	Shawn Axelrod	Omaha Winnipeg	471
WMOU	NH	Berlin	Ron Musco	Windsor, CT	209	1	KSST	TX	Sulphur Springs	Bruce Reynolds	Warrensburg	1117
WTSV	NH	Claremont	Steve Kennedy	Coal Township	278	1	KMOR	UT	Murray	Shawn Axelrod	Winnipeg	404
WCMC	NJ	Wildwood	Mark Hattam	Sheigra, Scotland	3270	1	KOAL	UT	Price	Phil Bytheway	Seattle	948 801
KALC	ND4	Alamoreda	Jeff Falconer	Clinton	*473	1	WJOY	VT	Burlington	Jean Burnell	St. John's, NF	801 1004
KALG KYVA	NM NM	Alamogordo Callup	Ernie Wesolowski Tim Hall	Omaha Chula Vista	791 509	1	WBBI	VA	Abingdon	Steve Kennedy	Coal Township	407
					. 117				··· <b>·</b>			

40					
WODI	VA	Brookneal	Jerry Starr	Youngstown	295
WXCF	VA	Clifton Forge	Russ Edmunds	Blue Bell, PA	292
WFVA	VA	Fredericksburg	Andy Rugg	Montreal	537
WNOR	VA	Norfolk	Andy Rugg	Montreal	615
WAMM	VA	Woodstock	Steve Francis	Alcoa	367
KOZI	WA	Chelan	Tim Hall	Radium Hot Springs, BC	261
KWYZ	WA	Everett	Esa Hänninen	Lemmenjoki	4268
KIII Z		Breiter	Shawn Axelrod	Swan River	*968
KRSS	WA	Spokane	Olle Alm	Abisko, Sweden	4114
Nues		openane	John Johnson	Billings	*443
KREW	WA	Sunnyside	Phil Bytheway	Seattle	139
WLOG	wv	Logan	Don Voorhies	Oswego	390
WKYG	wv	Parkersburg	Russ Edmunds	Little Silver	406
WHBY	WI	Appleton	Ice Fela	Newark	765
WCLO	WI	Janesville	Ron Schiller	Monmouth Beach	796
WXCO	WI	Wausau	Shawn Axelrod	Winnipeg	480
KVOC	WY	Casper	Olle Alm	Abisko	4258
		1	Frank Merrill	Nanena	*2228
WNIK	PR	Arecibo	Ron Schiller	Monmouth Beach	1574
CBPG	AB	Banff	Tim Hall	Banff, AB	4
CJOK	AB	Ft. McMurray	Esa Hänninen	Lemmenjoki	3509
0,011			Phil Bytheway	Seattle	•781
CIYR	AB	Hinton	Tim Hall	Jasper, AB	42
CILW	AB	Wainwright	Shawn Axelrod	Winnipeg	630
CKOR	BC	Castlegar	Phil Bytheway	Seattle	251
CINL	BC	Merritt	Tim Hall	Glacier National Park, MT	355
CFBV	BC	Smithers	Pete Taylor	San Francisco, CA	1200
CHFC	MB	Churchill	Olle Alm	Karesuando, Sweden	3093
			Shawn Axelrod	Winnipeg	*641
CFLN	NF	Goose Bay	Esa Hänninen	Lemmenjoki	2799
CFGN	NF	Port-aux-Basques	Steve Whitt	Sheigra	2295
		-	Jean Burnell	St. John's	*299
VOAR	NF	St. John's	Jean Burnell	St. John's	4
CFFB	NT	Iqaluit	Esa Hänninen	Ristiina, Finland	2766
CKMP	ON	Midland	Robert Kramer	Chicago	445
CJTT	ON	New Liskeard	MB DXPedition &	Arnes, MB	812
CJLB	ON	Thunder Bay	Morris Sorensen	Leaf Rapids	1105
CJLP	QU	Disraeli	Don Trelford	Scarborough, ON	414
CHVD	QU	Dolbeau	Esa Hänninen	Lemmenjoki	3334
			Jeff Falconer	Clinton	*573
CJSA	QU	Ste-Agathe-des-Monts		Montreal	50
CKLD	QU	Thetford Mines	Charles Reh	Leamington	624
XESCT	BCN	Ensenada	Tim Hall	Chula Vista	52
XEIZ	NL	Monterrey	Jim Boehm	San Antonio	289
ZBM1	BER	Hamilton	Ernie Wesolowski	Omaha	1831
LT2	ARG	Rosario	Pete Taylor	Poipu, HI	7522
ZY1670	BRZ	Joao Pessoa, PB	NF DXPedition #4 Team	Cappahayden	3897
ZYJ816	BRZ	Sao Jose, SC	NF DXPedition #4 Team	Cappahayden	5160
HJLK	CLM	Cali	LEM96	Lemmonjoki, Finland	6328 *2225
	~ .		NF DXPedition #2 Team	Cappahayden	*3325
CMAD	CU	Artemisa	Frank Merrill	Milan Liabila an Daint	1330
CMGM	CU	Jaguey Grande	Ron Schiller	Lighthouse Point	267 426
BEV58	CHN	Taichung	Pete Taylor	Hangzhou, China	420

MB DXPedition [Shawn Axelrod, Wayne McRae]

NF DXPedition #2 Team [Jean Burnell, Mark Connelly, Bruce Conti and Neil Kazaross]

NF DXPedition #4 Team [Jean Burnell, David Clark, Mark Connelly, Bruce Conti, Neil Kazaross, Jim Renfrew]

NF DXpedition #5 -1996 [Jean Burnell, Ben Dangerfield, Bruce Conti, Neil Kazaross, Dave Clark, John Fisher, Jim Renfrew]

UK DXPedition [Steve Whitt, Mark Hattam, Clive

Rooms] LEM96 [Mika Makelainen and Jorma Mantyla] WBGS • AM 1030

**CCRadio: Best AM DX Portable?** 

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#### **By Gerry Thomas**

A couple of years ago I had heard that Bob Crane of the C. Crane Co. was working on a new portable radio and that among the design criteria was a requirement for a DXable AM section. I had even spoken to Mr. Crane during the early design stages of the radio about, among other things, aspects of the CCRadio and came away thinking that he really wanted to do this project right...I was guardedly optimistic that he would pull it off. Still, between the drawing board and the store shelf a lot could go wrong, including the possible cost-cutting compromises that seem to inevitably accompany bringing a product to market. Nonetheless, Mr. Crane seemed adamant enough about the required performance of the radio that I had high hopes for the CCRadio. Well, I finally got my hands on one (courtesy of Roger Giannini) and have had the opportunity to check out this Sangean-made portable so I thought I'd share my impressions and the results of some side-by-side tests with known and reputed DX hounds.

#### **General Features**

The CCRadio is a medium-sized  $(11''W \times 6.5''H \times 4''D)$  multi-band portable made by Sangean and finished in the requisite gray color and weighing in at 3.8 lbs. (without batteries). Besides the four D-cells required for DC operation, the CCRadio also can be powered by the built-in AC transformer (cord supplied). The radio covers four bands: the standard AM (it tunes 520-1710 kHz) and FM bands, the channels 2-13 TV band (audio only, of course), and seven NOAA weather channels (a weather alert feature is included).

(These are the four bands I monitor when a hurricane hits Pensacola so I consider the CCRadio to be an ideal emergency/survivalist radio...add a scanner and you've got it all.)

The radio is PLL frequency synthesized and is digitally tuned by slewing buttons (10 kHz on AM) or a rotary knob (1 kHz tuning and read-out on AM) and has large (9/16") LCD dial frequency numerals. Tuning can also be accomplished by up/down scanning as well as by the five memory buttons located atop the cabinet. A digital clock replaces the dial frequency when the radio is off and adds alarm and snooze functions if desired. The cool green display light is push-button controlled when operating on batteries and is on continuously when using AC. A lock button on the side can prevent a channel change while listening or an inadvertent power-on condition during transport. Rounding out the features are a headphone jack, battery status indicator, and screw-type external antenna terminals. There is no carrying handle as such but rather a large indentation in the top rear of the cabinet to facilitate carrying. The operating manual is brief but clearly written and even has a small section on AM DXing with mention of the National Radio Club. The price of the CCRadio is \$159.95.

#### **Operating impressions**

Operating the CCRadio is really pretty straightforward. The rotary tuning knob has 1 kHz detents and is comfortably located, the various buttons are sufficiently large and have a positive feel, and the digitial display can be viewed from wide angles. There is a tuning indicator of sorts in that a boxed "TUN" appears on the display face if a station is sufficiently strong (I would have preferred a finer resolution signal strength indicator but, oh well). About the only thing I would add for desktop DX sessions would be a Tupperware turntable for easy nulling/peaking and a block of wood or such to tilt the radio back a bit.

All in all, from an operating standpoint, the CCRadio seems to be well thought-out with no operating quirks.

#### Looking Inside

An affliction I've had my whole life is an irrepressible need to open ("tear-up," my wife would say) any new electrical/electronic devices that find their way into the house. So it was that within 15 minutes of receiving the CCRadio, the back was off and I was examining its innards...and I was impressed. This obviously is a carefully designed and well-made radio. Two large circuit boards comprise the lay-out with the RF, IF, and AF sections on one large board and the logic/clock/display functions on the other. Functional sections are well separated on the boards and very extensive shielding is employed throughout. Whereas the Superadio series employs multiple (four) stages of IF tuning to provide selectivity, the CCRadio uses ceramic filtration. I counted seven ceramic filters being used on the various bands with at least one being used on AM. The circuitry is a mix of integrated circuits, and standard and surface-mount components (all 1% precision, from what I could tell). Not having a schematic and being reluctant to remove all of the shielding to follow the circuit traces, my circuit

analysis pretty much ended at this point. The ferrite rod, however, is worth mentioning. It's a 7-7/8" x 7/16" rod that is really a beauty (I'd like to get my hands on a pile of these, hi). It's the same length as the rods used in the Superadios but its girth is a little (by 1/16") thicker. The windings are of litz wire and a two-turn pick-up winding provides for external antenna coupling. Notably, the ferrite rod is located as far as possible from the AC transformer (which can suck RF from the rod, a common design flaw in Radio Shack portables).

I guess the bottom line of this visual inspection is that the CCRadio is a well-designed and very well built portable, but the absolutely ultimate question is, "How well does it perform?"

#### Performance Tests

To test and compare the performance of the CCRadio, I lined it up against the only other viable, currently available radio that touts itself as a "long distance AM reception" device...the General Electric Superadio III (SRIII). I considered including the Radio Shack Optimus superadio clone (#12-603), but it had fared miserably in earlier comparisons. Still, on the off-hand chance that Radio Shack had made some recent design changes, I got one from a local store and tested it briefly to verify that it was as awful as before...it was, so it was not included in the testing. Although long discontinued, I also included in the testing my personal, under-\$100, favorite for portable domestic AM DX-a fresh-outof-the-box Superadio II (SRII). Regarding the SRIII, I used two different samples in the tests. I knew that my personal SRIII (SRIII-Gerry) was not very good so I borrowed Charlie Barfield's SRIII (SRIII-Charlie), a radio that Charlie has spent an untold number of hours tuning up for optimal performance (no circuit changes were made to either SRIII, just tweaking of transformers and trimmer capacitors).

All of the testing was conducted between local noon and 2:00 p.m. on a mid-November, atmospherically quiet day in Pensacola, FL. All radios were AC powered and were rotated and tuned for optimal reception of the target stations. Note that all of the target stations that I chose for this test are, for the most part, moderately to very difficult daytime catches. Just about any radio can pull in AM DX at night but if a radio shines during the day, you know it will do well at night. The stations reported here are representative of the several tested in each of the low-, mid- and high-band portions of the AM band to test the two principal performance measures were of interest: sensitivity and selectivity.

#### Sensitivity Tests

#### Target stations

- 530 kHz R. Vision Christiana, Turks & Caicos Islands. Although this is a 100 kW station and easily heard at night, it is located 1200 miles from Pensacola and is heard by only the most sensitive radios during midday.
- 570 kHz R. Reloj, Pilon, Cuba. I included this low-ender in case the 530 kHz target was inaudible on any of the radios. It's reported to be 10 kW at about 1000 miles (sea path) and is always audible here.
- 940 kHz WYLD, New Orleans, LA. Just about 180 miles due W of here, it's listed as 10 kW but directional away from Pensacola.
- 1680 kHzWTIR, Winter Park, FL. This one is pretty tough during the day at a distance of 350 miles and of unknown power.

#### Rating scale

The subjective scale I used for sensitivity was:

- Local-like (all background noise "quieted") 5
- Easily readable but not local-like 4
- 3 Readable with effort
- 2 Intermittently readable
- 1 Present but not readable
- 0 NiI/Undetectable signal

#### Results

	CCRadio	SRIII-C	SRIII-G	SRII
530 kHz	2	0*	0	1
570 kHz	3.	5 2.5	2	3
940 kHz	4	1	3.5	4.5
1680 kH	z 1.5	50	0	n/a

\* Thought this was the target on Charlie's SRIII but upon closer listening, the signal turned out to be an

image of a station on an unknown frequency carrying the Jim Rome Show.

The CCRadio and the discontinued SRII performed on the same level but the nod has to go to the CCRadio with its stronger low- and mid-band performance. This was somewhat startling considering that I felt that the SRII was one of the two best under-\$100 portables ever made (the other was the Realtistic "TRF" (#12-655)). Of course, the SRII only nominally tunes to 1600 kHz but I was able to compare the CCRadio and SRII on WPHG-1620 and both provided equal signals rated at 4.5.

The two SRIIIs showed different trends. Charlie had apparently peaked his for low-band performance; mine was stronger at the higher frequencies but neither was in the same class as the CCRadio and SRII. Both exhibited the usual birdies and images.

#### Selectivity Tests

From a DXer's standpoint, selectivity is just as important as sensitivity in hearing weak stations in the crowded AM band. For this test, I selected as targets distant stations located on frequencies near strong locals. Again, these are tough catches that require good selectivity in a radio.

#### Target stations

- 600 kHz WVOG, New Orleans. This is a low-powered station next to my local evangelical slopper WVTJ-610. They are in-line so nulling is not possible.
- 1010 kHzWQYK, Tampa, Florida. This is a 50 kWer 300 miles to the SE but its daytime pattern of E-W lobes puts precious little signal northward. Local super slopper WRNE-980 (10 kW) easily masks WQYK on lesser radios.
- 1460 kHzWZEP, DeFuniak Springs, FL. This 1 kWer is just about 80 miles to the E but its presence next to local WBSR-1450 makes it tough to hear clearly.

#### Rating scale

The subjective scale I used for selecitivity was:

- 5 Clear
- 4 Minor sideband splash
- 3 Splash interfering with readability
- 2 Intermittent readability/some intelligible splash
- 1 Mostly intelligible splash, target never readable 0
- Target not detectable under splash

		Results									
	CCRadio	SRIII-C*	SRIII-G*	SRII							
600 kHz	4	4	1	3							
1010 kHz	4	0	0	4.5							
1460 kHz	4	0	0	4							

\* The two SRIIIs were in the narrower selectivity position (i.e., "Normal")

With all three targets, the CCRadio and SRII were virtual equals. The SRIIIs really couldn't compete except for Charlie's on the low end.

No specs are provided in the documentation for the CCRadio, but the IF filtration acts and sounds like it's about 5 kHz @ -6dB and 9-10 kHz @ -60 dB (great for domestic DX; serious split DX needs a narrower filter); ultimate selectivity is very good.

#### Other comparisons

#### Audio quality

The SRII and SRIII are clearly superior to the CCRadio on this variable. Their 6-1/2" woofers and 2" tweeters clearly sound better on loud and clear stations than the CCRadio with its 4" speaker. The CCRadio certainly sounds good on both AM and FM but can't match the full, wide-frequency sound of the SR series, especially when they are in their "AM Accent" mode.

#### **Battery** life

This one really floored me when I read in the CCRadio's manual that it draws 450 mA of current! That's about as much as a small portable TV! I couldn't believe it so I measured its current drain myself. At normal listening levels, the CCRadio draws 40-50 mA, not 450 mA. Apparently the proofreader of the manual missed the typo. By comparison, the SR series draws about 20 mA. Since both radios use D-cells, the CCRadio should run about half as long the the SRII and III (which, according to their literature, is 460 hours on a set of batteries).

#### FM, TV, and WX band performance

I didn't really check/compare these bands. I did note that all of the local and semi-local FM stations came in fine on the CCRadio and that I was able to pick up not only my local NOAA station but also the one in Jackson, MS.

After finishing the preceding tests, I couldn't help but wonder how the CCRadio would do against radios in a higher price class. So I decided to repeat the tests using some of my favorite AM DX portables, regardless of price. The challengers included:

Sony ICF-2010 — This is my personal radio with selectivity mods (the original narrow filter is in the "Wide" position and a very narrow (2.1 kHz) filter fills the "Narrow" position). Sensitivity is unmodified. Price new is \$350-\$400.

Sony ICF-7600G — This little radio does a good job for a little tag-along, pocket-book size portable. Price new is \$150-\$200.

Panasonic RF-2200 — This long discontinued analog portable remains a marvel of engineering and one of the all-time best MW DX portables (but only covers 530 kHz- 1600 kHz). Average used price: \$150- \$200.

The only change from the first series of tests was that all of these radios were tested using batteries instead of AC. The tests were conducted on a different day but during the same time frame (i.e., noon to 2:00 p.m.).

			Sensiti	vity tests
	CCRadio	ICF-2010	ICF-7600G	ŘF-2200
			_	
530 kHz	1.0	1.5	.5	1.0
570 kHz	2.5	3.0	2.0	3.0
940 kHz	4.0	4.0	3.5	4.0
1680 kHz	1.5	.5	0	n/a
			Selectivi	ty tests
600 kHz	4.5	4.5 [5.0]	3.0 [4.5]	<b>4.0 (4.5)</b>
1010 kHz	4.5	4.5 [5.0]	3.0 [NL]	4.0 (4.5)
1460 kHz	3.0	3.0 [4.5]	3.0 [3.0]	2.5 (4.0)

() Narrow selecitivity position

[] Synchronous AM detection locked on (no performance change on 7600G).

NL= Synchro couldn't lock

Given its performance compared to the SRII in the early tests, I wasn't too surprised that the CCRadio belongs in this elite class of AM DX portables. On average, it was just as sensitive as the 2010 and RF-2200 and consistently more sensitive than the 7600G. On the selectivity measure, it out-classed the 7600G and was essentially the same as the RF-2200 in its narrow mode. It even matched the 2010 when the Sony was in its "Wide" mode (really the stock narrow mode in this modified 2010) unless the target signal was strong enough to lock the synchronous AM detection circuitry in which case the 2010 gave better readability. In fact, with all three competitors, invoking the synchro AM or using ECSS (via the BFO) resulted in improved readability in some situations.

#### **Conclusions**

The owner's manual of the CCRadio states, "The CCRadio incorporates the highest quality parts and superior engineering to produce the most sensitive AM receiver available." On the whole, I'd have to agree (but I'd qualify it by adding "portable" AM receiver "under \$350"). Unless you pay \$200 more for a 2010 <u>and</u> the signal you are seeking is strong enough to activate the synchronous AM detection circuitry <u>and</u> you install very narrow IF filters, you won't do better than the CCRadio for AM DX.

Congrats to Bob Crane and Sangean for a very worthwhile DX machine.

Note: Sample-to-sample variation could alter tests of individual radios. For example, some D Xers have SRIIIs that are reportedly excellent performers. It's just that of the eight SRIIIs that I've auditioned over the years, none has been excellent and the two SRIIIs tested here are representative of those I've experienced. Under less challenging conditions, there may be little or no noticeable differences between any of the radios tested but under tough signal conditions, I would be very surprised if any SRIII equalled, much less exceeded, the performance of the CCRadio.

## Domestic DX Achievements

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Domestic DX totals listed periodically in different categories

and a second						., .					0.011			
Name and location	Yr	Last Upd	TDT	ST	PT	DCT	TDY	N	PY	DC	TDH	<u>SH</u>	PH	DCH
Kramer, Robert-Chicago, IL	70	11/96	2733	49	10	DG1	2010	49	10	DQ V	3803	50	$\frac{H}{10}$	V
Geary, Kermit-e PA	26	2/92	2487	48	9	À	5161	50	10	- V	5575	50	10	٦,
Malicky, John-Pittsburgh, PA	70	11/87	1184	40	6	V	902	38	7	1	1461	40	7	V
Forth, Karl-vic Chicago, IL	70	11/78	1077	48	10	-√	1088	48	10	1	1771	48	10	N.
Starr, Jerry-Youngstown, OH	- 54	1/86	1055	50	10	· √	16 <b>1</b> 0	50	10	1	2159	50	10	N.
Edmunds, R. Jn NJ/e PA	62	9/99	806	41	8	_√,	263	42	6	1	2001	47	9	N,
Swearingen, Paul-e KS	75	11/99	684	44	7	V	2	2	0		684	44	7	V
Pimper, Dennis-NE, UT	68	12/84	651	40	5	1	425	45	6		2447	47	7	,
Hayes, Harry Jne PA	70 78	7/98	641	39	9 6	V	185	30	3	.1	1354	41	9	Ŋ
Wolfish, Niel-Toronto, ONT Foxworth, Robert-Long Island, NY	- 78 - 57	2/93 11/78	402 400	39 44		1	493 270	43 48	10	Y	1285	43	10	Ŋ
Fela, Joseph-cent. NJ	61	10/78	400	40	9 7	V	1045	48	7 9	V	1000 1861	49 49	10 10	J
Schmidt, Dave-se PA/n DE	65	11/79	400	40	4	•	1006	48	8		1250	48	8	•
Taylor, Pete-Tacoma, WA	81	7/99	372	26	4		45	14	2		423	29	4	
Wheeler, Frank-nw PA	30	3/97	232	34		1	1708	50		1	2510	50	9	1
Mount, Paul-ne NJ	73	2/86	199	26	3 5	1	224	33	9 6	- V	489	36	7	٠,
Karchevski, Bob-Šan Francisco, CA	69	10/78	197	35	5		198	36	5		249	36	5	
Rugg, Andy-Montreal	60	9/99	168	68	5 7 7	1×	1395	47	10	1	1426	47	10	7
Rugg, Andy-Montreal, sc ONT	60	9/99	168	28	7	_√,	1552	47	10	$\checkmark$	1587	47	10	
Truax, Dick- vic. Louisville, KY	72	12/78	120	35	5 4	V	20	17	3		935	46	6	$\checkmark$
Wolfish, Niel-Winnipeg, MAN	85	2/93	113	10			25	10	4	1	813	37	9	1
Musco, Ron-nr Hartford, CT	62 82	3/98	108	28	3		1232 7	47	9	1	1367	47	9 5	7
Smolarek, Bob n NJ Taylor, Pete-San Francisco	62 58	4/89 7/99	78 70	16 6	5 1		329	7 32	0 7		817 449	36 32	7	v
Renfrew, Jim-Rochester, NY	76	3/98	68	27	5		161	42	8	1	1678	44	8	$\checkmark$
Mount, Paul-se OH	78	2/86	60	25	í		3	3	Ő	•	390	36	3	Ý.
Bond, Jerry-Rochester, NY	62	10/78	50	10	2		ŏ	õ	ŏ		785	43	8	Ĵ.
Sanburn, Mike-Bellflower, CA	72	11/92	33	10	1		212	23	5		600	32	5	•
Yocis, Dave-Bridgeport, CT	92	4/97	22	6	0		5	5	Ó		726	37	8	N
Renfrew, Jim-Severna Park, MD	71	4/89	15	8	1		0	0	0		553	36	5	N.
Ponder, Stephen-Shreveport, LA	75	8/89	10	4	4		721	39	5	, √	769	39	5	N,
Cooper, Ernest-Cape Cod, MA	32	10/78	0	0	0		3601	48	10	1	3601	48	10	N,
Steele, Sid-e IL	31	7/98	0	0	0		2994	49	10	Y	3400	49	10	N,
Krejny, Ed-nr Cleveland, OH Bezilla, Steve-cent. PA	50	11/96	0	0	0		2729	49	10	V	3265	49	10	V
Falconer, Jeff-Clinton, ON	24 69	10/78 9/99	0 0	0 0	0		50 1045	45 49	4 10	1	3000 2673	48 49	8	1
Francis, Steve-nr Knoxville, TN	70	1/98	Ő	Ő	ő		34	34	0	•	2606	48	10 7	J
Schiller, Ron-central NJ	52	11/98	ŏ	ŏ	ŏ		2103	48	10	1	2534	48	10	j
Wilkins, John-Denver/Des Moines	62	11/98	Ō	Ō	Õ		1852	45	7	À	2200	45	7	Ĵ.
Kureth, Joe-Uniontown, MD	61	9/99	Ō	Ō	Ō		342	41	7	V	2162	46	10	٦,
Wesolowski, Ernie-Omaha, NE	58	2/99	0	0	0		1970	49	9	V	2115	49	9	V
Chatterton, Ken-n NY	45	11/78	0	0	0		1101	50	10	1	1845	50	10	1
Voorhies, Don-New York/Oswego, NY	32	2/98	0	0	0		611	47	10	N,	1838	48	10	N,
Whatmough, Dave-Hamilton, ONT	~	12/85	0	0	0		967	49	10	N,	1724	49	10	N,
Axelrod, Shawn Ms MAN	85	11/96	0	0	0		0	0	0	Y	1673	50	10	Y
Jeter, Karl-Atlanta, GA Heinen, Wayne-NY/CO	69 64	3/84 12/96	0 0	0 0	0 0		1193	44 49	6	V	1574	44	6	Ŋ
Kennedy, Steve	58	8/99	0 0	ŏ	0		1434 178	49	9 6	J	1434 1369	49 45	9 10	J
Bailey, Ron-Shelby, NC	92	11/99	Ő	ŏ	ŏ		3	3	0	v	1301	37	4	J
Arruda, Ray-nr Boston, MA	63	6/99	ŏ	ŏ	ŏ		1150	47	9	1	1292	47	9	J
DeLorenzo, Marc-e MA	62	4/98	ŏ	ŏ	ŏ		0	Ő	ó	•	1172	45	ģ	Ĵ
Zank, Neil GLincoln, NE	61	10/78	ŏ	Ŏ	ŏ		535	45	9		1100	46	ģ	•
Anderson, Roger-Washington, DC	38	10/78	Õ	Ō	ŏ		1017	48	9	1	1017	48		V.
Harrison, Bob-ne NJ	82	6/98	0	0	Ō		772	36	7	V	996	36	9 7	1
Onyschuk, Ken-Homewood, IL	66	11/92	0	0	0		16	13	0		972	43	6	√,
White, Thomas-nr Washington, DC	68	1/92	0	0	0		243	38	7	٦,	970	39	7	٦,
Sampson, John-Omaha, NE	54	12/78	0	0	0		912	45	6	V	912	45	6	V
Hardison, Greg-Atlanta, GA	64	11/78	0	0	0		42	19	5	,	900	36	6	,
Kureth, Joe-Southern Pines, NC	63	6/71	0	0	0		92	26	2	7	878	38	7	Ŋ
Rigas, Christos-vic Chicago, IL Hopkins, Jim-s NJ	81 72	3/98 10/78	0 0	0 0	0 0		382	44 42	6	v	862	46	7	Ŋ
Holland, George Jr., vic. Albany, NY	31	10/78	0	0	0		455 828	43 49	7 9	$\checkmark$	850 828	44 49	7 9	J
Wallace, Jim-Columbus, OH	69	10/78	Ő	ő	0		020 137	36	3	J	626 795	41	7	J
Hardy, Nancy-coastal WA	69	12/84	Ő	Ő	ŏ		3	2	0	•	778	40	5	•
,,			-	-	~		~	-			110			

46													
Greene, George-Akron, OH	60	11/84	0	0	0	119	29	3 7	,	743	45	7	√,
Renfrew, Jim-New Canaan, CT	67	4/89	0	0	0	247	35		$\checkmark$	721	39	8	N,
Winkelman, Bruce-Greensboro, NC			0	0	0	0	0	0		686	40	4	V
Tynan, Jeff-Parker, CO	87	4/89	0	0	0	128	27	5		674	36	5	
Reed, John-Ponca City, OK	95	12/96	0	0	0	0	0	0	,	604	38	5	,
Edumunds, R. J. Syracuse, NY	64	9/99	0	0	0	75	31	5	V	533	45	9	V
Boersma, Philip-w MI	73	10/78	0	0	0	50	24	3		520	41	6	,
Sampson, John-Winston-Salem, NC	68	10/78	0	0	0	450	30	1		450	30	1	$\checkmark$
Tudenham, John-Joplin, MO	90	<b>10/9</b> 7	0	0	0	0	0	0	,	444	36	5	,
Taylor, Pete-Durham, NC	52	7 <b>/99</b>	0	0	0	208	36	6	٦,	366	39	6	N,
Alves, Paul H -nr Boston, MA	48	2/99	0	0	0	145	25	5	V	352	32	6	V
Sampson, John-Hutchinson, MN	60	10/78	0	0	0	336	42	6		336	42	6	,
Renfrew, Jim-Raleigh, NC	78	4/89	0	0	0	0	0	0		329	7	2	Ń
Turner, Richard-se MA	94	12/97	0	0	0	0	0	0		328	29	6	V
Houdek, Gary-n KS	75	1/81	0	0	0	31	21	1		294	34	3	
Winkelman, Bruce-Tulsa, OK	79	1/92	0	0	0	0	0	0		284	30	2	
Sampson, John-Cupertino, CA	66	10/78	0	0	0	258	17	3		258	17	3	,
Renfrew, Jim-New York, NY	78	4/89	0	0	0	0	0	0		242	32	2	V
Woods, Jack-w OR	74	2/81	0	0	0	25	18	0	,	194	26	4	,
Taylor, Pete-Miami, FL	45	7/99	0	0	0	132	28	2	N,	182	29	3	N
Sampson, John-New York, NY	65	12/78	0	0	0	181	33	6	V	181	33	6	V
Edmunds, R. Jne ME	94	9/99	0	0	0	0	0	0		172	20	6	
Renfrew, Jim-San Diego, CA	84	4/89	0	0	0	0	0	0	,	164	17	3	,
Greenberg, Warren-vic Boston, MA	72	11/78	0	0	0	99	26	6	N,	125	27	6	٧,
DeLeurere, Harley-Hendricks, WV	55	10/78	0	0	0	59	48	10	٧	59	48	10	V
<u>Legend</u> :	$\checkmark$	District	of Co	olum	bia h	eard, tap	ed.a	nd/o	or ve	ried			
Trifting.													

TDH. TDT. TDV Total Domestic Heard, Taped, Verified States Heard, Taped, Verified SH, ST, SV PH, PT, PV Provinces Heard, Taped, Verified

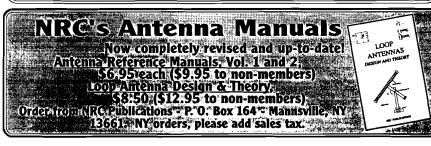
Thanks for updates from Ron Bailey, Russ Edmunds, Jeff Falconer, Joe Kureth, and Andy Rugg. We hope to see YOUR name and updated listings the next time around (don't MAKE me run a column listed by oldest update, hi!).

This column is arranged by Total Domestics Taped, then by heard for those who don't tape, and we'll run various priorities at different times. Domestics of course include the contiguous 48 states and Canada; Alaska, Hawaii, Puerto Rico, etc., are counted as foreigns. We'll only delete listings of those who are no longer NRC members, so should you drop out and rejoin, you'll need to resubmit your totals. And of course if we somehow hashed up your listings or even dropped you out completely, as we did Jeff Falconer somehow, you'll need to send in your new totals. How about making it a priority for next time of filling in the blanks above, at least in the year started and last update column? Some of the listings are estimates, and that's just fine, but don't forget to update accurately when you can. See you next time? -73.

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

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Dave Schmidt NRCMusings@aol.com P. O. Box 3111 Scranton, PA 18505-0111 Times are local per Muse; submit double-spaced only.

of the Members

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

#### Dan Gebhart - 4377 Timberwilde Dr. - Kettering, OH 45440 <<dtgebhart@juno.com>>

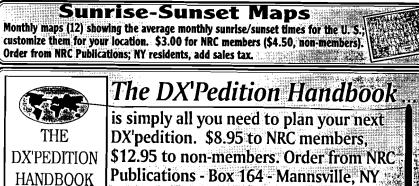
After reading the review of the Radio Shack Indoor AM Loop Antenna by Russ Johnson and John Bowker I rushed to my local Radio Shack, and they had 3 in stock. I purchased one and couldn't wait to get it home and try it out. To sum it up in a few short words "It's a lot better than the S-A-T but not as good as my 4' loop. So far I'm real pleased with it and will be taking it and the GE SR III with me on the annual Thanksgiving pilgrimage to the in-laws in TN. Previous trips to their home have convinced me that southeastern TN is a radio void spot. This should be a good test for the new Radio Shack loop.

#### Martin Wishnewitz - 35-34 84th Street #D-10 - Jackson Heights, NY 11372

First, thanks very much to the SWEIGER family for the great NRC convention in Bridgeport, WV. Thanks go out to JOHN & LINDA BOWKER for assisting in this terrific convention and to FRED VOBBE whose set up of WNRC-AM 1610 was just beautiful! One of the highlights for me was when JOHN MALICKY and I again went in search of local radio stations. In doing so, we took a trip approx. 2 hours away from Bridgeport to the Green Bank Radio Astronomy Observatory where we saw several larger radio telescopes. We took the tour of the center, and it was pointed out that this area of WV was picked for this site because it is a very quiet area with little interference generated by man-made devices. All of the transmissions made from local transmitters are pointed away from this area. Imagine, hitching your radio to one of these! We then took a ride over to the Allegheny Mountain station WVMR-1370. An all volunteer staff runs the radio station with several translators on FM. We were given a nice tour. While on the way, we noticed WNRC was getting out about 10 MILES, way to go! Hitch your wagon to a star and GOOD DX! More coming!

#### Dave Schmidt - P O Box 3111 - Scranton, PA 18505-0111

As I had mentioned, during December, we'd like to hear your stories on what you consider your best DX catch! Probably my best 'early days' one was a toss up between KORL-650 and KULE-730 when I lived near Chester, PA. After getting into the engineering field, I started to learn more about directional systems that some of these stations use, and having seen the 'authorized' pattern then heard the station blasting in, you really wonder if they worked properly from the start! One that comes to mind was WWKL-1600, heard all over the place with a strong signal but look at the pattern and you really have to wonder! One station that I worked at for many years, WAMS-1380, in their bigger and better days, was one that operated with 2 daytime patterns and a night pattern. The daytime pattern changes were due to the old WBNX/WAWZ share time agreement, WAWZ was slightly closer to Wilmington, the 'null' in that direction had to be deeper when they were on, so the station had a DA-1 (for WAWZ), a DA-2 (for WBNX) for the 5000 watts, using 5 towers, and a DA-3 for the night pattern, which included protection to KWK-1380, using 4 towers. I was CE there in the last 4 years they were on; it broke my heart to have to dismantle this station since it was basically the one where I cut my teeth of working on directional systems. Don't forget to send in YOUR reports and items of interest to the DX world! 73's



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