

dx news



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NUMBER 6

"Please renew my very expired membership.... I rarely DX anymore, but DX NEWS is certainly still in no danger of lying around unread, and is certainly still a terrific bargain. Keep up the good work!" (John Javetski, NY)



ON THE INSIDE.....

A New Long Distance MW Receiver - Joe Worcester
Publishers' Corner - HQ

NEW MEMBERS

- * Vince Pavkovich, 3717 94th Ave. West, Duluth, MN 55808
- * Conrad R. Durocher, Stone Productions, 437 Essex St., Saugus, MA 01906
- * Earl B. Johnson, Box 217, Mangrove Bay P.O., Somerset Isld., BERMUDA 9-08
- * Harlan H. Vinnedge, 205 N. Piedmont St., Apt. 3, Arlington, VA 22203
- * Danny Hurley, Rt. 1, Box 209AB, Jefferson, NC 28640

RENEWALS

B. Dangerfield, D. Shapiro, E. Allen, T. Feltz, E. Kocsan, G. Draeske, W. Powis, R. Purdy, R. Neal, E. Shetter.

FLASH TIPS & SUCHLIKE

Karl Forth sends along the info that WHCO-1230, Sparta, IL has an r/c on the 1st Sunday AM of the month at 0630 ELT per CE Mike Hoefft. KNUJ-860 TEST of 11/3 was on, though not hrd by Dailey or Musco either. Hrd weak by Ross Hansch. AM was quite auroral.... Musco says WETB-790, Johnson City TN claims they TEST every Sat. AM for 15 mins before s/on, but just OC..... WEEZ-1590, Chester PA lost a tower to vandals 10/31. Stn. had just gone WSP, too, per Dave Schmidt. Was bombing in here much stronger than usual MM 11/10 per RJE..... 11/10 TESTS from WSNW-1150, WAGL-1560, and WEAG-1470 all hrd by RJE who now has to try to find time to send reports, hi. WSNW was weak o/u the LA; WAGL was a monster; WEAG very weak u/pest WSAW. WLYC-1050 not hrd u/ local WHN pest. Cx continued somewhat auroral 11/10.

NOTES & FROM NJPC

There's an interesting article on Radio Direction-Finding Techniques (in fact that's the title of it) in the August 1975 issue of QST for anyone interested. It's by Tony Dorbuck, W1YNC.

QST is also the source of info on the proposed Radio interference bill pending in Congress. This bill would require manufacturers of Stereos, tapers, and hi-fi and household radios to be filtered against common types of interference at the factory. Aside from the obvious benefits to hams, who are unjustly blamed for a majority of such interference, DX'ers can benefit from the bill in that intermodulation, unwanted signal pickup, etc., may be reduced in cheaper tape machines and receivers. If you wish to, you may write your Congressman or to Rep. Torbert MacDonald, Chairman, Subcommittee on Communications.

ADDRESS LABELS: We apologise for the errors contained in the recent re-type of address labels, but we again ask you to INFORM HQ of any errors which may still exist, as the P.O. has taken to bouncing bulletins with minor errors back to us after delivering them in that condition for several weeks !!!!

C. P. C. TEST SCHEDULE

DAY	DATE	TIME	STATION	POWER	LOCATION	TYPE	REMARKS
MONDAY	NOV. 17	0200-0230	* WVOG-600	1000	D NRC		
		0330-0400	* WEXY-1520	1000	D NRC		
SUNDAY	23	0000-	* WIOO-1000	1000	D NRC/IRCA		
MONDAY	24	0100-0400	* KYSM-1230	1000/250	U NRC		
		0300-0330	* WNMT-1520	1000	D NRC		
		0200-0230	* KSIR-1470	500	D NRC		
		0300-0330	* KYME-740	500	D IRCA		
WEDNESDAY	26	0005-	* WASR-1420	1000	D NRC		
FRIDAY	28	0000-	* WHLW-1170	5000	D NRC/IRCA		
MONDAY	DEC. 01	0330-0400	* WTBJ-1090	1000	D NRC		
		0330-0400	* KWIP-1580	1000	D NRC		
FRIDAY	05	0000-	* WBTX-1470	5000	D NRC/IRCA		
SUNDAY	07	0000-0300	* WTHD-930	500	D NRC		
MONDAY	08	0115-	* WLLS-930	5000	D NRC/IRCA		
		0230-0300	* WMTY-1090	1000	D NRC		
		0230-0300	* WIVY-1280	5000	D NRC		
		0300-0330	* WNRI-1380	1000	D NRC		
MONDAY	15	0100-0200	* WKTJ-1380	1000	D IRCA		
		0200-0230	* WRAM-1330	1000	D IRCA		
		0300-0330	* KXRB-1000	10000	D IRCA		
		0300-0315	* WKLF-980	1000	D NNRC		
SATURDAY	20	0000-	* WMCS-1400	1000/250	U NRC/IRCA		
MONDAY	22	0100-0200	* KATE-1450	1000/250	U NRC		
		0400-0500	* WENN-1320	5000	D NNRC		
MONDAY	29	0400-0500	* WMAG-850	1000	D NNRC		
		0100-0200	* WGIL-1400	1000/250	U NNRC		
MONDAY	JAN. 19	0100-0200	* WBSM-1420	5000	D NNRC		
		0300-0330	* WSUB-980	1000	D IRCA		
MONDAY	FEB. 09	0200-0300	* WBRW-1170	500	D NNPC		
FIRST FRIDAY		0000-	* WBTX-1470	5000	D NRC/IRCA		
THIRD SATURDAY		0000-	* WMCS-1400	1000/250	U NRC/IRCA		

DETAILS:

- WVOG - No program details. V/s: Richard N. Conklin, II; Engr. 125 No. Galvez St., 70119; Arr. Neil Zank
- WEXY - Top 40 mx, various TTs. Prepaid calls at (305) 565-1841. V/s Joe Vogel, CE; 539 E. Oakland Park Blvd., Ft. Lauderdale, FL 33308. Arr.: Skip Dabelstein.
- WIOO - TT. Is r/c. V/s Curt Allen, Box 399, 17013. Arr.: Jim Hopkins.
- KYSM - TTs & IDs. Is PoP. V/s Dick Siemers, Box 1240, 56001. Arr.: Zank.
- WNMT - TTs & C&W mx. V/s E. F. Bigbie, CE; Box 7042, 31408. Arr.: Dabelstein.
- KSIR - TTs. V/s Bob Suarez, CE; Box 2677, 80157. Arr.: Dabelstein.
- KYME - No pgm. details. V/s Tom Hotchkiss, Box 1619, 83701. Arr.: Jim Pogue.
- WASR - Is r/c. V/s A. M. Severy, GM; Box 900, 03894. Arr.: Ron Muskox.
- WVOG - No pgm. details. V/s: Richard N. Conklin, II; E, 125 N. Galvez St., 70119; Arr.: Neil Zank.
- WEXY - Top 40 mx, various TTs. Prepaid calls at (305) 565-1841. V/s: Joe Vogel, CE; 539 E. Oakland Park Blvd., Ft. Lauderdale, FL 33308. Arr.: Skip Dabelstein.

international dx digest

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* Phone 703-354-2135 Before 2200 E T *All Times Are GMT *Deadlines Are Friday*

Greetings. A ton of material this time from 19 reporters so we won't waste much time with chatter. The deadline for the issue after the Thanksgiving skip will be Thursday, November 27 (Thanksgiving Day). Since we'll have 2 weeks worth of material, I anticipate a large column so want to get started early. Here is what has been heard

Longwave items from Jim Hagan . . .

- 151 -WEST GERMANY Donebach (DLF) weak but in the clear on this freq at 2300 11/2 w/oper type mx. Moderate static level.
- 155 -ROMANIA Brasov fair w/cl mx in the clear w/moderate static. 2300 11/2.
- 164 -FRANCE Allouis ORTF strong 11/2 2300 w/talk in FF. This one in well many nights almost like a local at times. No QRM from any source, but light static on this night.
- 180 -WEST GERMANY Saarlouis, strong 11/2 2310 w/rock mx, heavy het from WGU20 on 179 but eliminated by tuning to high side. In FF.
- 200 -ENGLAND BBC Droitwich fair 11/2 2315 w/rock mx in EE but accompanied by considerable beacon QRM some of which could be nulled.
- 209 -MOROCCO Azilal very strong 11/2 2315 w/AA type mx. This one received completely in clear for first time ever due to use of new loop to null ZFP beacon pest in the Bahamas also on 209.
- 218 -MONACO Monte Carlo strong 11/2 2320 in FF w/rock mx and female anc. This also in clear due to use of new loop to null beacon QRM.
- 236 -LUXEMBOURG Junglinster, R. Luxembourg difficult thru QRM from beacons 2310 11/3. GNI-236 super power wx stn in New Orleans nulled on same freq.
- 251 -ALGERIA Tebessa vy, vy strong 2325 11/2 w/mx in FF. Super pest beacon ZQA Nassau on same freq nulled for perfect crystal clear reception of local quality. No trace of static.
- 526 -COSTA RICA TICAL R. Rumbo, Cartago good 0337 10/30. This stns carrier noticeably is vy unstable when BFO is turned on. Freq listed is only approx as exact freq drifts and is hard to pin down. (Hagan)
- 529 -ALGERIA Ain Beida fair, absence of QRM 2324 11/3 in AA w/AA style mx. Loop allows complete seperation of this from TICAL. (Hagan) * 10/30 booming in 2224-2305 in AA, seemed to be one u/529, Switzerland or they off 529? (Schiller) The Swiss is back on 529 as far as I know. (ED) /((Connelly)
- 530 -UNID Background mx stn noted u/Algeria, Switzerland probable, 2217, 10/20.
- 533 -JAPAN JOQG Morioka, good w/pips 1300 11/1, then NHK1 pgm w/man talking.
- 535 -GRENADA St. Georges poor to fair w/apparent Shakesperian style /((Wiseblood) play (in EE) 0200 11/6. (Connelly) * Weak but readable w/mx and song "Winchester Cathedral" at 2324 11/4. Female anc w/Caribbean accent. (Hagan)
- 540 -MEXICO XEWA San Luis Potosi, SLP 10/3 0445 w/"Hora de Mexico" introduced by m/f anc. (Lobel)
- 548 -ALGERIA Oran 0615 OM AA, clear 0630, fading by 0645 w/AA chants 11/2. (Straus) *Annihilating CFNB/WGNG at local sunset on car radio in Rockport, Mass., AA mx, 2140 11/1. (Connelly) * Strong but low modulation w/talk in AA and AA style mx. Sideband splatter from stns on 540. (Hagan)
- 555 -ST KITTS ZIZ Basseterre in well w/Stevie Wonder record at 0158 on 11/6. (Connelly) * Good w/ad for some kind of tooth paste 2355 10/30. (Hagan)
- 575 -USSR Khabarovsk noted on 10/26 at 1230 w/OM speaking in RR w/S6 sig. (Finkle)
- 580 -MEXICO XEPI Chihuahua, Chih., numerous "R. Mexicana" slogans 1309 11/2. (Wise-
- 584 -UNID OM noted in CC at 1210 w/S5 sigs. USSR listed here and China on /blood) 985, but freq was 584. (Finkle)
- 590 -CUBA [] totally devastating local WEEI; mx in SS noted at least 20 db o/ feeble WEEI talkshow. VOXM, w/mush mx, also present. 0600 10/27. (Connelly)

Received another report this week w/a large number of items that would have been over 2 months old by the time this gets into print. Remember, cutoff is 3 weeks.

- 602 -FRANCE (Tentative) Cl piano mx, occ operatic female vocal. Fair level at 2219 on 10/20. (Connolly)
- 615 -CHINA (?) A stn noted at 1240 w/an OM speaking in CC w/S7 sigs. Nothing listed. (Finkle)
- 640 -CUBA CMQ Havana 11/3 0405 probable SS stn hrd u/KFI w/mx by male. (Lobel)
- 647 -ENGLAND Daventry w/BBC World Report at 0730 10/26. Song "500 Miles Away From Home" was hrd well after mx. First time BBC hrd this low in band here. (Hagan) *Strong w/editorial comments, list of upcoming programs. Strongly hetted by over radiating carrier current WCSB-650, Boston (who was topping WSM and an SSer). At 2230 on 10/20. (Connolly)
- 650 -RSFSR Vladivostok, fair 1313 11/2 w/CC. (Wiseblood) * Stn noted on 10/26 at 1235 w/man and woman alternately speaking in CC. (Finkle)
- HAWAII KORL Honolulu 11/3, 0836-0845 when WSM ET, weak, but clear w/rock, gal ancr, first TP for me, State #49. (Schiller) * Good 0615 10/31 w/hit mx. (Wise-
- MEXICO XETNT Los Mochis, Sin. w/mx and SS talk 11/3 MM 1308; lotsa slop /blood from KFI. (Pejza)
- VENEZUELA YVLH Maracay. Man in SS mentioning Maracay. Sig fair to good, atop WSM/WCSB, 2 low hets present, 2330 11/4. (Connolly) * I made a mistake...the "R. Vision" ID I hrd at 0902 was apparently a YV, this at s/on 10/27. Tried agn 11/3 at 0859 and stn here, already into RS, u/WSM ET who went off just then. In next several minutes hrd several mentions of YV towns such as Maracay, ads w/prices in bolivars, and 2 "Radio Vision" IDs. Had a nice sig agn this week w/cx favoring south. (Foxworth)
- 655 -NORTH KOREA Pyongyang good w/man in KK 11/3 1307. (Pejza) * Vy strong 1243 11/1 w/Russian marches. (Wiseblood)
- 656 -SPANISH SAHARA EL Aaiun vy good a s/off w/NA 0000 10/28 for another new country. (Sherman) Nice catch, would like to hear tape if you have one. (ED)
- 660 -UNID Talk in FF loops to Caribbean area. Possibly 4VI Haiti or most probably St. Lucia. 11/4 2340. (Hagan) 4VI reported more often than St Lucia. (ED)
- 665 -CHINA Noted at 1237 w/S7 sigs but poor readability w/a woman in CC on 10/26.
- PORTUGAL Lisbon trashing up WNBC at local sunset, 2130 11/1 in / (Finkle) Rockport, Mass. Many Iberians and North Africans noted at this time w/potent sigs. Hrd at 0650 10/27 w/Joni Mitchell record, at good level. (Connolly)
- UNID Lisbon likely w/weak audio 0530 10/27. (Roberts)
- 690 -DOMINICAN REPUBLIC Santo Domingo S9+ 0959 11/3. Almost no QRM, but assume 50 kw Cuban still on 690 and NSF? many IDs given as "R. Guarachita". Wonder if I've had this before and assumed it was Cuba? (Sherman)
- 700 -JAMAICA JBC Montego Bay, good at 0908 10/26 ID as JBC Radio One, Montego Bay by YL and OM, plus S1D. Report sent, how well do they verify? (Strentzsch)
- VENEZUELA YVMH Maracaibo strong w/R. Popular ID, SS dance mx at 0150 on 11/6.
- 701 -UNID Probably Morocco w/strong carrier, weak audio during auroral period when Dakar-764 was strongest TA 2140 11/5. (Connolly, last 2)
- 710 -VENEZUELA YVKY Caracas, R. Capital, even w/occ atop WOR. SS ads w/many different ancrs, ID, phone #781-7009, then "I'm Not In Love" by Ten CC. At 2300 on 11/5. (Connolly)
- 719 -PORTUGAL/UNID Norte, a regular at sunset, noted at 2235 10/20 w/man and woman alternating. 2nd stn noted u/w/lowkey male talk, too weak to determine language. (Connolly) Tunisia most often reported here w/Norte. (ED)
- 725 -SURINAM SRS Paramaribo in like a local w/funky soul mx, 2320 11/4. (Connolly)
- 730 -MEXICO XEX Mexico, DF dominating channel, way o/CKMJ/CKAC. ID as "La X", Guadalajara mentioned in apparent nx item, 0130, 11/6. (Connolly) * "La X" 1105-1118 booming sig, clear. (Schiller)
- 735 -UNID IA SS noted here at fair to good level, 2310, 11/5. (Connolly)
- 737 -SPAIN RNE Barcelona had to be the TA here w/good audio 0245 10/28, strong het from CEL. Good carriers on several Spanish freqs at same time though no programming. This is only TA listed AN on 737, so will claim this as definite reception. Only Spain and Portugal in at this time, more good evidence. (Sherman) What type of audio was it? What was language? In my opinion its very poor practice to claim definite reception on a basis of "most likely". Also, there is no way you can claim a carrier with no audio as anything but just that - a carrier with no audio. (ED)
- 745 -UPPER VOLTA Ouagadougou a pleasant surprise 0550 10/27, S9 w/high modulation. Programming seemed to be about 2 sentences, then several drum beats and repeated. DF abt same as Dakar leaving no doubt about it. Suspected this would become a pest, but no sign of it since despite Dakar sigs up to S9+20. Was excellent African morning. (Sherman)

- 750 -JAPAN JOIB Sapporo. w/gal talking in JJ 11/3 1226. (Pejza) * Good w/man talking 1319 11/2. (Wiseblood)
- 755 -PORTUGAL Lisbon poor-good sig on 10/21 w/mx, then talking by YL, anthem, s/off 0000. (Waterman)
- UNIDS Portugal assumed source of potent OC; weak cl mx apparently 2nd stn, Romania and West Germany both listed as on at the time. 2238 10/20. (Connolly)
- 760 -MEXICO XEABC Mexico, DF w/"ABC; Radio Internacional" ID 1228 MM 11/3. KFMB off; ETs just started about 1230. (Pejza)
- 764 -SENEGAL Dakar vy loud w/chanting during rather auroral cx 0628 11/3; follows pretty much the southernmost path of all commonly hrd TAs. (DeLorenzo) * Stronger than WABC, 2130, 11/3. (Connolly) * Fair to good w/het against KOB/WJR at 0611, w/chanting mx, talk and ID at :20. Think FF, but maybe local language, 10/25, is first TA, this weekend was great. (Strentzsch) If you couldn't even determine language how do you know ID was given at :20? (ED)
- 770 -JAPAN JOUB Akita 11/3 1238 must have been this one w/JJ talk by m/f u/KOB. Hrd NHK ID at 1240 "Nissan Hoto Koto". (Lobel)
- 780 -BRITISH VIRGIN ISLANDS ZBVI atop Cuba w/Jimmy Cliff reggae record, jive-talk male ancr, Heineken beer ad. No sign of WBBM. 0125 11/6. (Connolly)
- 816 -NORTH KOREA Noted w/solid S8 sigs on 10/25 at 1300 w/a man in KK. (Finkle)
- 817 -EGYPT Batra noted at equal strength to Morocco/Andorra-818. Resultant het so loud that audio detection proved difficult, even at 1 khz selectivity. All stns around 818 were vy strong, as usual. At 2240 10/20. (Connolly)
- 818 -MOROCCO/ANDORRA Morocco seemingly alone at 2203, then a rapid propagation change brought Andorra in, w/similar total dominance at 2205, on 10/18. I have a tape from around this date in 1973 when the same phenomenon occurred.
- 820 -NORTH KOREA Unk location, //875 w/man talking 1325 11/1. (Wise- / (Connolly) blood) * Noted on 10/26 w/S6 sigs w/musical pgm //816. (Finkle)
- 825 -COSTA RICA TIOS San Jose noted w/US and IA MoR mx, automated R. Titania IDs (between records) by female ancr. Strong at 0705 on 11/4, playing "Wildfire" by Michael Murphy, followed by SS C&W record. (Connolly)
- 830 -CUBA Presumed the one w/cl mx MM 11/3 0232, SS talk, but no definite ID. (Pejza)
- JAPAN JOBB Osaka w/brief musical interlude, then NHK ID 1240 MM 11/3. Faded quickly. (Pejza)
- VENEZUELA YVLT R. Sensacion loud, alone 0345-0359 w/off 11/3. (DeLorenzo)
- MESS JOBB noted on 10/26 at 1352 w/EE lessons. There was also a stn w/CC singing, and another in a lingo reminiscent of Vietnamese (possibly Thailand, will watch this one). JOBB has EE programming after 1400. (Finkle)
- 836 -FRANCE ORTF Nancy I 0510 good after Belize s/off 0510 10/31. (Straus) Were they in FF or carrying ethnic pgms at this time? (ED) / (Selleck)
- 840 -CUBA CMHW Santa Glara "R. Dobleve" w/Latinized US pop, 10/13 ar 0056; vy strong.
- JAPAN JOGK Niigata mixing w/at least one other stn; poor/fair MM 11/3 1243-1300; pips on the hour. (Pejza)
- RSFSR Unk location, Moscow 1 IS repeated 4 times at 1330 11/1, then played easy listening mx format w/RR ancr. (Wiseblood)
- ST LUCIA R. Caribbean w/mx program until 0025, then talking in weird sounding FF. Many mentions of St Lucia. Fair o/Haiti on 11/4. (Waterman)
- MESS (Another) 3 stns noted here at 1315-1326 on 10/26: Chinese w/OM speaking, North Korean (Tis a South Korean here methinks, ED) w/cl mx and KK chatting, and the Majak stn w/a YL in RR. All had good sigs, w/one being dominant, then another, etc. (Finkle)
- 844 -GILBERT ISLANDS A weak carrier, presumably Tarawa can be detected just in noise level on occasional nites, was noted 0845 10/28 but far below level (or atmos. NL too high) to be able to get any audio. Freq definitely 844 and not 845. Suggest those needing this one check every nite for openings to this one. (Foxy)
- 845 -ITALY Roma good w/nx in II and EE at 0300-0305 10/30 followed by piano mx. Still good an hour later w/similar mx broadcast followed by MoR mx. Report sent. (Hagan)
- 850 -COLOMBIA HJKC Bogota, IA pop, vy strong. (Selleck) Date, time? (ED)
- 854 -SPAIN RNE Murcia 11/2, noted w/mx 2330+, best of the southern European/north Africans (1466, 935, et al) w/the French, German and English stns barely detectable. (Sundstrom) * 0200-0210 inst pops, SS tx 10/31. (Straus)
- 860 -BRAZIL Rio may be the one here around 0900 11/3 w/slow, soft inst type mx and fading badly, soon gone which makes sense as slightly after local sunrise. Not countable is it? (Sherman) In my opinion, no. (ED)
- FRANCE Paris-Villebon 10/4 0555-0610 FF tx, FF vocals, fair. (Straus)

866 -UNID Stn noted at 1200 w/anthem followed by CC speaking on 10.26 w/weak (S3) sigs. FBIS lists Nanchang on 865. (Finkle)

870 -UNID Chinese programming noted here on 10/26 w/good sigs. Not // w/835 and 890 which were //865, etc. (Finkle) * China assumed w/CC 1323 11/2, may be // to 1040. (Wiseblood)

875 -NORTH KOREA Wonsan, vy loud man talking 1337 11/1. (Wiseblood)

885 -MONTERRAT ZJB noted w/soul mx, female ancr, at fair level 0045 11/6. (Connelly) * W/BBC mx at 2400 10/30. Fair. (Hagan)

890 -ALGERIA Alger I under, occ even w/WLS, man in FF at 2243 10/20. (Connelly)

-CHINA A Chinese play noted on 10/26 at 1306 w/good sigs but w/QRM from Korea and Japan. Was // to 835, which has good sigs daily and does not appear to carry Kiangsi programming as last year. Amnts are now given for national program. (Finkle)

-JAPAN JOHK Sendai w/man in JJ 1304 MM 11/3. (Pejza)

900 -UNID Either Dominican Republic or Mexico. **Extremely** loud w/mentions of "Contuto", "Maria Victoria", "Exitos", and both Mexico and "Republica Dominicana". The 26th anniversary (or birthday) of Maria Victoria was frequently alluded to. **Phones numbers given as 39091800 and 39091900. At 0100 on 11/6, Apartado (PO Box) 1757 also mentioned.** (Connelly)

908 -ENGLAND BBC w/tone test 0518-20, time pips 0520-28, mx 0528-30, s/on 0530, Radio Newsreel. 10/25. (Waterman)

917 -SPAIN EAJ2 Madrid 0150-0200 vy weak, SS OM tx, inst mx 10/31. (Straus)

920 -UNID Frequent tcs in AST, As "...es su hora popular", sounded pre-recorded. Its either Paraguay or Venezuela, I think, on 11/3 at 0330, w/Canadians muffled. (Selleck)

930 -COLOMBIA HJCS "R. Continental", u/WPAT and unid TT on 10/13 at 0113. IDs loud, in fact they were all that was readable. (Selleck) Your times EST or GMT? (ED)

935 -MOROCCO Agadir in well, man in AA, 0600, 11/6. (Connelly) * 0045-0100 AA chants, fair on AN lately as are all Moroccans during march on Spanish Sahara 11/3. (Straus) / (Schiller)

944 -FRANCE ORTF Toulouse, particularly good 10/29, 0330 w/"Raindrops" et al.

950 -VENEZUELA (Tentative) Sser dominant here during auroral disturbance, likely YVKG. Punto mentioned by male ancr, apparently a talkshow host. Strong low het on freq, likely normal channel occupants WPEN/CHER/WAGM/WIEK. At 0040 on 11/6. (Connelly)

980 -VENEZUELA YVVB Maracaibo. Seldom reported R. Exitos w/ads for cerveza, et al 0919-0926 thru WRC and co. (Schiller)

989 -UNID Likely Spain causing potent het on 990 domestics, 0545 11/6. (Connelly)

1000 -BRAZIL (?) Sao Paulo, maybe had slow inst mx like 860 stn, arnd 0900 11/3, good briefly, soon faded. LSR ther. Most IAS mx not this down tempo. Uncountable? (Sherman) I take it you didn't hear any amnts, so how do you know its an IA? (ED)

-MEXICO XBOY Mexico, DF w/standard ID (whistle) and muffled R. Mil ID. KOMO sure seemed to be on reduced power at the time, MM 11/3 0212. (Pejza)

-UNID "R. Nacional" noted here 0628 11/3. My old NRC IA log shows 100 kw R. Nacional in Bogota but listed as inactive (in 1971). Maybe R. Nacional is name of a network or other stn that was being relayed by Voz de Cartagena? Maybe not even a Colombian. Help! (Sherman)

1016 -WEST GERMANY Mainz 10/21 0500-0515 w/GG sung upbeat mx, GG amnts. (Straus)

-WEST GERMANY/TURKEY A regular pattern has emerged here: Turkish dominance around 0000, West German dominance by 0200-0300, then equality of sigs from 0400 to Turkish dawn, when the German has another hour or so by itself until fadeout around 0700. Noted 10/20 w/weak het from presumed IA on 1015. (Connelly)

1025 -COLOMBIA City and slogan unk. Noted AN MM 11/3, usually too weak here especially weekdays w/KDKA/WBZ on. Somebody please ID it! (Sherman) See last weeks column. (ED)

1030 -MEXICO XBCR Mexico, DF w/whistle and R. Centro ID 0205 MM 11/3. (Pejza) * Atop several other Ssers w/R. Centro IDs, in WBZ SP, 0530, 10/27 on car radio, near Worcester, Mas. (Connelly)

1034 -COLOMBIA Cali, "Radio Pacifico" has been IDed here, a regular. (Sherman)

-PORTUGAL Porto, 11/2, in talk 2345+ actually stronger than 4VEH and hitting the latter, interesting on the SB-620 screen. (Sundstrom) * 0130-0145 PP pers, OM ancr, poor 10/31. (Straus)

Nov. 8 and 91 degrees outside - no way I'm typing anymore of this this after-
- gonna jump on the Honda and ride - hopefully I'll finish in the morning !!

1034 -UNID Strong het against 4VEC. Tough to pull thru enough to ID. Is this Portugal? 2400 10/27. (Hagan) Portugal most likely. (ED)

1035 -HAITI 4VEC Cap Haitien good w/rel mx and talk in SS at 1023 4VEH ID on 10/26.

1050 -MEXICO (?) Golden Oldie program similar to that of XEPRS, in // (Strentzsch) fact, I believe this may have been a tape from XEPRS. Hrd an ad for a record offer 0640 11/1 to send money to Hollywood, Calif. Could this have been XEB? Pgm was definitely in EE. (Wiseblood)

1052 -ENGLAND BBC difficult in sideband splash from 1050. 0630 10/30. (Hagan)

1055 -COLOMBIA La Voz del Centro, Espinal, 0615-0630 ID as "Radio La Voz del Centro" ads, SS vocals, OM ancr 11/3. (Straus)

1061 -PORTUGAL Norte in well w/jazz program 2321 10/20. (Connelly)

1069.5 -COLOMBIA HJAH Barranquilla, fantastic S9+ sig, slight het and splash from 1070. Clear ID "Emisora Atlantico". (Sherman)

1079 -UNID Possibly Bremen. This stn not positively identified. W/song "Every Highway" in EE. Pgm language seemed to be FF. (Hagan) I'm beginning to think there is something new here or someone has substantially upped power, but I've seen nothing listed. (ED)

1088 -ENGLAND BBC Crowborough w/EE mx 0607 w/WBAL QRM. 10/31. (Straus) * Fair to good at 2320 on 10/20. Man talking, not in EE. Has been stronger on previous occasions. (Connelly)

1090 -DOMINICAN REPUBLIC Santiago S9 w/vy slight QRM 0925 11/3. Had mx, spots, clear "Radio Amistad" IDs. (Sherman)

1097 -CANARY ISLANDS Las Palmas S9 w/IS 0655 10/27. Easy w/3WE off, but slight low het probably from Madrid, which I still need. (Sherman)

-CZECHOSLOVAKIA (Tentative) Vy strong sig here: female vocalist w/Aretha-type soul style w/piano, language not identifiable. At 2318, 10/20. (Connelly)

1100 -ANTIGUA ZDK St. Johns, fair then gone at 0904 s/on said this is Zay-Day-Kay Radio from St. John's, Antigua then out. 10/25, 2nd wanted country that day.

-COLOMBIA HJCN Bogota, R. Reloj good at 0658 10/20 also mention-/(Strentzsch) ed R. Musical, ID as "Esta es Radio Reloj y Radio Musical". (Strentzsch)

1115 -MOROCCO Talking in AA 2235, fair w/fast fades 10/23. (Waterman)

1124 -UNID IS noted from 0327-0330 fade on 10/28, good at times. Taped for later ID by local experts. (Connelly) The Yugoslav sked to s/on at this time, is-//1133. (ED)

1133 -YUGOSLAVIA 11/2, tentative w/mx 2340-2350 then all talk to 0000 when sig seemed to disappear (fade or s/off?) although carrier could still be detected w/BFO thru 0030. Sure didn't sound like SS, have to replay tape. (Sundstrom) * IS to 0330, then talking in unid language, mx. Much QRM from WNEB./strom 10/25. (Waterman)

1150 -DOMINICA Radio Jumbo (Roseau? Address?) Jumbo sig 10/30, 0300-0330 all FF, couple EE records, mention of Martinique and Guadeloupe. (Schiller) * Noted nightly with very good sigs, in FF w/much US rock. **Generally dominates freq even on non-auroral evenings.** (ED)

-MEXICO XERM Mexicali, BC booming in 0203 MM 11/3, w/mentions of Mexicali and XERM ID. (Pejza)

-VENEZUELA YVIV Punto Fijo "Ondas del Caribe" 11/3 at 0330. Weak but steady thru null of mess. (Selleck)

1155 -UNID Probably YSCF El Salvador the Sser w/many ads, frequent use of reverb, 0218, 11/6. Good level, some WCOP splash. (Connelly)

1160 -DOMINICAN REPUBLIC Radiolandia S9+ no QRM readable 0930 11/3. What city is this and what power? Not in old IA log. (Sherman) 5 kw in Santiago. (ED)

-UNID IDs as Radio Aeropuerto; 0102 s/off on 10/20. (Selleck) Is this EST or GMT? All reports should use 24 hour clock and be in GMT. (ED)

1165 -ANTIGUA Caribbean Radio Lighthouse good, vy stable 2300-2315 11/3 w/mx followed by "The Gospel of Christ". (DeLorenzo) * 0025-0035 EE QM w/rel discussion. 10/31, country #42. (Straus) * Strong w/rel pgm in EE 0046 10/28. (Hagan) * EE rel talk on 10/20 at 0111; weak w/WVVA splatter. (Selleck) * Me too, hrd 10/16, ex sigs 0200 in EE, religious. (Schiller)

1169 -USSR (Tentative) Strong het on WVVA, no audio extractable, 2315, 10/20. GPN info indicates a new megawatt Russian here. (Connelly)

1173 -COSTA RICA TICA fair w/slow IA mx, male ancr, in SS, 1 khz het on freq, 0232 on 11/6. (Connelly) TIBB reportedly now here. (ED)

1185 -NICARAGUA (Tentative) YNCK probably the strong Sser hrd w/mx of varying tempos, male ancr, 0240 11/6. (Connelly)

1187 -INTERNATIONAL WATERS R. Caroline/Mi Amigo 0115-0130 TC as GMT, EE and US rock. vy good, remember R. Caroline North on 1520 verified in 65, 10/31. (Straus)

DOMESTIC X IGEST



editor: Wes Boyd
960 W. Liberty
Girard, Ohio 44420
216 545 4543

At the request of my wife, had best list my work sked again. Seems a few of you have tried to reach me while I was at work.

Monday---OFF Wed: 2PM-8PM ELT Friday: 2PM to 8PM Sunday: 5:30AM--2PM
Tuesday---OFF Thur:4PM to Mid. Saturday: 9AM--8PM

The Thursday sked is in effect until spring, as it is every winter. Best nites to catch me home are: Sunday (can't miss a MM!!) Monday (can't miss football!!) Wed. (thats DDXD type-em up nite) & Sat. (with a 5:30AM sked stay home!!). Should something earth shattering develop, you can try to reach Jerry Starr at 216-534-1394. Don't even try Silliman, he's now going out to work at 5AM, so goes Beddie Bye about 9PM anymore!!

TEST RESULTS: (This issues "joke" section):::

- 860 KNUJ 11/3 Hrd. poor by: (Ross) (JS) (HWB)(TRS)(ELK)
1000 WIOO 10/27 Not hrd., (WM)
1450 WMBH 10/27 Tent. by (WM)
1170 WHLW 10/31 Tent. by (JS) Not hrd. (HWB)

r c's

1st. MM: 950 KFSA per list (Ross)(ELK) KBTA 1340 per list (Ross) KGH 790 tent. by (Ross)

1st. Sat: WSHN 1550 per list, w/ ET before & after (JS)

4th. MM: KAMA 1060 w/ TT & full ID (BW) WJDY 1470 per list (BW) WMPL 920 tent. (TRS)

These are all on LAST MM, instead of 4th. MM (per DS)

WCBG 1590 w/ TT 0001-0015 WCCR 1580 w/ TT 0300-0315

WJDY 1470 w/ TT 0015-0030

And a change:::

WEEZ 1590 is 4th. TUESDAY at 0045 w/ TT

And an unlisted one:

WSHY 1560 ending anncd. f/c 11/3 (1st. MM) 0116 (JS)

changes

- 580 KFXD ID alternative address: Box 107, BOISE 83701 (ELK)
1320 WHIE GA address is DRAWER 6, per call during 10/19 PoP (EH)
1410 KQV PA Now all nx/sx & carries NHL Penguins, ex: KDKA (TRS)
1490 WBCB PA Carries NBA 76'ers, via WIBG feed. (WCAU 1210 has dropped all SX except Philly Flyers, WIBG carries all the rest, except NFL Eagles which are on WIP) (TRS)

1590 WEEZ PA Late 10/31 or early 11/1 vandals toppled a tower(s) per brief nx item on WCAU TV. Seemed ETing afternoon of 11/2, but was poor at my QTH where they usually dominate, perhaps low power & non-DA. (TRS)

CHANGES FROM THE F.C.C.---

1380 WHMI MD seeks call WZYQ

Call Grants:

910 KRRV TX granted call KIKM

1080 WPNS WV granted call WZTQ

1240 KWJB AZ granted call KPPR

1440 WBYB NY granted call WNYG

1590 WNOS NC granted call WGLD

***and the 1500 CP in Wharton, TX gets KANI, call of deleted station there!!!

Other changes:::

950 KNFT NM seeks 5Kw daytime

1090 WQIK FL seeks 5Kw DA-D on 1050.

1110 KDRY TX seeks 5Kw daytime

Applications::: (for new stations)...

1000 Ky Danville...seeks 1Kw days

1070 MN Cambridge...seeks 10Kw day

1130 KY Murray....seeks 250wt day

1190 KMCW seeks 500 wt. daytime

1290 WIRK seeks night power of 5Kw.

1540 TN Benton...seeks 250w. days

1590 KY Inezseeks 1,000w days

Before the goodies, best mention the "cut date" was 10/27 this issue--HWB

sunset & evening

- 590 WROW NY 11/1 Noted weak w/ EL, *Mx Radio 59", 1535 w/ WARM off (HJH)
740 WMBG VA 10/28 U/ CBL w/ RR 1720, "Radio 74" IDs. (HJH)
820 WOSU OH 10/31 Good 1646-1657 w/ OSU Campus nx, etc. (Semko)
UNID ?? 10/31 U/ WOSU-poor sig.-1648-1700, EZ mx, WAIT??(Semko)Yep-HWB
850 WKIX NC 10/27 Local ads 1727, Raleigh/Durham wx, then C&W (EH)C&W?-HWB
950 WRYT MA 10/31 In & dominating o/ super sig. from WPEN--1630 (HJH)
1080 WKLO KY 10/29 In WTC null 1836, good sig. at times w/ many ads (HJH)
1110 WSWF NY 11/1 Atop channel at 1715 w/ wx (JHR)
WMBI IL 11/1 In mess, noted w/ s/off annct. 1728 1/2 (JHR)
WJSM PA 11/1 This noted w/ WMBI, w/ s/off 1728 1/2 (JHR)
WJML MI 11/1 Weak u/ WBT 1739 w/ C&W "Country Caravan"(JHR)
1120 WYOL NY 10/27 Hrd. w/ nx 1630-1700, then ID & C&W mx (EH)
1140 WJCV NY 10/27 This hrd. 1600 w/ ID, then nx (EH)
1210 WILY IL 10/31 Noted this 1829, w/ s/off--no SSB (SEMKO)
KGYN OK 10/31 Suspect this w/ C&W mx 1830-1835 w/ WCAU (SEMKO) Yep-HWB
1300 CBAF NB 10/30 FFC, YL anncr. w/ nx, 1817. My logs show this is affiliate of CBC FF net (Kauf)
1440 WHHH OH 10/30 Noted 1830 w/ Ohio Edison ad, MOR instr. mx., & PSA feature. (is this anywhere near you guys??)(KAUF) Is you a wise guy, or something??--Tis all of about 5 miles from me & I'm in the lobe--HWB
1510 CJRS PQ 10/30 Male anncr. in FF noted at 2058 (Kauf)
1550 KRGO UT 10/30 Suprisingly atop 1944 w/ s/off sans SSB (WM)
KQXI CO 10/31 U/ KKJO w/ s/off 1914, no SSB. Think gave a studio address in Englewood, Co. (WM)
1570 KLEX MO 10/31 Good at 1841 w/ s/off, said was "voice of ??????" and FM 106.3 promo (WM)
KVRA SD 10/31 Traces of this u/ SSer after KLEX s/off 1841 (WM)
1580 KPFD AR 10/28 Fair 1840, ending nx from Ark. Net., local ads (HJH)
KPIK CO 10/30 W/ C&W 1905, strong, hrd. weaker on 10/28 (HJH)
KTUF AZ 10/30 In w/ s/off 2003, invites listeners to tune to KNIX FM for "Mx of America", no SSB (HJH)
1590 WHPY NC 11/2 Excellent sig. ending nx from Ac, s/off 1700 atop freq. w/ WEEZ on low power/ or off. Was o/ a couple other s/off's, then WQQW took over the freq. (TRS)

midnight to sunrise

WSNG - AM - 610 KC

- 550 KSD MO 11/1 Loud w/ MOR this AM, no sign of usual pests-WGR/WKRC(JS)
670 KBOI ID 11/1 Tent. on this, but must be the EE talker w/WMAQ all AM after 0200+ (JS) Nope..WLS 890 minus WBBM 780 puts spur on 670--HWB
740 WNBG VA 11/3 ET w/ mx & JX IDs 0340-0400+ (JS)
+810 CKJS MB 10/27 Hrd. first time here, 0125-0145 w/ nice sigs. & EL mx., IDs in EE & FF, severe CKLW slop (ELK)
*850 WEAT FL 11/3 Nicely atop 0106, w/ s/off for AM/FM (104.5), SSB. They requested comments to POB 70. (TRS)
WWJC MN 10/27 In well, on "DX test for the IRC" 0310-0320, test not listed in DXN (WM) Everyone in NRC hrd. them long ago, besides-who would test for the P,O, (IRC)--HWB
860 KONO TX 10/27 Call surfaced 0048 o/u KOAM/XEMO to RR mx, KOAM's C&W took over freq. 0050 (BW)
900 WKDW VA 11/3 On ET w/ C&W 0021-0030 & off (ELK)
920 WNPL MI 10/27 Noted on ET w/ TT 0002-0004, easy (ELK)
930 WTAD IL 10/27 W/ WQCY FM promo 0052, TC, AM ID, to EZ mx, atop (BW)
940 UNID ?? 10/31 Loud ET-TT-OC noted 0150, off 0308, not one ID (JS)
970 WREO OH 10/29 ET started b-4 0030, TT/OC to 0116 ID then RR/OC to 0145, loud & o/ WWDJ (EH)
*990 WIBG PA 10/27 S/off 0059 to return 0500. Went back to regular pattern/power about 10/20. Think was running non-DA while antenna site was re-built (DS)
1080 KRLD TX 10/27 W/ ABC nx "Perspective" 0121-0154, ID at 0200 (BW)
1150 WDEL DE 11/3 Atop freq. 0006-0008 w/ state nx (ELK)
+1170 KVOO OK 11/3 Noted s/off 0105 thru OC of WWVA who was on/off OC most of AM (thru 0145 anyhow). Also tent. of WCOV s/off 0100, but was too difficult to tell. Since when has WWVA moved back to NM SPs (TRS)
UNID ?? 10/31 Nx w/ female anncr 0030, u/ WWVA. also weak Tfer (JS)
1190 WQWB IN 10/27 S/off 0117 after nx/wx/sx...anncd. s/on as 0400 (BW)



THE WORCESTER LONG DISTANCE M.W. RECEIVER

J.A. Worcester*

- *1230 WJBC IL 11/3 ANing this AM, possible log change (JS)
- 1240 WTAX IL 10/27 Possible f/c, hrd. 0147-0200 w/ TT & IDs @ 5 min.(DS)
CFLS PQ 10/27 Atop freq. 0324-0327 w/ RR mx, promos in FF (DS)
WJEJ MD 11/3 This one atop 0518 w/ sx scores (JS)
- 1260 WVVW WV 11/3 Noted 0600 w/ s/on & ISSB (JS)
- *1270 WEIC IL 11/3 This back here w/ RR on RS, evidently NSP again (JS)
- 1280 WKST PA 10/27 ET w/ RR 0202-0210+, OC/talk, poor audio (DS) 11/3 ET & TT 0130-0300+ w/ 0200 ID, second weak TTer unid (JS)
- 1310 WLOB ME 10/27 Hrd. an ID at 0250, after RR mx (EH)
UNID ?? 10/27 AT 0158, "You are listening to a test..." then audio was cut at station. Was followed by "It's a Burning Faith" then gone(EH)
- + WRR TX 11/3 Atop most of AM w/ NIS net, local nx live on half hour. noted on past 0400 (HWB)
- *1340 WDCR NH 10/27 Noted a jingle ID at 0210, log change (EH)
WJRI NC 10/27 TT w/ ID every min.,0019-0026, strong (DS) is a f/c-HWB
- * WNHC CT 11/3 Loud 0532+ w/ "All Nx-All Morning",then area nx (JS)
WMBO NY 11/3 Faded atop WNHC 0546 w/ Community Affairs & promo (JS)
- *1360 WSAI OH 11/3 S/off 0308, anned. s/on as 0530--log change (JS)
- 1370 UNID ?? 11/3 ET-TT-OC-RR almost killing WSPD, noted 0120, off 0152, but no IDs.-suspect WNCB by strength & DF (JS)
- 1390 WEAM VA 10/27 W/ ET 0319. anned. as ET, & JX IS 0323 (EH)
- 1450 WMOH OH 10/27 JX ID 0235 & 0236, pop mx, atop freq.-- Had 2 TTers here and one might have been WMBH DX. (TRS)
- +1490 WMGW PA 11/3 Loud at 0528 w/ s/on--log change (JS)
- 1550 KGMO MO 10/27 Another pesty ET w/ FM audio & RR (DS) 11/3 Another RS type ET w/ RR 0145-0305+. A pain, the #3%&* ruins a good freq.(JS)
WYNX GA 10/31 ET/TT/OC/MX 0115+, anned. as a PoP (JS)
- * KOKA LA 11/1 Atop w/ RR 0210+, used to go off 0100, and was louder than usual (JS) How come I never hear this thing??!--HWB
- 1560 KQYX MO 10/27 OC/ET 0218-0232, Call popped up 0225 (BW) 11/3 Another ET/RR noted 0206 into long OC 0220-0258, JX ID then more OC 0300+. A pest ruins another good freq. (JS)
KKAA SD 10/27 Prob. this 0221-0233 w/ C&Wish mx w/ rel. themes. Faded down at 0230 so missed any IDs (DS) 11/3 This on ET-TT-OC w/ ECHO-y IDs as usual.--0220-0300+ (JS)
- 1570 UNID ?? 10/27 TT/OC/mx w/ distorted audio 0100-0300+. Killing CKGM most of the time, no IDs at all (DS)
- 1590 WGOB VA 10/27 Noted 0017 w/ the start of still another fun filled & exciting ET, r/c, w/ underground mx stuff (DS) WCTW 1550 RADIO
- 1600 CHNR ON 10/31 ET-TT-MX 0345-0430+, several jx IDs (JS) NEW CASTLE
- * WPOM FL 10/27 Not noted this AM per Shafton tip (Are you kidding?--HWB) so maybe on new nite DA (DS) New DA should have more power your way than old DA, but less than the non-DA thing--HWB
- KATZ MO 10/27 Noted 0143 w/ soul mx, on day pattern w/ ET (DS) 10/27 w/ ad, call ID/ CST TCs, & RR--didn't seem R&B format (BW)
- WTYM MA 10/27 ET noted 0130-0300+ w/ TT/OC/MX, ID at 0300 said this was routine transmitter tests (DS)

Well group, thats all of it this time. Have noted the super NW skip has gone bye-bye at present. However w/ the temps. of late it's gotta return. Today (11/6 it's 80 degrees), and temp. ain't helping the noise one bit.

Actually DXed on 11/3 & sunset on 11/4 so am finally sitting at an even 1400 hrd. & an even 1000 taped..now for another 30 veries to put that over 1000 & I'll quit DXing & go play w/ my trains in the basement--HWB

- REPORTERS:: (Hey, JWB...where you been old buddy??--HWB)
- | | | | |
|-------|-----------------|------------------|------------------------|
| HJH | Harry Hayes | Gouldsboro,PA | Zenith T-0 & SM |
| EH | Eric Havemann | Pequanock,NJ | |
| ELK | Efrahm Klutz | PARMA, OH | HQ180 & antenna |
| KAUF | Malcom Kaufman | Flushing,NY | Grundig 2000 & DA-3 |
| WM | Wayne Murphy | LOUISVILLE, KY | R 390-A & looped |
| JHR | Jeff Ross | Rockaway Park,NY | SPR4 & SM |
| TRS | TOM Sundstrom | Willingboro,NJ | HQ150-SM/SPR4-LW-/etc. |
| DS | Dave Schultz | New Castle,NM | HQ180 & SM |
| SEMKO | George Semko | Buffalo,NJ | DX150 & LW |
| BW | Bruce Winkelman | Greensboro,NC | HQ180 & dead SM |

Almost outta room. no space to list JS or myself.. but nobody cares!!!!

+++THE NEW NIGHT PATTERN BOOK IS COM ING!!!! +++++
(I hope!!...HWB)

Later, H&B
H.W.B.

In the design of a long distance medium wave receiver, the obvious problem of obtaining sensitivity sufficient to amplify the first circuit noise to room volume is so easy to achieve that it hardly ranks as a major design characteristic. Selectivity and strong-signal-handling capability, on the other hand, are overriding design factors of great importance and merit the utmost in study and creativity. The factor of selectivity in its application to the standard superheterodyne receiving circuit is a two-part problem. Selectivity ahead of the converter must be sufficient to reject the unwanted responses that are peculiar to the superheterodyne circuit, and post-conversion selectivity is required to reject signals close to the desired one in the crowded medium wave environment. This latter problem will be considered first along with a breakthrough solution that provides selectivity in excess of that deemed possible previously by even the "ideal" selectivity characteristic of a vertically sided rectangle!

Substantially all of the close-in selectivity is obtained in the intermediate frequency amplifier. In conventional practice, the pass-band of this amplifier must be wide enough to pass the side-band information required for intelligent speech and to pass, as well, an optimum signal-to-noise compromise on music. This means a 6 db bandwidth in the range of 4.5-5.0 kHz. Obviously, then, from a selectivity standpoint, there will be little attenuation of an undesired carrier one, two, or perhaps even three kHz from the desired signal. This usual practice, however, fails to make use of the unique properties of the standard A.M. double sideband signal. The I.F. amplifying system in this receiver employs separate amplifiers for the upper and lower sidebands, each of which passes the carrier with 6 db attenuation. These amplifiers feed a novel detection system called DIFFERENTIAL SIDEBAND DETECTION.** Figure 1 diagrams the essentials of this selectivity breakthrough. It will be noted that two transistor detectors, Q1 and Q2, are used in a series output connection. The bias batteries shown indicate that just enough opening bias is applied to each base to start collector conduction and thus provide efficient detection. Actually, batteries are not used but are shown to simplify the explanation. Transistor, Q1, is driven by the USB amplifier, and Q2 by the LSB. The detected audio signal appears across R1. First consider what happens for an on-tune 455 kHz signal. In this instance, the signal from each amplifier drives the transistors equally, and the collector currents of the two transistors are driven in unison as they must be in a series connection. Obviously, the detection process is completely normal. The DC voltage at point X then stays constant at 1/2 the B-plus supply.

Now consider what happens when the signal is at 456 kHz. In this case the signal applied to Q1 is very strong, and that applied to Q2 very weak. Q1, therefore, wants to draw a heavy current but is prevented from doing so by Q2, which is drawing only a weak collector current. The voltage across Q1 must then drop until its output current equals that of Q2. An inspection of a typical transistor collector family will show that this means the voltage across Q1 will be only two-tenths of a volt, or so, indicating that this transistor has become an essential short-circuit and contributes nothing to the output. The audio output across R1 will now be determined by the weak signal from the LSB amplifier

*R.D. 1, Frankfort, NY 13340
**patent application pending

AUDIO

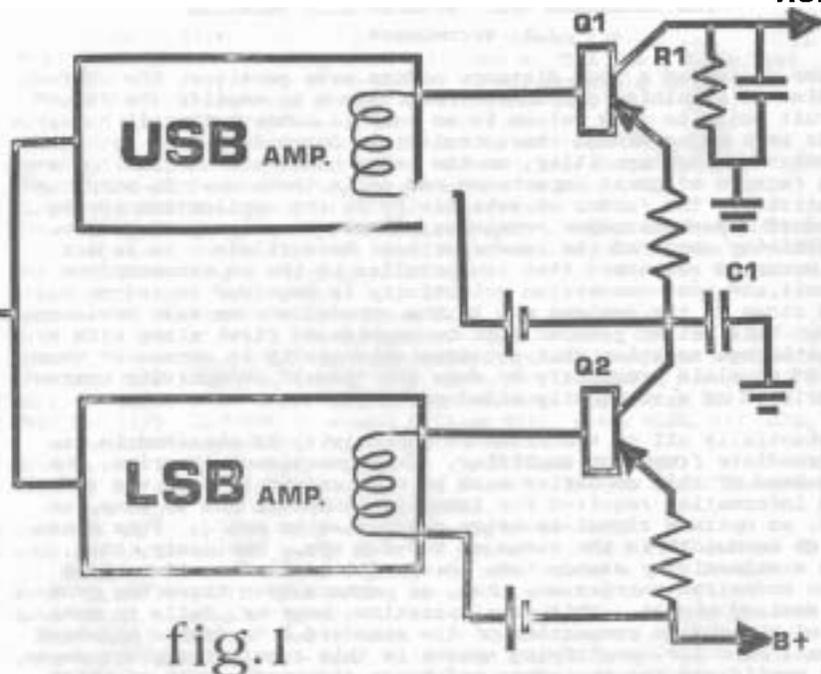


fig.1

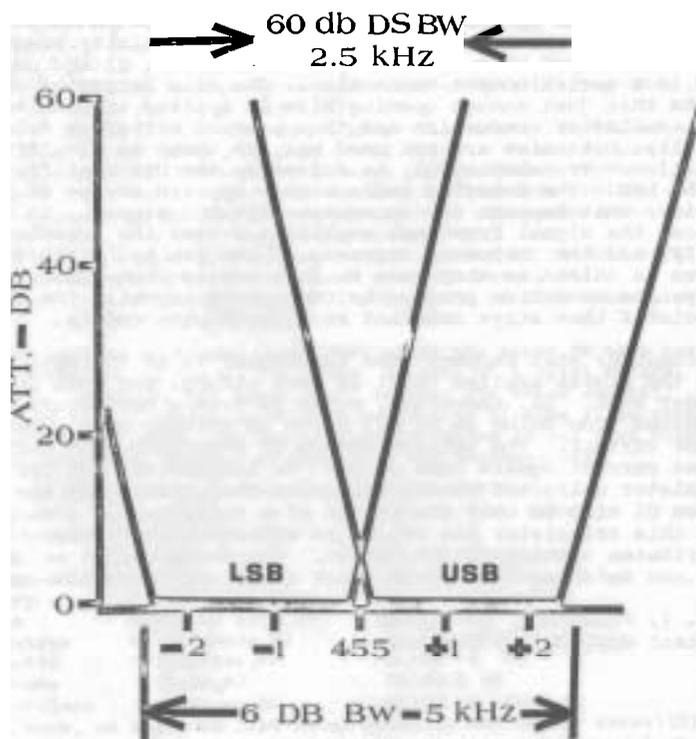


fig.2

and will respond only to the amount of 456 kHz signal that manages to permeate the LSB amplifier. Obviously, for a 454 kHz signal, the process reverses. To obtain a clearer picture of what is happening, consider [Figure 2](#).

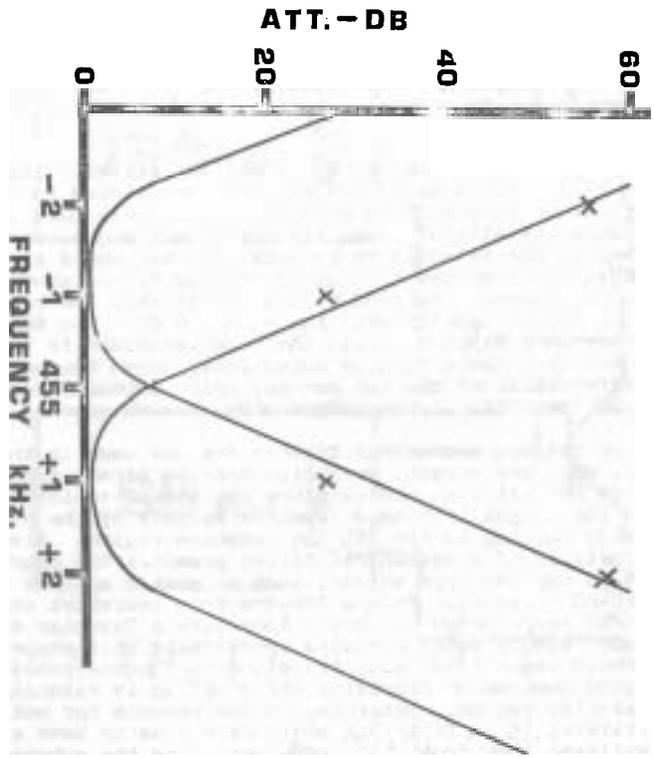
Figure 2 is a stylized picture of two mechanical filters with shape factors of 2 bandwidths of 2.5 kHz, and positioned so that the carrier is attenuated 6 db in each filter. The in-band ripple that is characteristic of these filters is not shown, as it is not involved in the selectivity process. It was noted above that at 456 kHz, the response is that of the LSB filter showing an attenuation of approximately 50 db and at 454 kHz, the response will be that of the USB amplifier, also about 50 db. The 60 db bandwidth is now only 2.5 kHz, while the 6 db bandwidth is 5.0 kHz! It will be noted that the effective selectivity curve becomes the overlap or differential of the two curves, which accounts for the nomenclature DIFFERENTIAL SIDEBAND DETECTION.

For a number of reasons mechanical filters are not used in the actual receiver. For one reason, very high carrier attenuations at 1 kHz removed are not all that useful since the signal-to-interference ratio in the output will be determined largely by the high energy sidebands falling in the 455 kHz response region. Also, the shape characteristic of a mechanical filter promotes the production of overshoots on impulse type noises, such as static and the "buck-shot" of sideband splatter. From a freedom from overshoot standpoint, the ideal response curve should look like a Gaussian error curve. Cascaded single tuned circuits approximate this shape closely but would require too many transistors. Double tuned circuits are a good compromise providing the coupling is maintained below the flat-flat region. Returning to the reasons for not using mechanical filters, it is felt that most DXers like to have a pleasant, realistic tone from their receivers, and the substantial inband ripple that some of these filters have militates against good audio response because of the frequency distortion that results. Perhaps all of the above reasons are made academic by the realization that no suitable pairs of mechanical filters are currently available to the writer's best knowledge. For use in communication receivers, it is desirable to attenuate the carrier as much as possible, typically 25 db. In the circuit described, more than 6 db attenuation would cause amplitude distortion at high modulation percentages. To have special pairs for this purpose designed would be prohibitively expensive and time consuming at this juncture.

In the receiver described, each sideband amplifier comprises 16 transformers arranged in double tuned pairs plus a single special transformer to drive each detector. These filters have individual shape factors of 3 providing a 6 db bandwidth overall of 4.5 kHz and selectivity as shown in [Figure 3](#). The attenuation at 1 kHz removed is approximately 30 db and at 2 kHz removed about 60 db.

The preceding paragraphs have been addressed to the post-conversion selectivity problem and have described a novel breakthrough detection system to greatly facilitate the reception of foreign broadcasts on split frequencies. Selectivity prior to the converter is also very important to eliminate the various spurious responses that are unwelcome guests in the super heterodyne reception process. The effective selectivity provided is a function of the number of tuned circuits and the "Q" of same. This may sound like an easy problem to handle, but the fact that the circuits must be tunable over a 3-to-1 frequency range and that the gain and

fig. 3



bandwidth should remain constant over this range becomes a tough nut to crack when as many as three tuned R.F. circuits are employed. The use of inductive tuning would simplify these problems somewhat, but such systems tend to become mechanical monstrosities and the realizable "Q's" are very low. Accordingly, this receiver uses a standard four section gang with three sections providing preselection and the other tuning oscillator.

A tuned circuit in which the capacitor is the variable element has an impedance characteristic (gain) that rises linearly with increasing frequency and a bandwidth that also increases linearly as the frequency goes higher. The above assumes that the "Q" remains constant, which is substantially the case. If three such circuits are cascaded, the gain would vary 27-to-1 over the band. Thus, if the receiver were designed properly at the high frequency end of the band so that AVC control took hold with a 1 to 2 microvolt signal, the receiver would be severely sensitivity-limited at the low end of the band necessitating constant adjustment of the volume control as signals of varying strength are received. On the other hand, if the receiver were designed in the manner noted above at the low frequency end of the band, the noise between stations at the other end of the band would be intolerable, and with the receiver going into severe AVC on noise alone, the signal-to-noise ration would be affected adversely. Likewise, in the case of a 27-1 variation in bandwidth over the tuning range, if the "Q's" were made high enough to provide meaningful spurious signal rejection at the high frequency end of the band, such as would be provided by a 10 kHz bandwidth, the bandwidth at the low end would be only 37 kHz; not suitable, at all, for the reception of broadcast type signals. If the design situation were reversed with 10 kHz bandwidth at the low end, at the high end the resulting 270 kHz bandwidth would amount to virtually no rejection at all.

In view of the above, it is evident that if the exceptional spurious rejection possibilities of three tuned preselection circuits are to be realized, a design breakthrough is necessary to assure simultaneously both constant gain and constant bandwidth over the extent of the tuning range. There are other engineering reasons for doing this that are not of sufficient general interest to explain in detail. Figure 4a shows a conventional double tuned circuit with capacitive coupling. Since there is a 3 to 1 frequency coverage by the variable capacitors, their capacitive variation must be 9-to-1. Thus, with a fixed coupling capacitor, the coupling coefficient is 9 times as high at the high frequency end than at the low; hardly the constant condition we are after. If the coupling capacitor could be replaced by a pure inductance as in Figure 4b, the coefficient of coupling becomes constant since the tuning inductances do not vary. This would produce constant gain if ordinary tuned circuits were involved, but in order to achieve constant bandwidth, it is going to be necessary in some manner to progressively reduce the "Q" of the tuned circuits as the frequency decreases. When this is accomplished, the coupling reactance must be made to vary 9-to-1 over the band rather than the 3-to-1 attained by the coupling inductance of Figure 4b in order to maintain constant gain. This is accomplished by adding a coupling capacitor as shown in Figure 4c. If the resulting series tuned circuit is resonated at a suitable frequency below the lowest frequency covered, say 400 kHz, the necessary 9-to-1 reactive coupling change can be realized to achieve constant gain. In actual practice, however, this circuit as diagrammed in Figure 4c is not realizable because the necessary inductance becomes so large that the unavoidable distributed capacitance of the coil causes it to

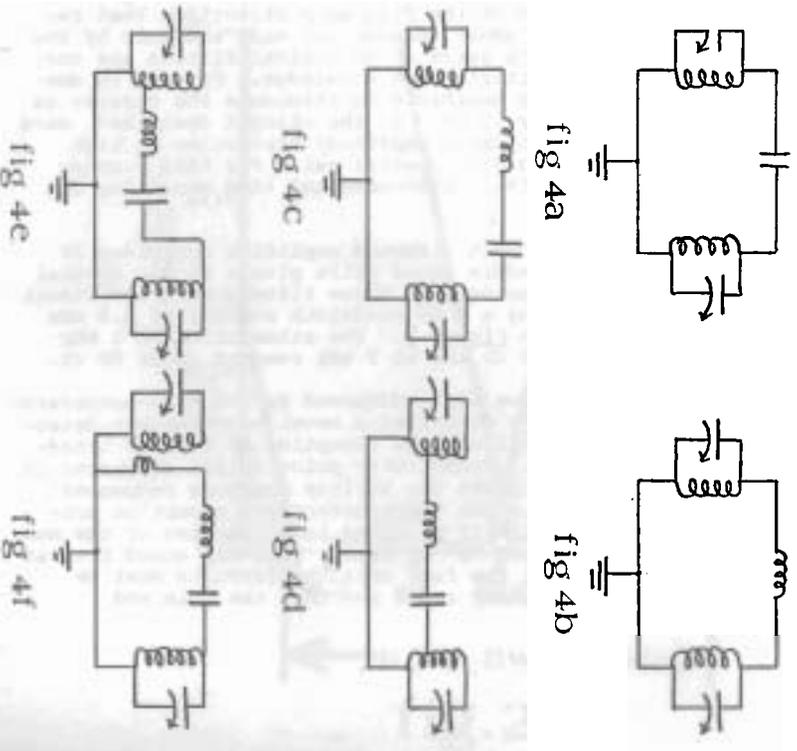


FIG 4

resonate in the band covered. To eliminate this problem the coupling network can be tapped down on the tuned circuits as shown in Figure 4d. The proper tap selection will permit the use of a coupling inductance sufficiently low that its self resonance falls well above the highest frequency covered. If this proper tap should fall at $N/3$, to pick an example, the same result could be achieved with the same coupling values by tapping the first coil at $N/9$ and by returning the coupling network to the top of the second tuned circuit, as shown in Figure 4e. The reason for doing this is that it now permits us to simultaneously realize our twin objectives of constant gain and constant bandwidth as far as the second tuned circuit is concerned. Figure 4f shows such a circuit where the secondary of the first tuned circuit looks like approximately 1000 ohms which suitably loads the second tuned circuit at the low end of the band because the series coupling network is approaching resonance while at the high frequency end, the reactance of the series tuned circuit is nine times higher which essentially decouples the 1000 ohm loading resistance from the second tuned circuit. It is hoped that this explanation will serve as a sufficient disclosure of the principle involved since the mathematical treatment, while uninvolved, is rather extensive.

It is now appropriate to examine how this principle can be applied to the complete R.F. amplifier. To meet the sensitivity requirements of a long distance receiver, it is necessary to employ an R.F. amplifier stage to mask the relatively high noise content of the converter. Also, to obtain optimum signal-to-noise ratio, only one tuned circuit should precede the amplifier in order to minimize insertion loss, with the remaining two tuned circuits located between the R.F. amplifier output and the converter input in a reactively coupled arrangement. Figure 5 shows such a circuit.*** In the case of the tuned antenna transformer, T1, the series coupling capacitor becomes the longwire capacitance-to-earth. The correct 220 pf value is provided by a 70 foot longwire, approximately. A front-panel switch permits adding additional capacitance in series with the antenna to compensate for still longer longwires. Antennas shorter than 50 feet are not recommended. Low impedance inputs such as those from a loop preamplifier have the 220 pf capacitor added by a switching arrangement as shown.

Transformer, T2 in the output of the R.F. amplifier, is broadbanded to cover the entire MW band without tuning. It couples the correct resistance through the coupling network to tuned transformer T3. T3, in turn, couples the proper resistive loading through the last series network to T4. Inspection of the measured image rejections gives a good idea of the superior rejection characteristics of this amplifier. These are shown in Figure 6, and reflect the excellent basic "Q's" of the tuned transformers, T1, T3 and T4. These are enclosed in 18 mm ferrite pot cores that provide realizable "Q's" in the circuit of 160 at 1600 kHz and this "Q" is reduced progressively by the circuitry described, as the frequency is reduced, to approximately 55 at the low band end. The effectiveness of this circuit in providing constant bandwidth is demonstrated by the nearly constant image rejections over the extent of the band. Presently available receivers, even those in the \$10,000 area, have image rejections that are not only considerably lower to start with but slope downward badly as the frequency is increased.

Ferrite core material can be criticized from the standpoint of R.F. saturation on very strong signals. The result is that detuning

***patent application pending

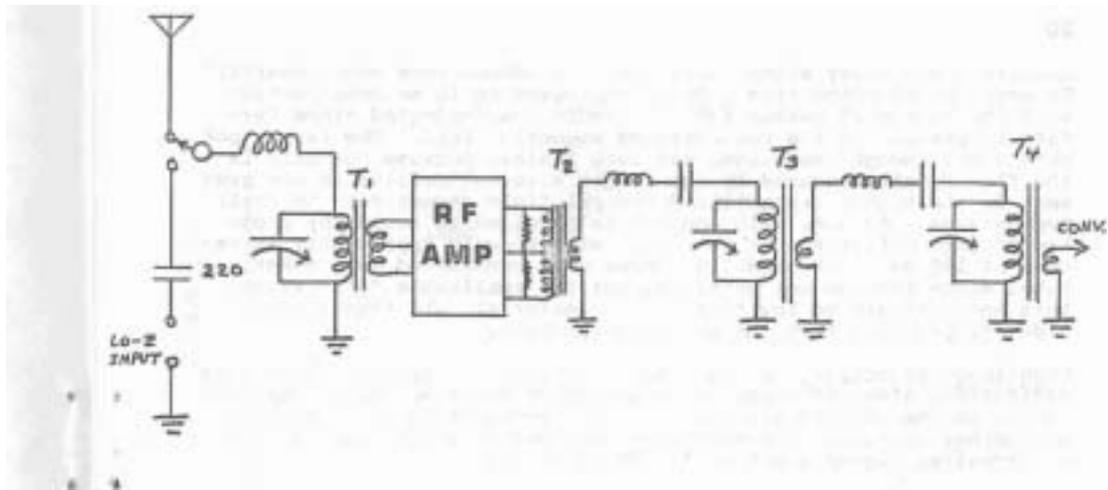
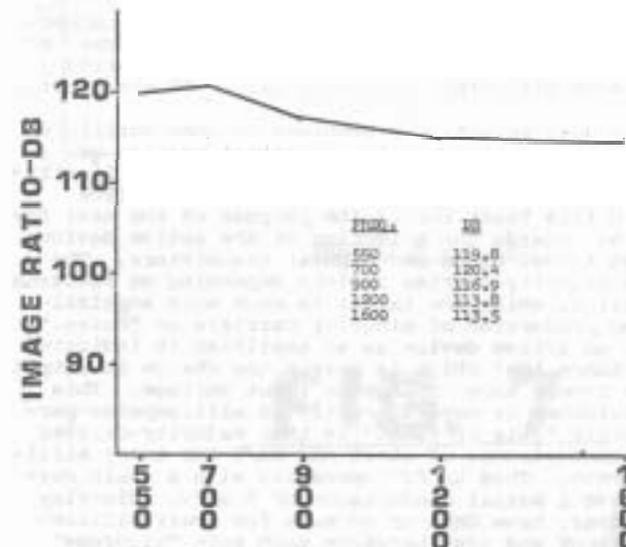


FIG. 5 RF TUNER

FIG. 6



FREQ — kHz

results under heavy signal drive which produces some non-linearity. In order to minimize this effect, the standard 10 mm construction with the "dumbbell" bobbin for the winding was rejected since ferrite is present in the concentrated magnetic field. The larger pot core type, though expensive, was used instead because not only is the flux density reduced by the larger size but ferrite is not present in the highly concentrated central field except for the small tuning slug. An R.F. gain control is provided to avoid any problem of this nature that might occur with signals appreciably in excess of 110 db. Powdered iron cores were considered as a substitute, since they do not saturate, but the realizable "Q's" with this material are so low that ferrite material, all things considered, provides much the better compromise.

High image rejection, such as that indicated in Figure 6, is a good indication, also, of superior rejection of other spurious responses closer to the desired signal. With the receiver tuned to 1000 kHz, no further spurious responses were observed at any frequency with an undesired signal input of 126 db (2 volts).

Perhaps at this point a look at the receiver's sensitivity is appropriate. The antenna coil circuit, shown in Figure 5, is matched to the longwire's impedance which is in the order of 1000 ohms. Most receivers, on the other hand, match to an input impedance of 50 ohms, which just happens to be the impedance of most signal generators. This permits a direct connection between signal generator and receiver thus avoiding the loss introduced by the intervening dummy antenna which must otherwise be used. In addition, matching to the input of the first active device by the antenna transformer results in a greater voltage stepup when you start from 50 ohms than can be realized when the starting impedance is 1000 ohms. All this means that the sensitivity measurements for publicity purposes are much better in the 50 ohm case, but the actual performance with a real, live longwire is very bad because of the large mismatch. In view of the above, two sets of sensitivity measurements are provided in Figure 7; one showing the sensitivity when measured through a standard IEEE dummy and the other made by direct connecting the signal generator through a 50 ohm matching transformer to the receiver. Curve B of Figure 8 is applicable when comparing sensitivity measurements with other receivers having 50 ohm inputs.

Having considered the dual selectivity problems in some detail, we can now turn our attention to the equally important problem of strong signal-handling capability. Referring to Figure 5, it will be noted that the R.F. amplifier is indicated only as a "black box." What to put in this black box is the purpose of the next few paragraphs. First, as regards the selection of the active device, the choice is between tubes, FET's and bipolar transistors. The first two are simple majority-carrier devices depending on electron flow for their operation, while the latter is much more sophisticated, relying on the production of minority carriers or "holes." The effectiveness of an active device as an amplifier is indicated by its mutual conductance (G_m) which is merely the change in output current that results from a known change in input voltage. This can be labeled in microohms or more directly as milliamperes-per-volt. A fairly accurate "rule of thumb" is that majority-carrier devices have mutual conductances of about one ma/v for every milliamperere of output current. Thus an FET operating with a drain current of 5 ma would have a mutual conductance of 5 ma/v. Minority carrier devices, however, have G_m 's of 40 ma/v for every milliamperere of collector current and are therefore much more "vigorous" active devices. A bipolar transistor, accordingly, with a

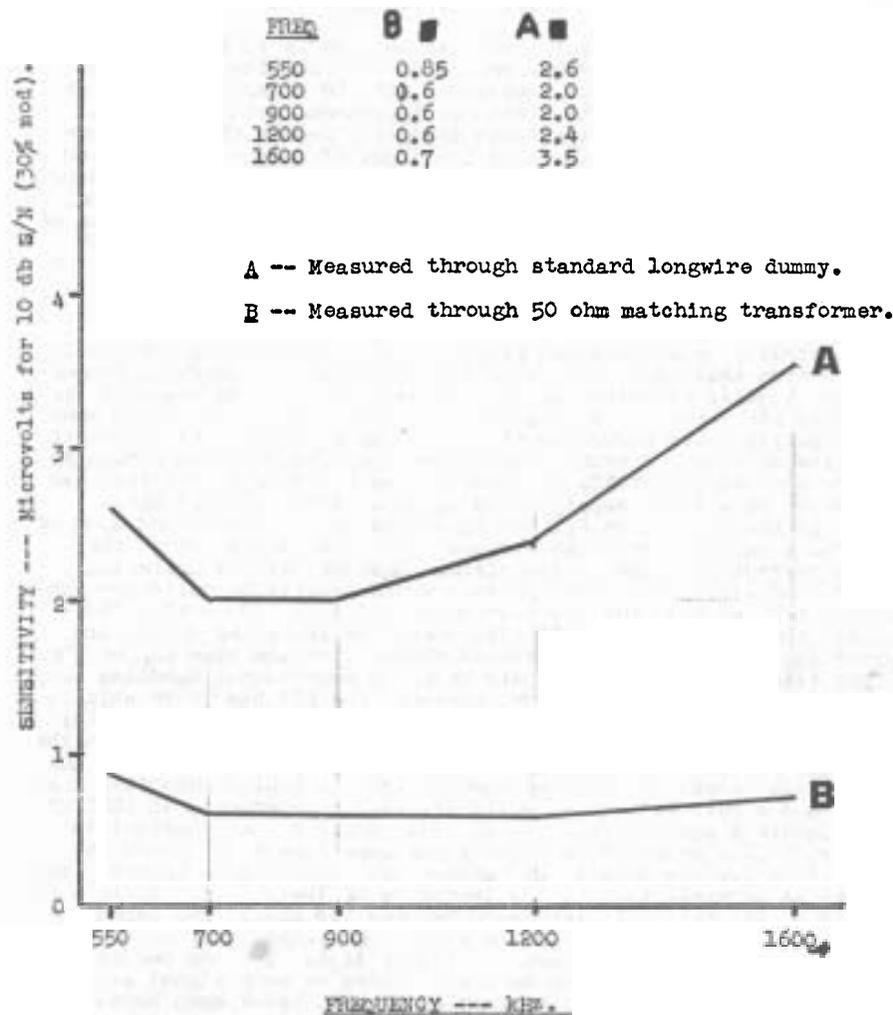


FIG. 7

collector current of one milliamperes would have a G_m of 40 ma/v.

The other major distinction that must be made is in regard to the relative input impedances of the two device families. Tubes and FET's have very high input impedances, of the order of megohms at MW frequencies; but as the frequency increases further, various transit time and feedback effects gradually reduce this impedance until at 100 megacycles it is of the order of only a few thousand ohms. A bipolar transistor, on the other hand, has a low impedance even at MW frequencies. As a matter of fact, it is equal to the current gain divided by the mutual conductance. Thus for a beta of 40, the input impedance becomes 40/40 ma/v or 1000 ohms. At 100 megacycles, the input impedance would still be 1000 ohms providing a transistor type was selected whose beta remained at 40 at this higher frequency.

The preceding paragraphs are preparatory to considering the widely held notion that FET's have superior strong-signal handling properties to bipolar transistors, even at MW. If a strong signal is applied to the input of an active device, basic overload occurs when the negative going excursion of the signal is sufficient to cutoff the flow of output CURRENT or when the positive drive is enough to reduce the output VOLTAGE to zero because the drop across the load impedance equals the supply voltage, or a combination of both. Thus, in the case of an FET having a 5 ma drain current and a G_m of 5 ma/v, a negative going peak signal of 1 volt would cutoff the drain current. A bipolar transistor, however, with a collector current of 1 ma and a G_m of 40 ma/v would experience collector current cutoff with a peak negative signal of only 1/40 volt. Obviously, therefore, at say 100 MHz, where the input impedances are essentially equal, and the devices driven from the same tap on the input transformer, the FET would have a strong-signal handling superiority of nearly 40. On MW, however, the FET has to be able to handle a much stronger signal to merely break even with a bipolar device because the high input impedance FET must be driven from the top of the tank while the bipolar is tapped way down at a much lower voltage level. To develop some figures, a tuning capacitance of 50 pf and a coil "Q" of 160 would provide an impedance, at 1600 kHz of QX where X equals $1/6.28 fC$ of 1989 ohms. Z then equals $1989 X 160$ or 318,240 ohms, which becomes the impedance that drives the FET. To drive the bipolar at optimum signal-to-noise, however, requires an undermatched driving impedance of $V_{beta} X R_e$. If beta is 50 and R_e 26 ohms, this impedance becomes 184 ohms. The impedance ratio then becomes $318240/184$ or 1730. The turns ratio or voltage ratio is then the square root of 1730 or 41.6. The net result of all this is that an FET can handle 40 times as much signal as a bipolar but has to handle 41.6 times as much to break even because of the different voltage drive levels so at MW it is pretty much of a standoff as far as signal handling capability is concerned.

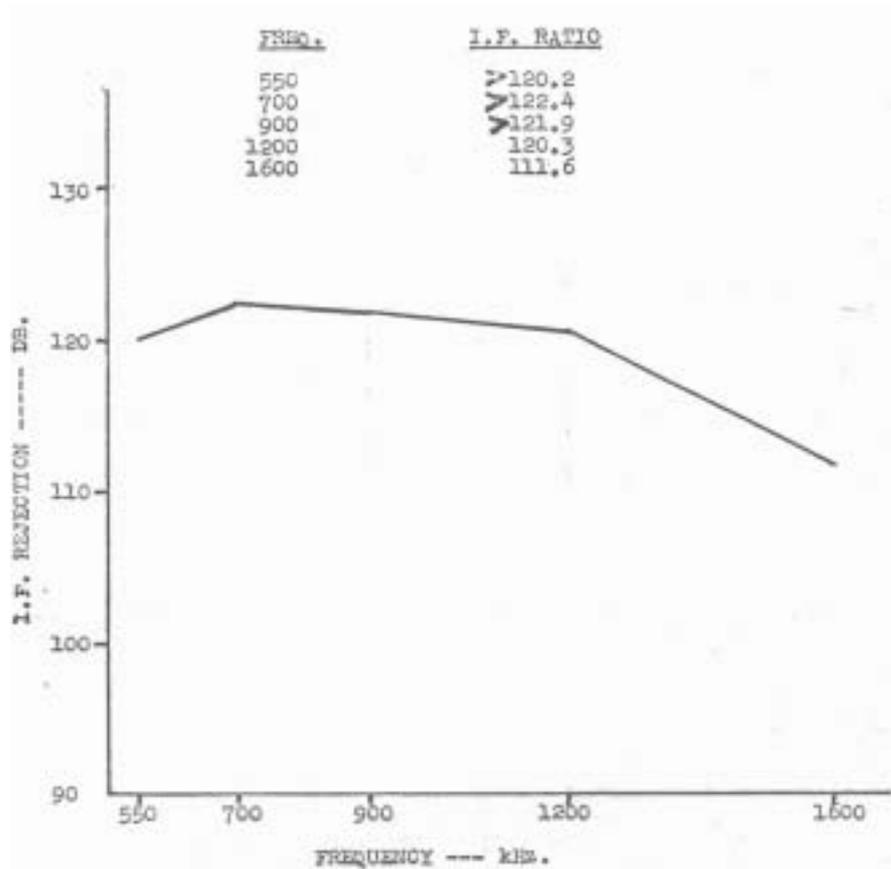
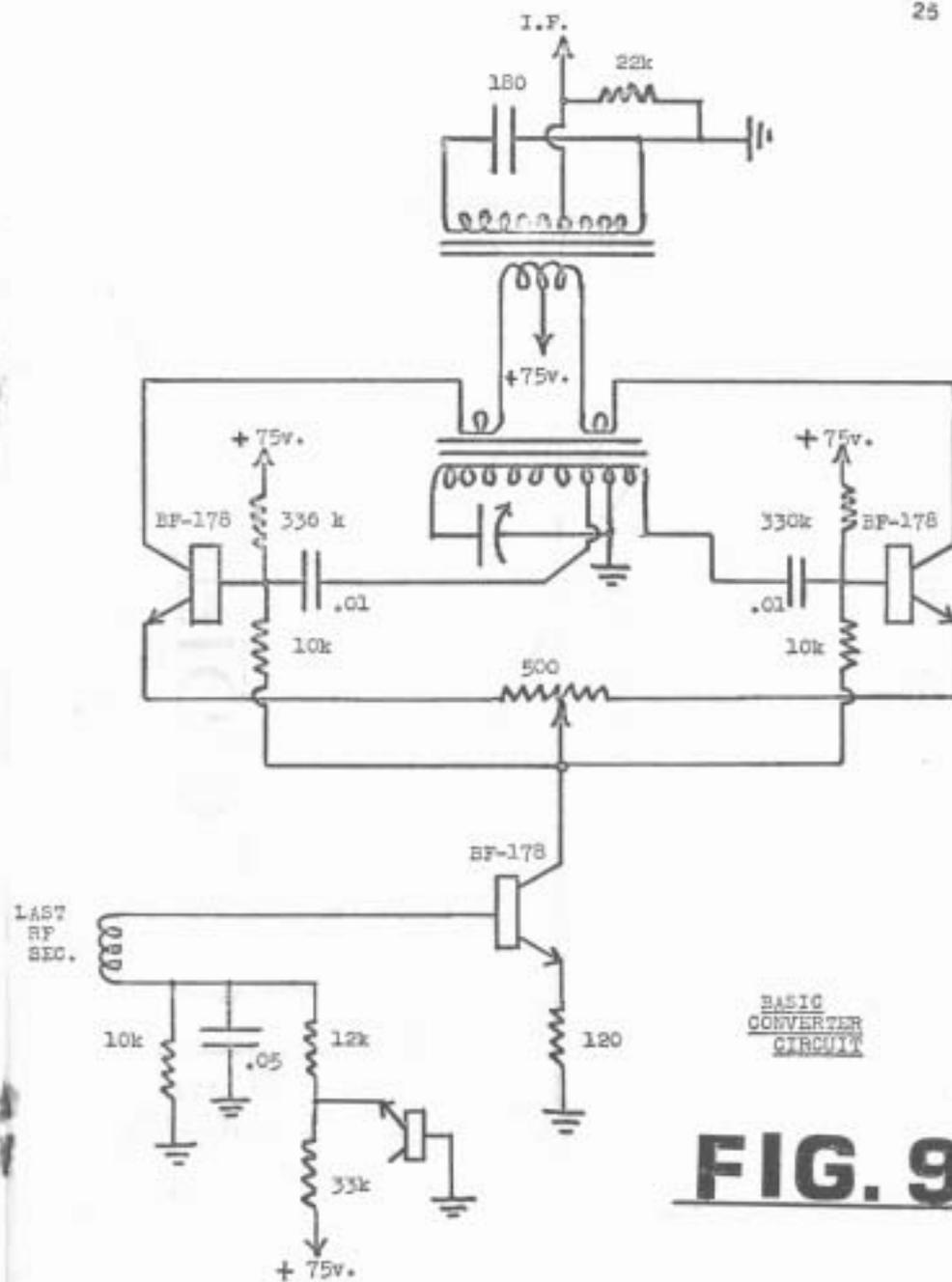
The preceding paragraph becomes academic if the R.F. amplifier takes the form of a pair of Class AB push-pull transistors. The current cutoff condition in the output then never occurs and the only drive limitation takes place when the output voltage is reduced to zero by positive drive peaks. This drive limitation can be thwarted by increasing the voltage supply and by decreasing the load impedance. In this competition the FET is hopelessly outclassed. The much higher mutual conductance of the bipolar, 40 ma/v versus 5 ma/v, permits the use of one-eighth the load impedance to obtain a given amplification and the much greater variety of available types permits the use of high voltage transistors

suitable for MW use. The R.F. transistors used in this receiver, Siemens BF 178s, were developed basically for use as television horizontal sweeps. They have a maximum collector voltage rating of 160 volts which allows them to operate safely from a 75 volt supply. Their cutoff frequency is 120 MHz, which permits them to operate satisfactorily in the MW band if beta selection is employed to reject those above 75. Class AB operation, noted above, is really Class B in the audio sense as just enough quiescent current (2 or 3 ma) is allowed to flow to prevent crossover nonlinearities under strong signal conditions. The transistor's maximum collector current rating is 50 ma, but to draw anything approaching this in straight Class A operation would degrade the signal-to-noise ratio because of the high shot noise produced in the output.

Using the push-pull connection as noted above and with 47 ohm emitter resistors, the R.F. amplifier can handle a 2 volt, 100% modulated antenna signal before clipping occurs. Compare this with the signal handling capabilities of a tube amplifier. With a G_m of 5 ma/v and operating with 5 ma plate current, a 1 volt half-peak signal would clip, which means .707 volts peak rms or .354 volts carrier assuming 100% modulation. Since the tube is a high impedance device the antenna transformer would have a gain of (typically) 5, making the antenna signal .354/5 or only 71 millivolts! This signal handling limitation can be increased to 0.5 volt by the application of AVC to the R.F. amplifier which makes it possible to listen to a signal this strong but is of no help to the DXer who is interested in a weak signal on an adjacent or split frequency where the AVC has essentially disappeared because of I.F. selectivity, and the R.F. attenuation is minimal.

Moving on to the converter circuit, three of the high voltage transistors mentioned above are used in a balanced push-pull arrangement. This balanced operation cancels intermodulation products to the extent that none could be found at 20 kHz removed at maximum signal generator settings (2 volts from one, and 0.1 volt from the other). The common-mode I.F. rejection is also outstanding as noted on Figure 8. A simplified schematic of the circuit is shown on Figure 9. Not shown are the various trimming, padding and temperature compensating capacitors. In addition to the latter, oscillator drift is minimized by operating at unusually high power; 75 supply volts at 20 ma total drain current, and by zener regulation of the bias applied to the bottom transistor. Temperature drift at the high frequency end of the band is minimized by making a portion of the trimming capacitance max-negative and at the low frequency end by doing the same to a portion of the padding capacitance. Both of these compensations combine in the middle of the band to produce a drift characteristic that is somewhat over-compensated as shown in Figure 10. This drift is entirely unnoticeable in practice as the receiver can be tuned to a station from a cold start and no observable improvement in tuning occurs after a period of time. This satisfactory performance of a free-running oscillator makes unnecessary the use of complicated and expensive synthesis or digital AFC schemes that introduce problems of their own.

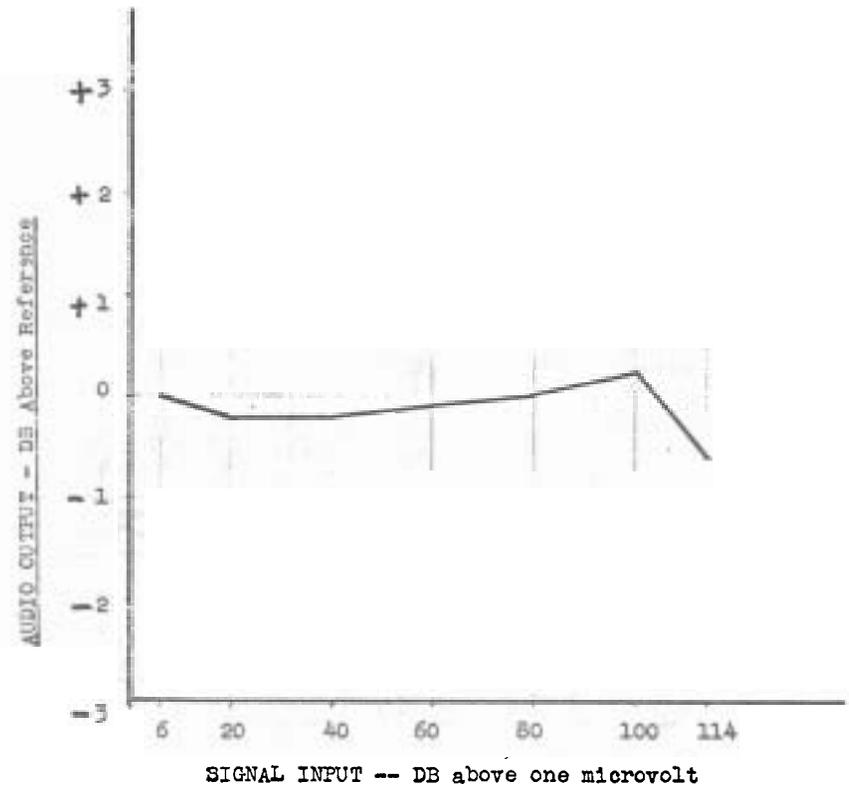
Between the I.F. output shown in Figure 9 and the dual sideband I.F. amplifiers is a 455 kHz amplifier module, the primary purpose of which is to provide AVC control. This is shown in Figure 11 and is probably the most sophisticated AVC control system available today. The 9 volt supply shown at the extreme left supplies forward bias to each of the 5 silicon diodes across each of the 5 tuned circuits. The voltage applied to the diode across the last transformer is that of the two series connected silicon diodes at the

**FIG. 8****FIG. 9**

extreme right, about 1.1 volts. The voltage applied to the other control diodes increases progressively on account of the added voltage drop across each of the 10 ohm resistors. These forward biases applied to the anodes are bucked by the positive AVC voltage applied to the cathodes, as shown. With no-signal this voltage is approximately 2 volts and with the application of signal this voltage is made to drop by the amplified DC of the detector output until with 0.1 volt applied signal (100 db), the AVC voltage has dropped to about 1.1 volts. Thus, as the signal increases the decreasing AVC voltage permits the loading diode on the first transformer to conduct first, since it has the highest positive anode voltage, and the other diodes conduct sequentially as the signal strength continues to increase. This results in an output signal that remains essentially constant over the entire dynamic range of the receiver. This characteristic is shown in Figure 12. The attainment of AVC control by the process of "Q" reduction as just described is much superior to the amplifier bias change from the dual standpoints of dynamic range and freedom from cross-modulation.

A few remarks regarding the digital readout may be of interest. This operates by counting the oscillator frequency but displaying the signal frequency. This is accomplished by using presettable counters (74192) so that the count starts at 9545. After counting 455 (the I.F. frequency) the count reaches 10,000; but since only four digits are displayed, the 1 does not appear. After completing the oscillator count, the displayed count is now the frequency of the signal (in kHz). A crystal controlled clock circuit is used to initiate and stop the counting procedure. Since the individual cycles are counted but the display is in kHz, it would seem that a counting period of 1 millisecond is in order. This, however, presents a problem. There is no correlation between the time when an oscillator cycle begins and when the clock circuit initiates the count. Accordingly, the last digit fluctuates plus-or-minus one count, which of course, not only makes an accurate frequency reading impossible but is visually annoying, as well. To combat this, one more decade is counted (.1 kHz) but not displayed. This requires the counting period to be 10 times as long or 10 milliseconds. To further insure that the last displayed digit does not fluctuate, the crystal frequency is made a Hz or two high so that the count at resonance can fluctuate between 2 and 3, for instance, rather than between 0 and 9 which would produce a count reaction down the line. If the counting period is made 10 milliseconds, the off period is made this long, also, so that the display can be updated and the counter resets accomplished. The complete clock cycle thus totals 20 milliseconds or the clock frequency is 50 Hz.

In this receiver, the basic crystal-controlled oscillator frequency is 16 kHz. A divide-by-16 counter, 7493, reduces this to 1 kHz. This is followed by a 7490 divide-by-10 counter, connected BCD, so that the various conditioning pulses can be obtained from the remaining outputs. This is followed by $\frac{1}{2}$ of a 7474 flip-flop to provide the final clock signal of a 50 Hz square wave. The clock chain can be followed on the top line of the block diagram shown in Figure 13. Below this on the left is a discrete amplifier-limiter. The oscillator pick-off signal to be counted is applied to the input. The back-to-back diodes square this signal off so that there is no need for a Schmitt trigger I.C. The two amplifying transistors, being unidirectional devices, serve to isolate the steep front of the clock signal from affecting the oscillator's output. The gain provided by this amplifier permits the use of a low amplitude oscillator signal which permits additional decoupling of the



AVC CHARACTERISTIC

R.F. Gain Control Maximum.

FIG. 12

provides a 9 volt supply for the I.F. amplifier and auxillary circuits and a regulated 5 volt supply for the digital readout. The power consumption is 26 watts. The overall receiver dimensions are height - 5½", width - 11½", depth - 12".

The writer would like to thank Bob Mahrenholz for valuable help in adapting to the world of digital integrated circuits and also to list the following credits:

WIRELESS WORLD, December, 1971 — C. ATTENBOROUGH — "Displaying Frequency Digitally."

WIRELESS WORLD, November, 1974 — G. LOMAS — "Signal-Frequency Meter."

Lancaster, Donald E. — TTL COOKBOOK

NOTICE

Free license to use the novel features of this receiver is given to DXers who wish to construct for their personal use. If profit motives are involved, write for licensing details.

It has been the writer's experience that very few DXers are interested in doing their own construction. This applies particularly to something with this degree of complication. In view of this, six receivers have been built, aligned and tested. Each has had at least ten hours burn-in time on stations including TA's.

PRICE — \$795.00 each, plus transportation.

J.A. Worcester
R.D. 1
Frankfort, NY 13340

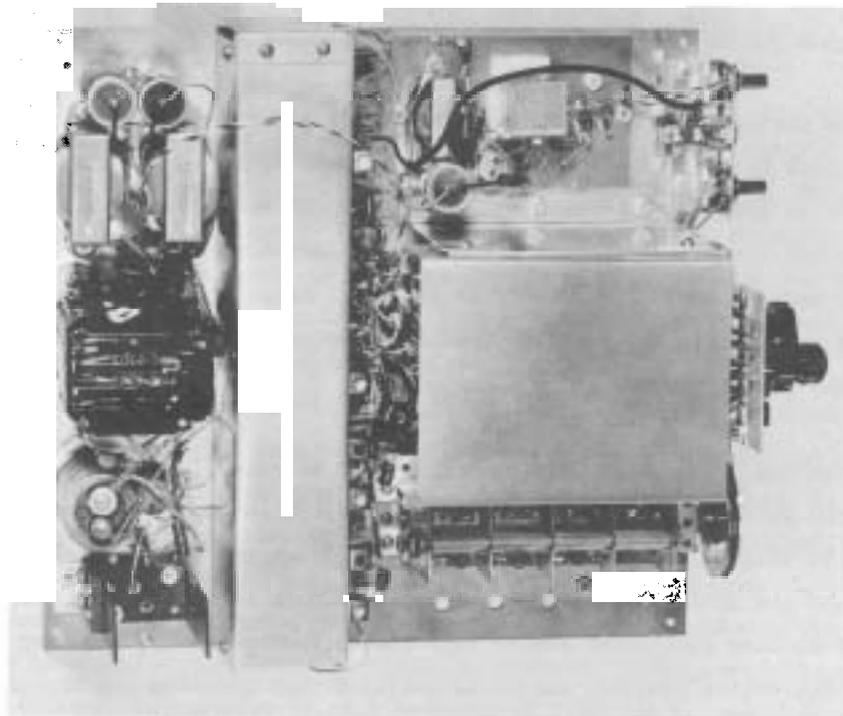


FIG. 15

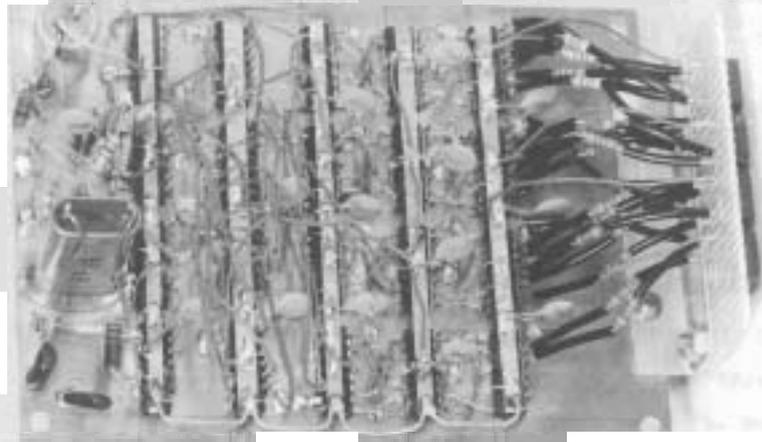


FIG. 14

MORE ON THE WORCESTER RECEIVERJ.A. WORCESTER

Since the photograph of the complete receiver was not available when the original material was submitted for publication, it was thought a few words to describe it would be of interest. The cabinet material is aluminum and the various panels are masked at the edges during the painting process so that a reasonably good electrical shield is provided. As noted previously, the cabinet dimensions are approximately 11½" length, 5½" height and 12" depth.

Looking at the front panel, the control at the extreme upper left is the ANT TUNING switch which compensates for variations in longwire characteristics. It will be remembered from the report, that the longwire antenna is part of the Antenna Transformer circuit and this control, which has 6 positions adds additional series capacitance to provide the required 220 pf. The switch position should be selected that provides the highest reading on the tuning meter for a weak station at the low frequency end of the band for the longwire in use.

Next to the ANT TUNING switch is the ANT SELECT switch. This is also a 6 position switch which permits the selection of any desired loop, longwire or beverage attached to the 4 antenna posts at the rear of the cabinet. These are selected as follows:-

<u>POSITION</u>	<u>SELECTION</u>
A	Loop L1 (or beverage)
B	Loop L2 (or beverage)
C	Longwire A1
D	Longwire A2
E	Longwires A1 plus A2
F	Disconnects antennas and grounds receiver input.

this switch should be left in position F when the receiver is not in operation to prevent possible damage from high voltage spikes from lightning and other sources.

At the center of the front panel is the digital readout display and below it the tuning control. As described in the report it reads to the nearest kilohertz. The large meter on the right indicates signal strength and is calibrated approximately in decibels above one microvolt divided by 10. Below the tuning meter on the left is the R.F. Gain control which is maintained in the extreme clockwise position unless distortion is encountered on very strong signals. For best reception of weak signals it is essential that this control be in the extreme clockwise position. Below the meter on the right is the A.F. Gain control. This is the conventional volume control and should be adjusted to the volume level desired. Between these two gain controls is the jack to accommodate headphones. The jack normally provided parallels stereo headphones but a jack can be supplied for monaural phones, if desired. In this connection, an external loudspeaker (8 ohm) is required (and can be supplied) and this plugs into an RCA type jack on the rear panel. Another RCA jack permits the operation of a tape recorder.

It will be noted that no heterodyne elimination control is provided and the elimination of this is made possible by the DIFFERENTIAL SIDEBAND DETECTION system which automatically provides a 30 db attenuation of a carrier 1 kHz removed and nearly 60 db attenuation of one 2 kHz away. Regardless of whether a Het Elim notch filter takes the form of a Twin-Tee, Wien Bridge or potentiometer-tuned network, the realizable attenuation is a theoretical 40 db if all components are precise and held to a 1% tolerance. Practically speaking, it will be less than 40 db and an unpleasant guest is an undesirable frequency distortion of the audio signal.

To the left of the main tuning control are the words PROPERTY OF. Below this, the name of the owner can be inscribed if he wishes. This personalization may serve as an effective deterrent to theft. However, if it is not wanted, this area will be left blank.

PUBLISHERS' CORNER.....

Lately there has been talk in the pages of IRCA's DX MONITOR about a possible merger of IRCA and NRC. The proposal has been informally made by one of that club's Directors. As in past efforts, the reasons cited for the proposal have been duplication of effort, and a poor position of one club or the other. In this case, the club in the "poorer" position is IRCA, whose membership has slacked from about 500 to about 300 while NRC's has increased from about 500 to almost 750 during the same period.

In 1968, the NRC underwent a crisis where its then publisher had to quickly relinquish his position, and, for a time, there was no one in sight to help out. At that time, merger was scuttled due to vociferous adverse reaction in IRCA, which then brought about more of the same in NRC. Thus, the Boston group took over.

The major differences between the two clubs have been small in some respects and large in others over the years. Both have similar columns, both have published a similar number of pages over the past two years, and, for a time, both had similar membership numbers. IRCA has an elected, democratic government while we do not. IRCA does not allow DX reportage within their equivalent of Musings, while we do. IRCA has a less stringent code of what is acceptable for print in the area of editorial comment by members. Governance, however, proved to be the crucial issue which divided the two clubs originally, in 1968, and, it would appear, again in 1975.

Most of the comments in IRCA's bulletin following the proposal's first airing have been concerned with governance. Comments as to information content, bulletin comparisons, etc., are purely subjective and preferential. The issue of governance stands as the major deterrent to merger. NRC has traditionally operated on the principle that those who do the work make the decisions, and that when someone else wants to take on the decisions, they also take on the work. In IRCA, democracy is paramount, with the result that often candidates for office have not performed any work for the club. The obvious possibility is that the individuals who do the work could lose complete control of it under the IRCA system. IRCA proponents claim that the NRC type of government could lead to abuse of power.

Certain allegations have been made that NRC has no constitution or by-laws. This is not true, as we have pointed out previously. In order to become incorporated under New Jersey law, we were required to have both. All of our editors of major columns and members of the publishing crew plus our fifth Director, Tom Sundstrom, have been a part of the revision and approval of these documents. Abuse of power can occur regardless of democracy, as we all well know, so that ceases to be a factor. In our eyes, the sole issue is whether or not democracy is necessary in a hobby club. In a majority of hobby clubs we are aware of, the type of democracy practised by IRCA is rare. Many operate as does NRC, while many operate with a limited and controlled democracy.

It is not our intent to take a position regarding a merger, as we believe that the proposal will die out within IRCA in its infancy if current sentiments are a guide. The fact is that of IRCA's 300-odd members, roughly 200 are jointly members of NRC. Secondly, there are probably some 50 more IRCAs who would under NO circumstances forsake their "principles" and join NRC, even should IRCA fold. Regardless, the difference is between 50 and 100 additional members for NRC in either case. When we consider our current status, this amount is marginal in terms of extra work. The workload could be divided some but perhaps not substantially. Therefore, we at HQ really have no substantive opinions on a merger. The concepts of governance would of necessity have to be compromised and negotiated so that neither absolute would win out, so we need not concern ourselves with that at this time. The comments of the membership on this subject in Musings is invited.





DEPARTMENT OF THE TREASURY

U.S. CUSTOMS SERVICE

LOS ANGELES, CALIF.

June 18, 1975

 REFERENCE TO
 PIN-4-0A:1:JH

Mr. Albert S. Lobel
 247 N. First Street - Apt. 27
 El Cajon, California 92021

Dear Mr. Lobel:

Your letter has made the rounds from the Border Patrol at San Ysidro to the U. S. Customs Service at the Border Station to the Regional Office of U. S. Customs Service in Los Angeles.

I'm pleased to certify that you did indeed receive the radio transmission and that your quote of the announcement is exact.

The broadcast system which you received in fact is a public service announcement which was introduced by the U. S. Customs Service in Los Angeles in order to facilitate the border crossing.

The low-powered radio broadcast system has an output of 100 milliwatts and broadcasts on 1600 kilocycles.

I thank you for your letter and I am most pleased to learn that you were able to receive it in your apartment in El Cajon.

Cordially,


 Jerome Hollander
 Public Information Officer

(THIS STATION WAS HEARD ON 2 JUN 75 USING MY DX 150 A & SAN SERINO LOOP.
 TIME WAS APPROXIMATELY 10:00 A.M.) CSL

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musings of the members

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5 Anthony St.

Provincetown, MA. 02657

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

ALAN DAVENPORT - 31 Madison Drive - Ogdensburg, New Jersey - 07439
 Well it looks like no one else has a 6BV8 tube either (see my Muse, 10/14, Vol. 43 #1), but it doesn't matter since I found a company which sells them regularly (not by special order only). That company was Burstein-Applebee. They carry all kinds of electronic parts & audio equipment. Their catalog is even thicker than Lafayette's. You might want to pick one up. Their address is Burstein-Applebee - 3199 Mercier - Kansas City, Mo. 64111. Still no DXing done, the reason: no other suitable RX. Once you've used an HQ-180 you're spoiled, hi! I did hear KFI COVERING CMQ Havana @ 4:05am on 10/24 on the DX-150A on a 10' LW lying on the floor below ground level! Ever since I got the HQ-180 I've been using the DX-150A as an entertainment RX on my night stand. I've never heard them that well even w/the SM-2! There was only an SAH. Well, since I don't really have anything to say I'll stop talking. I hope I get that tube soon because I can't STAND missing all those TESTs. Oh yes, my offer for the tube in the 10/24 Muse is canceled (of course). I don't think I'm over thirty. (You don't sound a day over 29, hi! -ERC)

WARREN M. POWIS - 3 Warrington Avenue - Wellington 4, New Zealand
 G'day! It was a pleasant change to welcome Norm Maguire on his N.Z./Australia trip. Wellington put on some typical severe gale winds for him, gusting to twice the legal speed limit! Recent DX: 9/23- UnID TT-1540 @ 400hz from 1 to 2:15 w/no IDs. Frequency check list gives WRCP, so I sent tentative report with request for possible test. KXEL & KPOL IDed over the 1540 TT @ 2. KQMB-590 fair @ 2:35, KMVI-550 good w/pop mx @ 2:40. 10/21- I heard KDAY-1580 ID @ 1:50, WLAC-1510 w/Dominican Family Bible ad @ 1:58, KPRK-1530 w/CBS NX @ 1, KTOM-1380 w/c/w & ID @ 1:10, KPAB-1110 w/al mx @ 1:15, KVOO-1170 w/c/w @ 1:20, plus CFRN-1260 w/MoR, CFRN NX 1:48-2:20 (report sent). Other DX sent to IDXD. Good DX to you all and tell ERNIE about it! 73 to the BX & 88 to the GX. It was good to see the photos of the mob at Hartford - it gives me an idea of what ye look like. How about a photo of all editors & publishing staff?

ERIC FADER - 23-35 Bell Boulevard - Bayside, New York - 11360

OK folks. This week, with daytime skywave going beserk, has been nothing short of INCREDIBLE! We'll get to that in a minute. 10/19- WELD-1270 new @ SSS w MoR 6:23-6:29 a/off. WKRL-1300 good for a relog, 6:30 a/off. NSVA-550 good -re-pattern change w/MoR, on top 6:38. PFCs on top of 1220-1230-1270-1310. WNSA-730 for a newbie w/a/off, ID by 106.3 FM mention, 6:45. TA hets, no audios, 6:50 & up. 10/20- CKSO-790 good 6:39, rr. WHFY-1590 now a pest, on top @ a/off. 10/21- WBJO/WDDL-1440 WRBX-1530 were the only a/offa IDed. UnID was someone w/voal SSS on 1530 strong @ 6:45. In zone are WBCW, WHYP, & possibly unkn WTHM. Also SSS-1460 6:45, could be WBCU or unkn WMBA, pest. These days, WDCS-730 usual at a/off w/announcement w/one ID at beginning which I missed every day, ran hymn 6:27-6:30 off, IDed abstractly, hi. (By comparisons of a/offa of WNAK etc. would you believe?) 10/24- 3:35pm & up- WHPA/WERA/WMIK-1590 all w/WQQW. Unkn WRDI-1580 w/WCRC, apparently no WSUP, so who had c/w? 1570: WBUX like a local w/uptempo MoR, WNTN & someone UnID w UPI, probably WEXT? were QRM. WQCH-1490 a/on is 5, not 6, by the way. 1440: WDDL, rare days, WNYG (former WBAB) w/callchange w/goepel, & SURPRISE! WJBQ-1440 Mo. surfaced 4:53 w/Masteradio SID. Local WVOX-1460 now has c/w. WQTC-1450 for a newbie in six-station mess. 1430: WTTT/WENE like a local, WWEL, WUJR in that order, 5:09-5:17. WALY-1420 new w/WX, WLNA & two rockers also there, this 5:19. 1410: WLSH Pa., WOKW Mass., ("OK"), WBZA N.Y. all new w/WPOP & other, WRLM? Time, 5:29-5:58. WEGP-1390 new w/ID @ 6pm. Who has women's NX on 1390, WFBL? WSYB topped 1380. WBOC

(Fader)

duly ided w/rr-1290 5:23, WPIT-730 new, s/off, easy w/local NX 6:31, then c/w. Unn CKRB-1460, FFC. More TA hets, less a udio, hi. CKCN-560, WLYN -560 day w/MoR & SIDs. WPRJ closest unheard & CJSO-1320, four more new-ies on 10/25. Note WACE-730 IDs as Chicopee-Springfield. WJTO-730, WIQT -1000 both new @ SSS 10/26, WESR-1330 unn, ditto WHEB-750. WIQT was my first on 1000 in daytime, wow. MM 10/27- WIOO no-sho on TEST, just an LA w/gospel. The rest will wait till next time. 73s.

SCOTT STRENTZSCH - 5206 Round Table - San Antonio, Texas - 78218

Greetings to all! I wrote this letter on 10/25, this AM was quite an interesting morn. I logged two new countries & my first TA, details later in report. Recent DX: 10/2- CKLM-1570 unn, good w/EE & FF mx u/o XERF; R. Capital-1120, unn, w/mx; ZDK-1100 possible w/religious mx 6:05, KEGG-1560 s/on @ 7; WPMP-1580 w/s/on, mentioned owner, 7:00; WLUX-1550 7:01, CBW-990 7:45 unn, but report taken; KSEO-750 u/WSB @ 8:06, 8:10 XEFG-840 @ s/on in SS. 10/3- 1:35, TIW unn w/EE mx; 4:43 WBT-1110, KFAB off till 5 - how does one get a verie from them? I sent a report, then a f/up - it's been three weeks. 6:04, WFIA-900 s/on; Cuba-1180 is R. Reloj Nacional w/time clicks, anyone know the call letters? 10/6- WWVA-1170 unn, should have taken report; unID-1605a, call is "RIB" in CW, is this supposed to be here or is it an LW harmonic? 10/11- R. Mil-1000 u/XEOY, mentioned San Jose; unID-820 10/12, WBAP off, K TSA-550 spur & something else. 10/12 PM- XMN-900, mentioned Monterey; lots of splits, best: TIWA-575, unID-1005, was HJDP; 1575 & others. 10/13- R. Caracol-1005 HJDP @ 1:38, unID-1510 WLAC off, SS IDing as @La Voz ---, muy radio"; WDL0-1470, I thought was only DL; 2:05 WMBD-1470 s/off, unID-1085a, het, maybe BBC. Musical-1080, HJFF, R. Libertad-1090 HOL 82 good! @ 3am. 10/14- R. Columbia-1525, TIEEAW. 10/16- JBC-700, first sounded like BBC, maybe BBC NX, country #20. 10/19- WHIE-1320, PoP, good o/KXYZ, report sent. 10/20- CKWX, province #6; R. Centro-1210, goof also La Voz Amiga ID, HJFF @ 1:57; R. Reloj-1100, HJCN, also mentioned R. Musical ID as "Esta es, R. Reloj-1100 HJCN, y R. Musical." 10/25- KBR5-1240 w/r/c & then @ 2:11, chanting-764, @ 2:20, Dakar-764, first TA, w/man talking in FF I think; also had wailing-chanting mx, country #21; 5:03 ZDK-1100, I was listening to WWWE for report & this pops in w/"This is ZAY-DEE-KAY Radio, from the island of Antigua" country #22. 73.

JOHN D. BOWKER - 14 Canoe Brook Drive - Princeton Junction, N.J. 08550

Greetings from the central portion of the Garden State. This is my first offering to the column so a moment of introduction seems appropriate. I'm an electrical engineer employed at the research laboratories of a major color TV company and, on weekends, work as a transmitter babysitter for WHWH-1350 (which is going 24 hours starting 11/3). My first AM BCB entry (that's dated) is 10/2/46 - it was my 57th station by then, all heard in Middlebury, Vt. More recently, once my son was old enough to show interest, we invested in some cassette recorders, & since then, have had a chance to travel through much of the central & north-eastern states recording IDs near enough to stations so the breaks are clean. He & I have IDs from about 1,000 stations now strung on a "master tape" end to end. At one sitting, they last about five hours; no duplicates but we have several from most stations that are different. It's fun to edit the tapes putting identical singing breaks from various stations together. (Does everyone do this?) Later on, I'll get my son (middle initial S) to fill you in from where he's in school at Valparaiso, Ind. HE & I compare tapes of the band on the same night from the two locations. (I get WOWO in N.J. better than he does in NW Ind.!) I'm wondering if we have enough members spread over enough territory to put together a listing of when stations change from day to night pattern or power & back again. Since such changes are usually quite audible or at least visible on an "S" meter, it would help ID the region from which a station is broadcasting - particularly if the station isn't copiable under another station. For instance, WHWH changes to a night pattern at 4:45pm during November. I could supply all of the change times if it were possible to put a listing together. (Welcome to the NRC, John, & we hope you will Muse again - and again! -ERC)

TWO WEEKS FROM THIS ISSUE IS A "SKIPPED WEEK". YOUR NEXT DEADLINE IN PROVINCETOWN, THEN, WILL BE WEDNESDAY, NOVEMBER 26 (Thurs. is a holiday).

HARRY HELMS - 115 West LeRoy Street - Fort Mill, South Carolina - 29715

October was a very good DX month here, with all continents but Australia logged, plus several good domestics. To DX: Turkey-1016 finally @ 10:33-10:54pm EDT, femme announcer, male vocals, dynamite signals at tune-in but rapidly faded into a mess, enough for a report & verie, hopefully. Oops, date was 10/23. On 10/25 it was all West Germany at the same time on 1016, so Turkey must have an irregular skew or the path from Ankara to NA must be erratic. East Germany-1043 also good on 10/25 from 11:50pm onward, pops & MoR. MM 10/27 featured some excellent WC reception, w/KNBR-680 well heard 1:21am w/Billy Graham, SID, & more religion @ 1:30am. This is quite rare here, yet was easy when I started BCB DXing back in the late 60's. Some stuff like KNX-1070, which should be easy, is simply impossible due to all the NSP junk on the channel.

Where will it end? Some SSS DX: 10/25- KIKR-900 doing s/off routine, studio & XR locations, etc. @ 6:45pm EST. 10/29, WANN-1190 atop WOWO on LW, s/off 5:30pm w/black announcer, seems to have about 45 seconds of a gospel tune by a femme announcer instead of SSB. 10/30- WOSU-820 4:56-5:10pm w/extended Ncast, first w/femme announcer, then w/"NX-75" & male announcer @ 5. WAIT was a problem. 10/31- WVOL-1470 o/WBIG on LW w/rr @ 6:11pm. WAGC-1560 w/SSB @ s/off 6:20. KQYX-1560 was left, Howard Cosell sports 6:21, into a high school FB remote 6:25, AM & FM IDs given. 11/1- Most welcome verie from KORL-650 for a one hour report of 10/6. Original report to address in NRC Log returned, so another sent to Broadcast Services. I didn't get the correct KORL address per my request, though. How about some other Carolina DXers reporting? Welcomes go out to Bruce Winkleman in Greensboro and Chuck Hafter in Chapel Hill. I'm a former resident of the "Hill". 73 & good DX to all.

HARRY J. HAYES - Star Route - Box 226C - Gouldsboro, Pennsylvania - 18424

EDT till 10/26; EST afterwards. I also object to the terms YL & OM, Ernie. I especially find the term YL demeaning. What do YOUNG or OLD have to do w/DXing anyway? I'm not an avid verie collector but recent veries received are one from WVIN-1380 N.Y. & a very nice confirmation from Ron Musco for the WSWG TEST a few weeks back. A letter from the CE @ WYVO-970 Pineville W.Va. says he MAY put on a TEST in Mar. or Apr., nothing definite yet. The CE seems very interested in NRC& wants to know more about it. Enough blab, two seeks of DX to get to. 10/21- 6:54pm WAUK-1510 "is. c/w. 7:30 tentative Monaco-1466 w/strong signal, SS-speaking woman playing instrumentals till 7:45, then talking in unk language, s/off @ 8 s/organ mx, no announcement, in almost every night. 10/22- WYNN-540 S.C. on late @ 7:43pm. 10/24- WSWF-1110 N.Y. w/FB @ 7:23, on late. 9:43, CKRB-1460 P.Q. w/FF. Where in P.Q. is this? (St. George de Beauce - ERC) 10/25- 6:55am WNAK-730 weak w/106w PSA. 7:18, WLKW-990 R.I. w/EL. 6:16pm, WNTY-990 Conn. excellent. 6:20 WGOE-1590 Va. 7pm, WGTG-540 Fla. s/off, in well. 7:15, WLIJ-1580 Tenn. s/off. 7:31, tentative WBBA-1580 Ill. s/off. 10/26- 1:25am, KOKA-1550 La. weak w/soul. 10/27- epm, WEEZ-1590 Pa. finally heard w/excellent signal: "You & me on the right side of the dial." 10/28- 5:20pm WMBG-740 Va. u/CBL w/rr "R. 74". 5:57, CHWO-1250 on w/pro hockey ad. 6:40, KFDP-1580 Ark. in well w/Van Buren Auto Supply spot. 7:12, KPIK-1580 Col. weak. 10/29- 6:36pm WKLO-1080 Ky. w/rr in WTIC null. 10/30- 7:05pm KPIK-1580 strong w/c/w. 8:03, KTUF-1580 Ariz. s/off "Mx of America" c/w, good signal. 11/1- 3:35pm, WROW-590 N.Y. weak w/EL, "Mx Radio 59", w/WARM off briefly w/XR problems. 8:23pm, YVLT-830 R. Sensacion Venezuela mixing w/HJJB. That about concludes it. (No, Harry, you're not the "culprit" - your reports are nicely double-spaced and easy to read and welcome! -ERC)

BOB McCOY - 4105 Washington Street - Lincoln, Nebraska - 68506

I've been an NRC member since June, so I thought it time to Muse. I'm 29, married, & currently have time on my hands. I have been DXing BCB since last winter, & am using a DX-150B & LW. Totals include 455 domestics heard, 37 states, & 11 countries heard. Rob Keeney was my guest here weekend o' 10/18 en route to Nebraska DX Association meeting in Kearney. He showed me where to find Globo & let me use his SM-2 to log KORL, so he's welcome here any time, hi! I met faces at Kearney to

(McCooy)
 go along with names and voices on the phone. I've been working MM & SRS mostly, & an adding regional catches daily. Recent loggings: 10/21-KOTA-1360 @ 9:16am w/WX; KSCB-1270 @ 9:56am w/market reports, & KRSL-990 @ 10:30am w/ads. 10/27-WGFL-920 @ 12:09am w/MM ET/TT & ID each minute; WNYR-1260 @ 11:51 w/local NX. 10/28-KLIZ-1380 @ 9:50am w/NX, trading post. 10/29-WOVO-1190 @ 6:54pm w/WX; KREX-1100 @ 8:39am mixing w/WVVE w/c/w. 10/30-KRWC-1360 @ 9:13am w/funeral notices; KOLY-1300 @ 9:47am w/ads. 10/31-WFRL-1570 @ 8:28am w/WX/WX/ads; & KVOX-1280 @ 9:22am w/ads & regional NX. Thanks to CPC for good work so far; KQYX TEST heard so well 10/6 that full 10kw must have been used. KBTN not heard same MM because of TT from KTQE. 73. (Very good Musing, Bob, and welcome to this section and to the NRC! -ERC)

MARTY WRIGHT - 1913 Jeanette Lane - Springfield, Illinois - 62702
 CX poor in this area lately but a few good but not outstanding catches since last Muse. Long sought after KSAL-1150 finally logged 10/10 12:45am w/clear SID & spot. Verie back in three days. I heard WMMN-1240 10/13 under strange CX. WTAX was on ET w/OC & WMMN was very readable for four minutes, 1:09-1:13am. WTAX's tower is directly in line w/Louisville & just four miles from me. Also 10/13 I snagged WINZ-940 w/WNBS 2:36-2:45am. WINN & WINZ back to back. WBBK-1260 good on r/e 1:01-1:08 w/some TT & info on tropical depression. 10/17-WROZ-1400 took over the frequency for a couple of minutes, 2:29-2:33am, then quickly gone. I finally heard KTOP-1580 10/19 8:54-9pm. Am I the last? Also 10/19 much needed ERWN-880 o/WCBS 7:47 to pattern change @ 8. They gave quite a spiel about the pattern change. 10/23 found CHX-1150 alone & strong 2:12-2:28am. Report came back marked "service suspended" & inquiry of local USPS revealed postal workers are on strike in Canada. Strike still on 10/31, so no use sending Canadian reports till it's over. WHIY-1530 good w/WCKY for r/e 10/23 2:45-2:50am. Back on 7/13 I heard WISE-1310 for six minutes but report sent back by PD stating it was not WISE. I was certain it was & confirmation came 10/29 w/CE sending nice v/l saying he found the report correct. Veries have been extremely slow coming with a usual wait of some 60 or more days - but they seem to be coming through eventually. I now have 27 reports outstanding that are due. I didn't hear WHLW's TEST - only KVOO/KSTT. Also too much WOPL to hear WIOO. I hope you all have a good season.

RON B. SCHILLER - 1951 N.E. 28th Court - Lighthouse Point, Florida - 33064
 Veries in from: WACA-1520, WBBK-1440, WBGJ-1510, WBRF-1490, WSEF-1580, all v/l, v/q from R. Antilles-930, WRRP-1580, RJB-580; a v/f from WQSA-1220 & a FF/e back from WAGY-1220 saying off the air now. WTVL returned by tentative report w/a definite "Yes", best 1490 catch here & first Maine from here. Recent listening finds CX much improved over the last two seasons, reminiscent of the mid-60's when I DXed from Monmouth Beach, N.J. 10/16, thanks to RFS' tip, new Antigua-1165 with tremendous signals 9-9:30pm. 10/28, also per RFS, new "R. Junco"-1150 booming in o/WJBO/YV 9pm in FF. TAs on better than half of the TA frequencies that evening sent me scrambling back to my '63-'65 logs to see who I'd heard & who I needed! Best signals were CRTP-944, EBC-1088, RAI-845, SWP-1016, & the East German 1043. All were verified from NJ except 944. 10/29, umm WGBR battling umm WHUN-1150 @ 5:50am. WLLY-1350 s/on @ 5:59. That afternoon TAs again excellent all over the place: RNE-683, CRTP-836 were best but others noted on 55 split channels, excluding LAs! I took a log on much-needed WBBK-1340 Sebring @ 5pm. 10/30, XEX-730 surprisingly loud w/light just dawning @ 6:05-6:18 & "La X" IDs, rare for a Mexican to be on at that early hour. I took logs on the // Algerians 529 & 548 5:24-6:05pm in AA - they didn't answer back when. Dakar-764, EBC-647, Lisbon-665 particularly loud that SSS! Ditto ZBVI-780. 10/31, TAs poor but LAs good. 11/3, my first TP, KOKL-650 w/rr 3:36-3:45 till WMM decided to test, weak but clear. Carrier on 844 but no audio from presumably Gilbert & Ellis. Umm EPI-640 booming in. 1190 had Cordillera & needed WNWJ w/EE-rr from San Juan (SS talk) @ 4, P.R. #28, joined by an UNID s/on 4:11, probably a YV. 980 had R. Exitos-YVIB 4:15-4:26 w/many "Exitos" IDs. 73. (Thanks for replies to my queries, Ron! -ERC)

PAUL MOUNT - 471 Emerson Avenue - Teaneck, New Jersey - 07666

The MADmen meeting here almost attracted ten people, but strange things came up like illness, college work, & one college man whose parents wouldn't let him come! We wound up with Chris Hansen, Jeff Hambricht, Malcolm Kaufman & myself. Too bad Joe Pella couldn't make it. Activities included the great tour of the area, & the DX Quiz won by Malcolm w/48 points of 100. Somewhere around the beginning of October, I finally heard WFDD-640 at my house. It was done by hearing it while near the campus, then driving home & heard the 5:30pm ID, weak. I can't get it on the Ameco since WABC has a powerful spur there. I called the guy there who said it's a mistake & would correct it right away. He didn't. They're 40w, using the telephone lines as the "carrier" so it's conceivable they get off campus since the phone lines go off campus. 10/12 was a bad morning, only notables were WVOJ-1320 again, & KEGH-980 again. 10/24- In Hackensack I was able to hear WFEN fairly well w/DJ spluttering on it. It was audible u/DJ up to 3/4 miles from me. 10/26 I actually heard it w/an attempted nulled DJ. The fact that I heard it under the mile away aimed down my throat is why I mention it, since I know otherwise it's nothing to hear 5kw in Philly. (I take it 'DJ' is WWDJ-970?? They wouldn't know that in Coxackie Crossroads -ERC) 10/27- 2:13 a- ID from WIXE & "Great American----" slogan, nothing else heard. 3:11-3:50 the WWJC test heard, this was published in DX Monitor only I guess. They had a good signal w/gospel ex, QRN from unID SS, any ideas, or better, who was it - I have ideas. 73.

02139

MICHAEL GOOD - 413A Burton House - 410 Memorial Drive - Cambridge, Mass.
 I continue to fit DXing in my school sked, & my totals here are growing steadily. My first two months here have yielded 210 stations from 30 states, seven provinces, & 14 countries. No varies except for WVCH TEST - I'll start going after those when I get my loggings built up a bit more. Recent DX: 10/27- TAs heard from 12:45 to 1:15am include Paris-863, Madrid-854, Dakar-764, & Lopik-746, in order of readability. I also logged WRA-1000 @ 1:47 on ET, fair. 10/31- First SSS session! WAVA-780 Vs. @ 4:56pm w/political ad, fair (reception, not the ad, hi). Two newies on 540, WLIx N.Y. & WDMV Md. @ 5:10. WLIx w/instrumentals usually w/WDMV w/WX, local ad, farm report. WNET-1070 N.C. @ 5:18pm w/WX for all parts of N.C., ID @ 5:22. 11/3- This MM seemed like a waste of time until 1:30, when it suddenly picked up. WOKR-1340 S.C. @ 1:37 w/local WX dominating over the jumble; WMBL-920 Fla. in fair-to-good w/anniversary greetings, ex @ 1:49; Cuba-780 w/"Carousel" program of Cuban ex, good @ 1:55; R. Melodia-730 Colombia w/repeated IDs @ 1:59 o/u ether SS, & the session's frustrations - an UNID on 690 @ 2-2:33, 88, played two cuts of ex between IDs by woman - but always faded at ID; not Cuba. Maybe R. Guarachita, Dominican Republic? By the way, I'm 18, not 19 as typed in last Muse by UNID greenin. (Boo!! -ERC) All times EST.

MARE . SURINA - R.D. #1 - Box 60 - Osceola, Pennsylvania - 16942

CX are still improving here in N. Pa. No DX of lat., too busy; but here goes with some old logging: 10/16-WREO-970 s/off u/WNSW Mystery Theater @ 11:15 EDT PJB-800 totally alone @ 11:30, where is SELW? 10/17- WUSS definitely at last, but I lack its location - "mx for S. Jersey" - where? (Atlantic City -ERC) At 7:04pm they were on top of 1490 o/WNBT/WAZL. 10/22- 1540 evening: WRCP @ 5:56, WADK/WPTS @ 6, each in turn way o/WPTR. WDOV-1410 w/HS FB plug, 6:10. 10/27- WNYC-830 @ 5:49pm - did they recently increase power, or have I just not been listening? Lastly & leastly, WARD-1540 on @ 12:33pm on 10/29 - is this a new call or a new station? Location? I'm astonished at the number of stations that should have been heard here all Summer but are just becoming audible - but maybe it's just my RX. A good example is KQV-1410. Thirty new ones for October - best probably CKWX-1130 & WDIC-1430 on SRS. I am breaking in a new (hi) RX, an early 40s RCA AM/FM/hi-fi console job. I used it before for local CX but the cabinet space & relatively good channel separation have convinced me to try to modify it for DX, 11" speaker, tone control - good for GY DX. Oh - I'm 16, a junior at Elkland HS, possible chemical engineer. I enjoy bowling, tennis, collect antique bottles & insulators. I didn't hear WIOO-1000 TEST, umm anyhow. I only listened till 12:30 - anybody hear? A big box of No-Doze to MM fans & 73s

ALAN IMPRESCIA - 201 East 17 Street - New York, New York - 10003

Greetings. My absense from these pages were certainly no indication that my DX activities had ceased over the Summer - quite the contrary, w/63 new ones added to the ol' log. Among my best logged were: WRBN-1600 WEVA-860 WKHJ-1440 KATZ-1600 WWUN-1590 WISE-1310 WVOL-1470 XEMO-860 WPUP-1190 KEYS-1440 KTRM-990 KONO-860 XEROK-800 (finally) KPRC-950 KVOL-1330 - WKOK-1460 KOLE-1340 (my best GY - CE verified w/a two page letter & says he's a DX NUT, & will answer all reports promptly. He veried in five days. KILT-610 WTAI-1550 WYRU-1510 WETC-540 WTYN-1550 WKOG-1560. All above have been verified. More recently, TAs have made a few appearances w/reports taken on Lisboa-665 on 10/19 @ 12:30am w/female NXcaster into PP folk tunes, & log taken on BBC-647 on 10/26 @ midnight w/NX & commentary. Umm Nice-k554 & Germany-1586 almost nightly & hets all over the place (I'll log Luxembourg yet darn it) especially strong het at about 539 which bears watching - no audio yet but I see Kuwait has a giant XR there. To recent domestic DX: 9/29- WBTX-1470 w/TEST way over all @ midnight & on 10/23, after about five years of trying I logged ZIZ @ 10:30 w/US tunes & many "accented" announcements. After trying for about seven years, R. Dominica boomed in @ 10:03pm w/BBC NX into US pop tunes. These two loggings must be an omen for a good DX season. 10/25- WYNX-1550 w/ET, had TT w/ID every two minutes from 2 to 2:15 am. 10/27- I finally logged KGMO w/ET @ 1:45am, usual rr & FM IDs. I've gotta be the last one to get him. 10/27- WCJW-1140 @ 5:22pm w/MoR into s/off @ 5:30. 10/28- R. Globo @ 10:17pm giving WHAM a fight - unusual to say the least - all PP, naturally. 10/29- YVKL-590 topping Cuban @ 6:30pm & finally 11/2, WFTP-1330 w/c/w & Country Night Train ID o/u WFBC @ 2am. Who had rr on 1560, 11/3 @ 1:30? No ID, off 1:45. Who had rr on 1550 11/3 from 1:30 till past 4am with not one announcement, definitely did not sound like RS - KEDD? I enjoyed pix of Convention - glad to see I'm not the only guy with hair past my shoulders, hi. Totals: 1,568/1,286 - 50/50 - 11/11 - 67/52. C U N a few.

TONY LAGATTUTA - Box 6291 - Portsmouth, Virginia - 23703

Greetings - all EST. 10/27- WVKO-1580 atop @ 4:50pm. WADC-1050 s/off @ 5:45. WPAG-1050 clear @ 5:50. WNOE-1060 @ 6:25pm. I assume still 50kw. WNOX-990 & WFHG-980 good @ 7pm. WAMB-970 clear @ 7:30-m & also good signal during daytime outside work location about ten miles W of downtown Norfolk. WAVE-970 good @ 7:38. WWSW-970 clear @ 7:51 for three in a row on same channel. WINZ-940 good @ 8pm. WSOC-930 atop 8:06. KSL-1160 clear @ 8:15. This is the furthest so far on new RX. 10/28- KSTP-1500 clear @ 5am. WHHH-1440 s/on-SSB @ 5:30. WBBB-920 good signal at high noon & this is probably best reliable daytime on portable outside work location. Thanks to White's Log in new Communications World I found signal in daytime on 900 w/WJWL nulled to be WKDW, as it was formerly WAFG. 10/29- WISZ-1590 clear @ 4:57am. WPTR-1540 fair @ 4:59. WSAN-1470 clear @ 5:01. WKEB-1600 good @ 5:11. WQQW-1590 evidently s/on @ 5:34. WCMB-1460 clear @ 5:29am. WPOP-1410 fair @ 5:30 w/all-NX like WKLX-1350 & semi-local WRNL-910. WBTE-990 atop at noon w/WANT-990 nulled. WINA-1070 fair w/WNCT-1070 nulled. WNIB puts in good day signal at the room near downtown Norfolk, surprisingly as I was looking for WHAP. 10/30- WIRE-1430 atop @ 5am. At noon there seemed to be a trace of WWVA-1170 showing Winter is on its way again with these clear channel 50kws coming in during daytime. Signals get to be fair but never strong as in the evenings. 10/31- WAME-1480 clear @ 5am. WEIR-1430 fair, 5:31. 11/1- I spent about 1 1/2 hours again at Sleepy Hole Park in N part of Suffolk, Va. & found some interesting day CX, but fading. It shows these extra kws do matter, hi. Around 10-11am, WTRQ-1560 like a local at times, but fading. WGSE-1380 fair but fading, w/semi-local WTVR nulled. WBT-1110 fair. WHP-580 fair but steady w/semi-local WLES nulled. WETC-540 finally IDed, weak & barely audible. This is because it is in nearly a straight line w/WDMV in Md. Nulling the latter also nulls the desired WETC, which would be quite clear, I assume, if it were at right angles. WVOK-690 fair-clear @ 11:30am w/semi-local WNNT nulled. White's Radio Log seems to have accurate listings of BCB & also good info on DXing (all bands) & also fine ad for NRC. Best wishes for now. IN DECEMBER, OUR DEADLINES WILL BE WEDNESDAYS IN PROVINCE TOWN.

M O T H B A L L M E M O R I E S
CHAPTER VI - "GOLDEN YEARS FOR DX" - by Guest Author MARTY WRIGHT,

1913 Jeanette Lane - Springfield, Illinois - 62702

I will always consider the years 1946 thru '48 as the real "Golden Years" for DX. Following the conclusion of WW-II there were actually hundreds of new stations coming on the air. In fact the majority of the present stations took the air after 1945. This, coupled with the lack of all night stations provided the DXer with a tremendous opportunity to log new stations nearly every night.

I recall that in one night I found 17 stations testing prior to embarking on a regular broadcast schedule. The majority of these stations were daytimers operating on the clear and regional channels making the possibility of hearing them much better. I can recall some of these stations booming in from a thousand miles away at levels equal to local stations. To show how great it was, in 1946 and '47 I verified over 500 stations, including 100 graveyarders. As Ernie noted in Chapter I, West Coast reception was fairly routine. I can remember when KFOX in Long Beach, and KROP in Brawley were every night pests to me. KGU and KGMB, Honolulu, were heard regularly. Daytime wasn't bad either with many new stations audible within a 250 mile radius. How different the graveyards were then! I recall the night I listened to a 100 watter in Oshawa, Ont. on 1400 for an hour. 1600k back then had virtually no stations, and WKWF Key West was audible often here in the Midwest. I have never heard them in the past five years. 790 was so clear that every morning at 5 a.m. you could usually hear ACA in Panama Canal Zone, an Armed Forces station, sign on. We had a lot of 100 watters then, and these we really went after. There were some odd powers too. WJJD ran 20,000 watts, and a San Francisco station used 7,500. Things have changed, but to the new DXers I can say that different opportunities exist now. The PSA authorizations offer something we old DXers never had - a chance to log a station running less than ten watts. The many all nighters are not entirely an evil either, with night to night condition changes allowing many stations to be heard which otherwise would never be. The biggest change I have seen is the lack of interest by station personnel in verifying. Years ago, 99 percent did.

NEXT WEEK ERNIE COOPER RETURNS WITH NEW YORK RADIO "UP END AT 'EM'!"

MIKE COLLINS - Apt. 506- 600 Asylum Street - Hartford, Conn. - 06105

fooling around with my Panasonic 1170-C in Hartford in front of the State Capitol in the day, I noted WVMT-620 Burlington, Vt. is very audible with WVNJ-620 nulled. WVMT has the same jingle package as WELI, WGSM, WNLC, WQQW and so many others, the package called the "Philadelphia Sound" which WFIL & WMAQ once had. WTHe-1520 also makes it into Hartford, weakly, all day, with only 1,000w. Talking about nighttime reception, in downtown Hartford & around the city, WHYN-560 Springfield Mass. has a solid signal. Late at night it will occasionally suffer from WFIL. WICC is fair on non-Latin nights but is buried by Cuba if Cuba is really strong. WELI is fairly weak but 960 usually is quiet at night so WELI is listenable. WAVZ-1300 suffers severe interference from WFER in Hartford at night. Occasionally WBNX-1380, WHOM-1480 and WWRL-1600 are very strong on skywave. Most nights they are a loss. I am thoroughly enjoying the radio history articles and noted by ERC & am looking forward to more in the series. I found it interesting that in the early 30s the suburbs already had a number of radio stations - Long Beach, Bay Shore and Freeport on Long Island had stations, for example.

THOMAS R. SUNDSTROM - WN2AYA - Box 205 - Willingboro, New Jersey - 08046

Greetings. I haven't Mused in a while, but have been getting back into DXing what with the super TA CX the end of September & early October. After a setback of CX, the morning of the 27th seemed to be pretty good after a slow start. Notable additions to the TA Log have been the Turk on 1016 Rabat-818, also Lopik-746. Interestingly I find the 18AVT/WB vertical put up for the ham band operations provides the best signals due to minimizing the ITV. This holds true for the LA reception & particularly with Antigua-1165 (another ITV frequency) & the Honduran (per Schatz) on 1085. That, by the way, sounds like

(Sundstrom)
 (pardon my Spanish) "R. Iraquartre" w/an "... Internacional" sometimes added to the ID. Frequency is given, but not understood (has a five in it), & no location is discernible in the s/off (could end in a "...Plata". On 10/27, the SB-620 was displaying 1080, 1085, 1085.7, (ITV), 1088 and 1090. Very interesting to see comparative signal strengths - at 12:50am. The vertical was also providing the best reception of the "carrier-current" WGC-1606 Charlottesville, Va. station that Schmidt tipped me off to, later announced in a recent DX NEWS. Nightly here, usually in the noise level but the gospel mx is very obvious. The evening of the 26th provided good signals, best to date. That's a h--- of a signal for a "carrier-current" station! Two items in closing: NRC & IRCA CPCers are reminded I do appreciate direct notice of TESTs so that I might publish them in the NNRC's BCB pages. Let me know as soon as possible. By the way, we looked at the reports (14) WJIC-1510 received (a report sent to HQ), and WJIC will be running another TEST in February. And finally, again I say I'd be willing to sked NRC hams on 10, 15, 40 or 80 meters - weeknights or weekends day or night - except when a Philadelphia Flyers hockey game is home or away. We saw ERC's thank-you card at WJIC - is there a station he doesn't have verified? Hi. (Try WNRK-1260, hi -ERC)

NEIL ZANK - 2445 "E" Street - Apt. 6 - Lincoln, Nebraska - 68510

I hope everyone has had a good start on the DX season. I'm looking forward to some good TESTs this Winter. Let's everyone MEWZE! Here is a rundown on my DX here. 9/14- WJIC-1050 w/s/on @ 7am. 9/15- WHUT-1470 ET 2:19-2:22am IDs, OC, rr; CKLG-730 ABing w/rr. 9/17- KRER-1360 w/f/c 1:11-1:13 end & into ET/TT, two IDs. 9/19- WPR-960 w/s/on, lost quickly. 9/22- WLDY-1340 w/ET of TT & IDs 1:34-1:45am. 9/23- WJIC-1380 on f/c-TT 1:15-1:30, ID each minute; WCOA-1370 running AN non-directional for Hurricane 1:31-1:49. 9/27- WRJC-1270 w/f/c or ET 2:30-2:33 w/TT & one ID; KEEY-1400 ANing w/beautiful mx & NX 2:45-3. 9/30- KMCD-1570 w/weak s/on @ 7am. 10/3- WITY-980 w/ID & c/w. 10/6- WVCH-740 TEST but only two IDs heard - nothing understandable in between. 10/7- WTRU-1600 w/R&B & SIDs 1:30-1:48am. 10/10- WMAZ-940 ETing w/TT & OC 2:45-3 ID. 10/11- KCHA-1580 ETing w/rr & ending ID 3:25-3:39am; KHOS-940 ANing w/c/w 3:55-4:22am; WINZ-940 w/local NX/WX into NIS 4:02-4:10am; KTKT-990 ANing w/rr 4:20-4:44am - just a month previous I was in Tucson & got a picture of their studios. 10/15- A surprise ET on 980 - KSVK good w/instrumental mx; WDMG-860 w/NX @ 5:02-5:07am. 10/20- WJBO-1150 w/NX & s/off 1-1:06am. 10/24- KFCC-1380 r/r/c-TT 2:30-2:32am & ending ID; KWRT-1370 ET/TT/OC & ending ID 2:35-2:37am. 10/25- WKAC-1080 w/ET??, one ID & spotty Gospel mx 5-5:10am; KCLD-1450 ex-KFAM running AN-rr, local NX @ :55 and NBC NX on the hour.

ROB KEENEY - 22-12 Stouffer Place - Lawrence, Kansas - 66044

A big WELCOME to new NRCer Richard Dale! The NERDs meeting in Kearney was a lot of fun. I finally met Skip Dabelstein & Bill Nattler. I spent the whole weekend at Bob McCoy's in Lincoln, now his wife knows that there are other crazy people who stay up all night listening to THAT radio! There has been some really good DX here. I have noticed that the good CX for TAs have dropped off somewhat but signals from the Pacific have been very good since late September. KORL has been coming in just about every MM. They should easily make it to ECNA almost regularly. I'm looking forward to the New NRC Pattern Book. I just missed the last one. I heard the WVCH-740 TEST & got a quick v/l-CM back for my taped report. Very few reports have been sent out lately thanks to lots of schoolwork & working parttime, 20 hours a week. If there are any members who'd be interested in a DX meeting in Kansas City around Christmastime, drop me a line. I'd like to get something like that going. Glad to see all the upcoming CPC TESTs! Keep up the good work all you CPCers! Country count here is up to 41. Rest of my totals: 853/350a stations, 45/45 states, 6/6 provinces. Attending the LOUISVILLE Convention is a good possibility for me - I hope that's true for the rest of you! I'll be sending in a list of v/s soon. Good luck in future DXing. DEADLINE IN PROVINCETOWN FOR MUSINGS IS THURSDAYS. REMEMBER THERE'LL BE A SKIPPED WEEK FOR THANKSGIVING SO NO NOV. 20 DEADLINE - 11/6; 11/13; 11/27.

CHARLES A. WOLFF - 4911 Proctor Road - Castro Valley, California - 94546

So Capt. Glotz thinks there's not enough WC support? Well, perhaps he's right. (Glotz is ALWAYS right! -ERC) Considering the excellent CX we've been having here, it would seem like enthusiasm would be at an all-time high. I think one of the reports that Mess & Hairy lost was my report for MM 10/13. That was an excellent MM w/WSPD=1370 O. rolling in L&C w/the announcer telling Italian jokes in honor of Columbus Day. Fust IS everywhere. At 5am however, WSPD was "interfered with" by the s/on of WFEA in Manchester, N.H. for what has to be my all-time best domestic catch. I sent them a tape, but weren't they at one time a notorious non-verifier? Part of the reason for not having Mused in two or three weeks is I've been putting together a set of antenna plans which'll be published in DX NEWS #6. The antenna is basically a loop, except it's triangular in shape; 4 1/2' tall & 1 1/2' wide at the bottom. I'm slowly finding out the names of people who have dealt with the idea before, & am trying to write to them for info - anybody who reads this who has had experience with triangular loops (or anything weird in the way of loop antennae) let me know about what you're doing, & we can swap info & ideas. Also, send me your Domestic DX Achievement Totals. Also, what would anybody think about the NRC having a DX Contest of some sort for the last three months of the season? 73 - DX - report!

GARY ATKINS - 2200 West Burnett Avenue - Louisville, Kentucky - 40210

Reception here is steadily improving. If the "early season" CX are any indication of what is to come I think we are in for a great DX season. Recent newies: 9/28 - KFFA-1360 8:35pm. 10/6- WDAE-1250 4am, CHWO-1250 3:05 & CJTR-1140 FF @ 3:10. 10/13- WGBR-1150 12:10 s/off. 10/14- WHCC-1400 f/c 12:40am. 10/19- CFUN-1410 2am, CJRC-1150 FF @ 11:55pm. 10/29- KPIA-1480 6:30 s/off, WCBK-1540 2:30pm. 11/3- KBWD-1380 s/off @ 1, KNUJ-860 1:15 w/TEST, KGMO-1550 ET 1:45 using KGMO-FM for audio until s/off @ 2 but AM remained on w/a local-like signal; HJLQ-1520 R. Minuto on, top 2:15, KNDY-1570 6:15 s/off & KVLG-1570 6:30 s/off. 73.

Mass. - 02657

ERNEST R. COOPER - The Cape Tip DXer - 5 Anthony Street - Provincetown, Two TA veries in, Paris-863 v/2 & I got the first USA, v/l from Athlone-566's new 500kw XR, which was running 150kw at the time of my reception, according to the v/l. That's a new country for me! 11/1- Semi-local WHET-1330 noted AN-MoR, w/TT u/them 1:20-1:31 & on, looping E/W. That PM, CBI-1140 good @ 3:52pm, & log on Portugal-719 great signal in still daylight here 4:04pm, no WGN yet of course. Ann semi-local WNTN s/off @ odd time of 4:34pm. Unn WSLT-1520 @ 4:36 w/BB scores, unn WOBK good @ 4:42. MM 11/3- CKLM-1570 & WVVA-1170 off early. Low, "hummy" TT on 1570 @ 12:31, unID, & odd DT-like tone on 1170 @ 12:50 till 1:05 off, no ID. Great signal from "R. Tres" XEDF-970 topping everything there 1:24-2:03am, & reported. No KNUJ-TEST here, Auroral CX, XEMO heard on 860 instead. WNBE-1440 in Aurera w/NNIS o/u CFGO-AN for a report, @ 2:21-2:36. An SS on 1420 in/out but unID, mentioned seemingly "Cabeimo" or some such. Report also on HJES-980 "R. El Sol" AN, taken down a peg by 4:02 Venezuelan unID s/on atop. The Dominican Republic is on daylight time, same as AST. R. Sensacion-830, unn, @ 4:08 (Venezuela). A little of Dave Gleason's "Onze Coo" (WQII-1140) @ 4:08, but too weak a signal to copy. 11/4- Unn WGSB-970 s/off @ 1, no SSB. Unn WKBA-1550 ET-c/w much of AM, heard first @ 12:55 asking for phone calls, o/u CBE. Unn WBAM-740 ET-MoR @ 1:10. An SS u/WTIC-1080 @ 1:44, unID. We heard Herb Jepco say he's now on: WCAR-1130 WAAAB-1440 WLOX-1490 KBEA-1480 KRAD-1590 WRAN-1510 (Hi, Russ!) WHWH-1350. I also heard him on an unID 1400-er. And hello, WEAN-790's back ANing, now w/NNIS. Mystery SS on 1045a 1:44-2:05, then s/off quickly & left carrier on till at least 2:28. Odd accordion or accerina mx most of the time, endless selections. 11/6- Unns WMLO/WPER-1570 both s/off at exactly the same moment @ 4:30, both no SSB. Nothing else then on channel on an Auroral SSS. 11/7- SS-920 to s/off @ 2:02, often mentioned "Onda Popular" - s/off w/Colombian NA, still unID, but Ronnie Schiller told me who 'tis. Unn WPER-1340 in/out in Aurora @ 2:30, talk-talk stuff. Then the big surprise of the day, WQII-1140 in quite well in Aurora, no sign of WRVA, & only a trace of CJTR, for a report, 2:44-3:28. That's it for this week, C U N 7.

ONE SINGLE-SPACED TYPED REPORT HELD OVER FOR NEXT ISSUE. DOUBLE SPACE!