By the way, since I've been a member of the NRC for almost a year now, it's about time that I rate it. I give DX NEWS an 83 'cause it's got a good beat and you can dance to it."

(Dave Christensen, Seattle)

IN THIS ISSUE...

A great 10 page IDXD - Bob Foxworth
Why is a Country? - Page Taylor and Russ Edmunds
LA Info - via César Objfo
Important message from CPC - Jerry Starr
The long-awaited final installment of Captain Glotz - Crater Schlotz
Another SPR-4 review - Robert Fischer
BBC Info - via Pete Taylor
Tips for Hot-Rodding Receivers - Ray Moore
Tripping with RFS - Ron Schatz
Portuguese for DX'ers (who know some Spanish) - Ron Schatz
Announcing the Thanksgiving New Jersey Get-Together - Russ Edmunds

NEW MEMBERS THIS WEEK...

Lloyd Roupe, 2147 Darlington Rd., Beaver Falls, Pa. 15010
Dick Centorino, 112 Cypress St., Watertown, Ma. 02172

NEW HQ PHONE NUMBER...

Tired of playing telephone roulette with the various HQ numbers on the back page? Well then Bunky, your problems are solved! The Official HQ phone number forever and ever is: 617-926-0965 All previous numbers are obsolete!

IF YOU NOTICED LAST WEEK...

...there was no DX NEWS, this was because the Editors had trouble shifting their mailing dates to meet the current weekly schedule. The issue will be made up for sometime during the year. But gang, the NRC now hands you only the second 60 page DX NEWS ever printed in History!

* BGK & GPN *
ANNOUNCING:

THE THANKSGIVING NORTHERN N. J.
GETOGETHER!!!

DX'ers EXPECTED FROM MASS., OHIO, LONG ISLAND, MD, VA., AND POSSIBLY FLORIDA!!!

To be held from Friday noon to Sunday noon, November 24, 25, and 26.

LOCATION: The Mountain Motel Inn on Rt. 46 in Rockaway, New Jersey.

Location is as name implies, on top of a mountain, electrical noise has been checked and is essentially zero. Events will be DXing, rapping, drinking etc., plus a wine & cheese party. The general format will be quite informal, but a business meeting and tech. session are planned.

PRICES: $5.00 a head to cover the meeting room. Members wishing to stay at the motel should make their own arrangements, but be sure to mention you're with the NRC and you will get a slight discount on your room. $14. for a single (with double-bed) is the price-range. Contact Russ Edmunds if your coming!
They will sign on a half-hour before their normal sign-on time with this program, which will include music with frequent station IDs, also frequent mention of the IRA. For example, 21:20 UTC on 1580 kHz.

**SPECIALS**

Sun. Oct. 29 WJ VA 1070 South Bend, Indiana 1,000 D-1 120:01-120:10 I R C A
Mon. Oct. 30 W S P A 1590 Spartanburg, S. C. 5,000 D-1 01:00-01:55 N R C
Mon. Nov. 2 W S J M 1570 St. Joseph, Mich. 1,000 D-1 12:00-12:10 I R C A
Mon. Nov. 9 W R W B 1570 N.W. 1,000 D-1 12:10-12:20 N R C
Mon. Nov. 16 W R W B 1570 St. Paul, Min. 1,000 D-1 12:20-12:30 N R C
Mon. Nov. 23 W S J M 1570 St. Joseph, Mich. 1,000 D-1 12:30-12:40 I R C A
Mon. Dec. 4 W B J R 1090 Wilmington, Ohio 1,000 D-3 12:40-13:00 N R C
Mon. Dec. 11 W N M M 1090 Tuscaloosa, Ala. 1,000 D-3 12:00-12:15 N R C
Mon. Dec. 18 K N E 1070 Hayettaville, Tenn. 1,000 D-3 12:15-12:30 N R C
Mon. Dec. 25 W L K 1070 Newport, Tenn. 5,000 D-3 12:30-13:00 N R C

More details on the last four mentioned above in the next issue of IX NWDS.

**GOOD LUCK, MIKE! GOOD LUCK, MIKE!**

We wish the very best to two IRC lads who are going into the Service - our salutations to MIKE HARDCASTER (Navy) and MIKE SHELTON (Marines!)

**ERNEST R. COOPER - 483 East 21st St. - Carrier Route 56 - Brooklyn, New York - 11226**

Recent DX here but I couldn't get an ID. 1920 - I heard just the announcer's name as brand new WMT-1170 s/o 7, seconds after WLB had done the same. While looking for WMT-1170 01:15 UTC here new WMT-1170, I heard new WMT-1170 on KPNN, then 1010 kHz. No ID or anything. Brand new WMT-1170

We are checking on WMT-1170, but in general this is a good station and we have always enjoyed listening to them. We would like to be able to get a steady signal on WMT-1170 and be able to hear more of their programming.

**ERNEST R. COOPER - 483 E. 21st St. - Carrier Route 56 - Brooklyn, N. Y. - 11226**

All DX was confined to WM/10, Columbus Day. The were in from 1050 up to 1370 kHz, with this latter channel the strongest. A log taken for Orson Welles-1050, in junk language for a while, then FF, then an FF commentary which started at 1340. Also a minor miracle of 1050 was off & I got a log on WWV-1331, weak at first, but held all the way through the 1330 a.m. and then weakened again. Also a minor miracle of 1050 was off & I got a log on WWV-1331, weak at first, but held all the way through the 1330 a.m. and then weakened again. Also a minor miracle of 1050 was off & I got a log on WWV-1331, weak at first, but held all the way through the 1330 a.m. and then weakened again. Also a minor miracle of 1050 was off & I got a log on WWV-1331, weak at first, but held all the way through the 1330 a.m. and then weakened again.
Ih Alberta ends it first

CHAM-1280
Continuing with

I keep

3tlme
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Alaska. The CRTC holds the final decision. CHMH vs. CHIM for a twin at

1800, Princeton, B.C. CHEN won, but the CRTC let the loser, Barkman, buy out CKM Radio. Barkman has the biggest B.C. family: CHIR-1270 CFPR-1240 CGM-1100 (the

baby) plus mother station CKRM-800 & her family of triplets: CKUX-1240 CGM-

1140 & another new arrival, CGM-1150. John Skelly is the father of five: CHFR-

500 CHIL-590 CHIL-1000 & the new kid, CJID-1-1800 Princeton. Seriously,

there certainly is a need for such twins in mountainous B.C., but operations such as:

CRBN/CJIN 1400/1490, CRFR-1500/CJWV-1500 & CGM-1050/CGMW-1050 are silly.

The B.C. & GCM can easily find regional channels to replace this space, as well as

CFRM/CFBF 71/40 vs. 125. There's lots of room on the dial on these passes. A

friend of mine told me about this, some famous LFM CKQG. Some

B.C. plus local studios. A postcard if you like. For you LFM fans, CGQ-400 is a regular telephone pose (Ask my dog) type longwave CKQG, except perhaps the

fishing boats, in U-Clue-Let Inlet, B.C. It seems to be directional. It seems to be a constant 5-4 at Torino, (30 miles N) all year. The CBC LFM, Toronto-CGMO is strong between poles in three backyards (a garden station), but only carries eight miles N on my car radio. I've

just received in order to keep 9500 typing for another 25 years. Next time, BX-73.

Congrats, Eric, I bet the Pattern Book dedication. Rightfully so. (Thanks, John "ERC"

MIKE SCREED - 4126 Nobles Drive - Davenport, Iow. - 52804

9/22, well, the Pattern Book arrived! It was everything I thought

it was going to be. TV/FM XING during the summer was the main idea for

this year. My IX didn't take a back seat, though static-free nights were rare. 5/29.

WIKR-1360 @ 3145 v/F & 1A, 10H-1200 @ 1199 v/F. It is only 63 miles away, it was

unheord until 6/16. WQX-1340 @ 6:16pm. I live within a gravel-filled salt water

bed, about 15' from the fishing boats, in U-Clue-Let Inlet, B.C. It seems to be directional.

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Aldo.

Any

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Fomt

Veries WKSK-1600 1:40, (r/c)

Send

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Musings

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It looks like a good season is in the making, all right! If 10/9 was any indicator... a dynamite morning, here and everywhere to judge by the flood of reports in here. All areas were good - TA's, Lantis, West Coast. Here's what's on: 200 England. BBC-2 was in again, even better than previously, solid from 0440 in to past 0600 with a sort of pop shop, 6 pipes on the hour, slightly upbeat a.m. Nice steady signal. The FTFY station here at 0600 is apparently only sporadically, as not heard this morning, which was Tue 10/10. (This is not the Nantucket beacon "TUX" on 194, which is extremely strong, and always on.) This station not heard at all on 10/11 at same time and it ought to be instructive to monitor them closely, strength-wise. I am watching the band for the freq range; plan to build a tuner to let me go down to 150 kHz also. (Foxworth, N.Y.)

25h Algeria. New superpower station here at Tipaza, hrd to 2600 in Sweden and is apparently // 590. Not noted here. Beacon "CH" (Chateauneuf, Provence) covers. (Foxworth)

527 Switzerland. Berometer noted with weak but clear signals on 1019 at 2320 to 0000 s/off, playing Funeral March, one brief blast by a man in German just before the s/off. (Merrimac, Va.)

533 Algeria. Ain Beida at good level at 2320 on 10/9, typical chants. (Merrimac) @ 10 Beida good level 10/4 at 2330 tuned in Arabic and Arabic; s/off at 2400 with antihype. This one is at the very bottom of the dial on the 520. (Grant, Mass.)

Some DXers may find their rx's don't go down much below 540. Adjustment of the slug in the Band 1 oscillator coil will be necessary to allow tuning this range. (Don't turn the trimmer capacitor - that sets the HIGH end.) It may be necessary to adjust the band 1 mixer coil, too, or strength may become too poor, that is, too weak to hear it. (Merrimac)

I'm sure it is not heard in NE where the following stations are heard regularly: 517 - Beacon "WP" (loc. unknown); 525 - Beacon "UP" (Uplands, Ont., Ont.); 530 - Beacon "NH" (North Bay, Ont.) and in the quiet hours of the morning on 534 - Beacon "FH" (Clearwater, N.S.). All of them ID in code, very slowly, giving call letters ("UP" does not do ID at times) with a long 10 second dash, until the ID. The 525 and 530 jobs are the strongest here, and are heard in mid-evenings. If you can hear these beacons, THEN you may reasonably try for the broadcasts down here. See also Freeman's "Bottom DX" which appeared in DX News in late 1970s. Incidentally, last year several DXers logged the Costa Rican Radio Rumba on 530 kHz. None of them mentioned the beacon; I've had no sign of the TI here, myself, but am still looking. Don't know if they're still on-ed.

539 France. Proposed operation here, and on 1840 not yet active, as of mid-August, 1972. (Taylor, (Page), in Wales)

540 USSR. Leningrad noted with potent signal; news in Russian by a woman from 2330 - 0000 non-stop prior to this time indicates either a s/on or a favorable pattern change. (Page, Taylor, Scotland)

546 Algeria. Les Trabulms noted with fair signal at 2335 on 10/9 // 533. (Merrimac, Va.) (I question whether 533 was on at s/on, when I hrd 534 last week) if so, was not heard here. Same with Morocco-209; not noted in mornings. Are 549 and 563 the same? Just in the evening's ed. (Rob.)

555 Hrv. K1VR ZIZ is still here, noted in passing at 2336 on 10/9 as I listened for TA's. (Merrimac, Va.)

557 Radio Veronica, Int. Waters. Hrd here with ID (gave freq as 5600 - ed.) as: 611 is Radio Veronica. In the lower 1300 10/9. (Greenhill, Eng. via MTA) @ radio Veronica is now here, from 9/90. Much weaker and more distant than on 1562. Better reception after local midnight. (Bent Ericson, Swe, ARC)

625 und ID. Is TIRKA Back? Fairly strong Spanish stn here on 10/10 at 0451. Too much WMAV alop for decent copy. Apparently signed off at 0000. (Merrimac)

630 Guatemala. TZN was noted here with a fairly good signal 10/5 along 0700 - 0730, QRM was apparently off, altho W30 pgm was hrd with normal sig on // 630. Pgm was signed romantic instrumental American style mix; leading me to think perhaps CBN was on, until s/sum came in Spanish. Think s/off about 0730, signal was down then. KPO piped in and out with a basketball game and was quite clear at times, only several cycles difference between the 2 signals. I didn't know if KPO was on, have noted before over tropo. (Foxworth, England. Devon very strong with folk music, 10/9 or 0945. (Merrimac))

650 Morocco. Mocha, Son. Hrd a strong OC 1057 MHz 10/25 (1-ed.), re- check at 1110 had them in strong on s/off apparently at 1100. (Fezja, Ca.)

532 Cuba. East No. (Izrievski, Radio Veronica is now here, 1053 MHz 10/25 (9/25, 0945) covered, is still here, noted in passing at 1100. (Merrimac)

682 East Germany. Suhl/Wachsmann finally logged here despite the ease everyone claims it's on, under Cuba-600 splat. (Foxwarth, Eng.)

719 Portugal. Hrd was a s/off signal on 2310 at 10/9, was quit abit stronger than 655. was even better on 0900 s/on on 10/10. (Merrimac)

720 Cuba. Noted with Mt Drak, on top for 5 minutes, then fade out, 0315-0400 10/5. Was // 690. New pgm? (Erdman, N.J.)

725 Cuba. At 10/9 kHz it was 0315-0410 with solid talk by man in Dutch, possibly for Olympic Messengers. (Taylor, N.J.)

726 Australia. For the first time from San Diego with news, txs, sports, weather, (CWR) 1105 MHz 10/25 (4045 kHz) was on from 0800 to 1000, s/off at 10/25. (Erdman, Calif.)

728 Holland. Logik noted with stronger carrier but 1105 kHz 0545 MHz (N.J.)

735 Cuba. K1VR on 24 MHz and 2345-0310 with solid talk by man in Dutch, possibly for Olympic Messengers. (Taylor, N.J.)

736 Portugal. Voice of the Past, in Cuba at good level on 10/9 at 2341. (Merrimac)

737 Finland. Finnish ID on 10/7 0300 s/on with news in Finish in folklore music. (Grant, Tenn.)

738 China. P.R. Radio Peking hrd 10/13-1105 during: 9C8 and V with poor signal, strength 1 of 5; readability 4 of 5 with bad QRM from 1455 (KS1) tests and local power source, signs burst. 1013 - woman talking. (speech-type voice) and very distorted. At 2345 we orchestra mix, very loud, 10 minutes. Then at 1100, 5 pipes of main, 800 Hz follo by one of 1000 Hz. All pipes above 500 ms in length with about 2 seconds between each. 1105: woman talking again then a man talks as signal fades. 1105: fades in with woman talking again. (Karchevski, SF, Calif)

739 Switzerland. Now that local WARC has started going off 15MHz again, finally logged this one with atten German mx, likely a dance-type mx. 0210 10/9. (Erdman, N.J.) They seem off sporadically - will try to find out.

740 Panama. Checking channel 10/5 I found the Panamanian stn here at 5-5 with ID as Radio Libertad and giving PO Box addr. Constantly mentioning " Revolucionario" and kirnied-write. (Erdman, N.J.)

741 Colombia. Radio Tequendama, HJU, Excellent on 10/7 with ID at 0700. WARC are as they were for most of the week, for some reason. (Merrimac, Va.)
Colombia. (Abb.) Radio Teleguarajna, Bogota, 10/2 with IDs and each record, noted 0252 £9000. (Sanford, NJ)

Spanish station under sail was Radio Teleguardia with ID consisting of a 3-note gong. WABG was off; 0330 10/5. Sounded like the accent said "Teguamena" *(Edward, NJ)* (Your times are in EST, not EDT.)

This station was the only detectable audio noted both 10/4 and 5 here, with WABG off evidently to 3 AM local time (0500-0900) and was off again 10/9 and 10/11 at least. 77C here is just a monstrosity hit with NRJX occasionally atop. *(Foxworth)*

Spain. John Azita with English lessons 10:32 NW and 95, much better at 1120. Not hrd 10/2. *(Vijay)*

Azita hrd 0857 (GOAT Seg. 4) at times, like a local. Strength 5 of 5 and readability 4 of 5. WABG was faint in the background, also some static. 0654 - 2 men and a woman with German lessons; same format as the English lessons. 0859 - Celeste music (an IST) 0900 - NEBE pipe, then music. Then, a woman in Japanese. *(Karchevski)* John heard 1045-1055 segment segment square and no detectability. Strength and readability both 4 of 5. Only QRM was from an UNID local noise source. 1045 English lessons. Woman says, "There is a broken cup on the table" and other phrases. 1056 - Men sings "Kabes sweeter than wine" in English with guitar. Then, more English phrases with Japanese comments. *(Karchevski, Calif.)*

Radio India. OKA 91 FM in Spanish strong at 0536 on 10/9 with Spanishmx. WABG off, as they had been for most of the week. This station really puts in a signal for only 20 km. *(Merriman, Va.)*

Portugal. Radio Clube Portuguesa has as good a signal as WEJW at 2345 on 10/9. Woman in English with female accent. *(Merriman, Conn.)*

Syria. Taras at fair level 10/10 0205 tunein to after 0330 with Arabic chanting, often buried among other stations on the frequency. *(Grant, Mass.)*

Poland. Warsaw finally hrd for one of my most-wanteds, with the usual Tarawa probably the very weak carrier detectable. *(Merriman, Va.)*

Spain. El Plata (GOAT Seg. 4) at times, like a local. Strength 5 of 5 and readability 5 of 5. Says, "Nothrd..." thev had been for most of the week. This station really puts in a signal for most of the week. *(Merriman, Va.)*

Radio Spain. OKS 91 FM Sebastian strong at 0536 on 10/9 with Spanishmx. WABG off, as they had been for most of the week. This station really puts in a signal for only 20 km. *(Merriman, Va.)*

Mediterranean sea. OKA 91 FM first noted 8/31 0040 with continuous chanting in Arabic, short Arabic talking every half hour; location determined by 1000 kHz fades shortly after 0700 the sun extremely good in Arabic voice with chanting and Arabic talk 10/5 0015. Thought at first it was Moscow but loop cured that. *(Edward, NJ)*

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England, BBC, Droitwich Spa, Warwickshire now in Foreign Service daily, noted 9/4 0340 in German, very slow, deliberate English at 0500, possibly a long lesson. I jumped the gun on this one, and took it for Tirana at first; so beware. (Taylor, NJ) (Not the only one, Page, ed.)

New Foreign Service xmt strongly all week. They are on at least as early as 0400. News in English; into German at 0430 on 10/9. (Merriman) BBC very good with discussion in English at 0545 on 10/4. Also good 10/9 in German 0526-0529, English/French ID 1130 then into Radio Newsreel. (Delorenzo, Warwichshire) BBC best of the 1A's this morning 10/9 with German noted 0335 tunein, pop mex. German changed to French 0330 and signal was stronger than an hour before. At 0455 was almost pinning the meter, noted with English ID and freq and pmm summary for World Service, Big Ben and into Radio Newsreel. (Before WPL) put 00 back on the air at 0518. Suspect a second carrier on 1081 probably in Eastern Europe - signal was oscillating 0430-0445 and effect was gone at the 0530 check. Oh for a scope and SAM techniques! (Sandstrom, NJ)

Czechoslovakia. Pratsilava was strong at 0346 on 10/9. (Merriman) Czechoslovakia. HCMC, LA Vos de Cucuta on 0500 tunein 0500 giving complete Caracas list, ID and into a good level for 2 or 3 minutes over the normal LA id when WRL is off. (Sandstrom, NJ)

oris from England, Barking, Big Ben and into Radio World Service, Big Ben and into Radio Newsreel. (Before WPL) put 00 back on the air at 0518. Suspect a second carrier on 1081 probably in Eastern Europe - signal was oscillating 0430-0445 and effect was gone at the 0530 check. Oh for a scope and SAM techniques! (Sandstrom, NJ)

Lithuania SSR. Vilnius fair level 10/9 0300 s/on with NA, news in Russian & light cl mx (mostly piano). Lost under Munich by 0345. First time heard this season. They were heard last year // 1115 (Kailingsra) which is not heard this year. (Grant, Mass.)

Vilnius on 3437 on 0519 with man in Russian, Completely pushing past the WRL stop. (Merriman, VA.)

oland. AFP Munich extremely strong 10/9 0428 with NA and a few anats, on a good night for Germany. (Edmunds, NJ)

Yugoslavia. Zagreb was good with music when checked at 0440 on 10/9. Was also heard several other times during the past week. (Merriman, VA.)

Sweden. Hertz was fairly clear in peaks with a man in Swedish news and talk by a pianist. (Edmunds, NJ) (Not the only one, Page, ed.)

Italian Milan heard well 09/8 0300 s/on, then news, way over the Portuguese for the first time ever. This one seems to be infinitely heard at its best, so far. (Page, NJ)

1034 Italy. Rai Milan heard well 09/8 0300 s/on, then news, way over the Portuguese for the first time ever. This one seems to be infinitely heard at its best, so far. (Page, NJ)

UK: unID Radio Dresden? Het and weak audio, definitely not Spanish, fell on 1043 according to dial on R-350. No sign of H032 on 1045, slight WHO splash. (Giannitti, Ill.) (Date? Was in Sept. - ed.)

E. Germany. Dresden 10/9 with German anxious, pop mx, standing out like a sore thumb without excellent signals at tuneup 0440. Just a trace at 0520. (Sandstrom, NJ)

UnID: Still no WHO on 1046, 1097, 1313 or 818. (Taylor)

1043 unID Radio Dresden? Het and weak audio, definitely not Spanish, fell on 1043 according to dial on R-350. No sign of H032 on 1045, slight WHO splash. (Giannitti, Ill.) (Date? Was in Sept. - ed.)

E. Germany. Dresden 10/9 with German anxious, pop mx, standing out like a sore thumb without excellent signals at tuneup 0440. Just a trace at 0520. (Sandstrom, NJ)

1052 England, BBC strong at 0542 on 10/9, // 096. (Merriman, VA.)

@ BBC good with discussion pm in Eng 0545 MM 10/9. (Delorenzo)

1058 Romania. Despite the excellent conditions, this station has not been heard during the past week. Wonder if this station is off, or if they are using a directional antenna? (Merriman, VA.)

1061 UnID: Somebody here on 10/9 only from 0220 to 0440, fadeout, occasional patches of spoken audio; music not noted, too little to determine language. Bearing about W? But hard to determine due to proximity of KYW. This was the date of the vote on Germany's admittance to the European Common Market, ergo my constant most-wanted Kalundborg. But in the long run, who knows? (Swedish DXers might know - ed.) Therefore, my most-wanted is still Kalundborg, hi. (Taylor, NJ)

1064 @ unID: Hit herd with KYW splash here all night 10/9. Only time herd, looped sht until fadeout time 0440. This was the night after the plebiscite in Denmark on the Common Market, so chances are that they have been long-sought Kalundborg, as bearing and E-20 time also agree. (Edmunds, NJ)

1070 France. GRF Paris came up here 9/4 for a real surprise, and a new catch with 6 pipes (5 short, 1 long) and into news by a man. (Taylor, NJ)

1080 Mexico. KDAP DI. Morelos, BC (not WHO as in Vane Jones-FIP) with music, ID 9/18. C1. Morelos is a suburb of Mexicali, I believe. (Pfejar)
Norway. Stavanger noted 10/1 0455-0505 s/off; IS on some unknown instrument which is more lower-pitched than a piano or celeste, folo by short ID at 0500. Noted on several occasions and should indicate a good season.\(\text{[Taylor]}\)

Mauritania. Nouakchott on 9/6 with 0700 s/off at magnetic noon, fairly brief accepted. French ID on the hour and folo immediately by Arabic chanting, was up to 20 over 9; 1250 domestation were just not there.\(\text{[Taylor]}\)

Int. Waters. 10/2 tuned 0535 with pop mx, ID and 0537 thru 0555 with many more IDs. Excellent sig, best ever, a s-7 or more.\(\text{[Sanstrom]}\)

Poland. Blajystok hrd here under Noordzee 0300 with girl announcer in lengthy talk then Polish mx, 0418 (for re-tune temp between freqs, seemingly so.) 0446 10/9.\(\text{[Edmunds]}\)

St. Pierre et Miquelon. CET had a good signal on 10/10 to 0100 s/off. Had some type of drama just before s/off. Some music at times. Sign off was with the French Anthem.\(\text{[Merriman]}\)

France. Lille strong when checked at 0520 10/9.\(\text{[Merriman]}\)

USSR: Ukraine. Vinntsis at a good level 10/9 0300 s/off with NA. Audible until Lille puts their carrier on.\(\text{[Grant, Mass.]}\)

unID. A hdt. Here, looping about 5s at a very late hour - 0445 or so, 10/4 and again on 10/9.主题 and Greece would have long since faded by this hour. Nothing else listed. Quite strong; help?\(\text{[Edmunds]}\)

Spain. NCS-11 Madrid noted at magnificent level on 10/9 at 0601 s/off; have 0C with brief spurs of very wild music folo by "Radio Centro" ID by a man and then into a lively musical format.\(\text{[Feit, Md.]}\)

Tunisia. Has been fairly regular of late, whereas previous seasons was almost never heard. Perhaps a pattern change or power increase? Best hrd 0452 10/9.\(\text{[Edmunds]}\)

unID. Something here daily at 0400 in an East European lang by a woman under a potent 0C; redout on 10/2 at 0445. Could be either Tirana or another Russian stn. All this alike calling in vain for the new Radio Bergen service.\(\text{[Edmunds]}\)

unID. Carried here after 0300 this past week. Have never been able to get any audio. This might be the Peking Relay in Albania that is being heard in Europe. Is probably directional toward Moscow.\(\text{[Merriman]}\)

Costa Rica. HRd with apparent sports coverage in Spanish, but lost ID on the half hour, 0520 10/1. After the break, signal was lower.\(\text{[Bivard, Va.]}\)

Austria. Wien was strong at 0511 10/9. Typical Austrian music with happy sounding male and female announcers.\(\text{[Bivard, Va.]}\)

Senegal. St. Louis finally hrd with decent audio 9/11, 0605 in French ending talking and into quiet mx, similar to 1530, which was 20 over 9 with Limun-flavored MX at the same time. Did not appear to be part of Radio Moscovia's 0530 s/o wave 2130-2230 and is "beamed to Great Britain and Ireland'. There is approx, 5 minutes of silent between 2135 and 2200, allowing the "addition of another transmitter in the medium waves, 1320 kHz. Indeed, at 2200, 1328 appeared \(\text{[Taylor]}\) and its bearing was Murmansk, not Leipzig.\(\text{[Taylor, from Yorkshire, Eng.]}\)

USSR. NCS, possibly Ukraine noted with Moscow ID right over the top of Leningrad in English at 2120; a better signal than Leningrad.\(\text{[Grant, Mass.]}\)

Poland. Warsaw forex s/o good at 0435 on 10/9. Man and woman in Italian.\(\text{[Merriman]}\)

Spain. Assumed the source of the 3 or 4 carriers here, all within 100 hr or so, 0600-0650 10/7. Discerning to listen to them with BPO on, as one, then another slightly higher or lower, fade in and dominate and out again. Also a good demonstration of how selective skip can be, geographically. Each carrier should be slightly different from the others, in freq the Spanish "common-waves" seem to fill the bill here, M. (Tonnage)

Europe. Norwood, Ontario tuned with English daily at 2200-2215; IS at 2215, then Italian, dominating channel. Worth watching for on ECON this season.\(\text{[Taylor, London]}\) (When in Germany I would note this station, about this time of night, would mightly answer 5 or 6 letters from listeners in England - writing out of political motivations, and not as DXers - \(\text{[continued]}\)
I would appreciate it very much if members could send me their nomination for one hundred easy to log TAs. This is for an article I’d like to write about TA reception and try and have it published, (in the popular electronics press) and mention NRC in the process and possibly get more members through the article. There must be a lot of SWL who would sure get a big thrill out of hearing TAs when being so used to hearing standard SWL DX, What TAs have been heard on common and uncommon rx’s, etc. - Roger Gianmini, 1111 Forest Hills Drive, Belleville, Illinois 62221

This really should have been longer as conditions were truly outstanding the morning of 10/9; of course we had scads of unneeded TAs, and many more uncommercial. Also may have had a trace of audio out of Tarawa around 0800 that morning - sure hope the sun stays quiet a bit longer.- Bill Feld, Maryland.

After very dull rx in September, things really picked up this past week. TAs started to get good on 10/2 and really peaked this Mt., 10/9. Stations were audible on many frequencies, many of them with fantastic signals. Included is a sample of what was heard. (Alan’s sample ran 2 pages, tightly spaced, hi -ed.)

This location (Rockaway, NJ 07866) is much better than Staten Island. Of course, the R-390 helps, too. This set is clearly superior to both the Collins S-11-4 (a R-388 with mechanical filters) and the Hammerlund SP-600, though the SP-600 seems to have a bit more gain, but I’m not sure. The R-390 has an internal RF gain control which is not turned all the way up. - Matt Edwards, N.J.

Conditions are getting back to normal after a long dry spell. No definite Asians had here yet (as of first week Oct.,-ed) Just bits of audio on 1525 and weak carriers from the mid-East stations. A few Russians have been heard, as seen by my report. Again, I have a few tentatives on additional frequencies, such as Baku on 1295. Bill Bailey in Holden, Mass. - 8 miles from here - believes he’s heard this one. (10/10/72) It appears Ramadan must have started. (News item 10/12 says yes to this, -ed.) Lebanon-836, Syria-722, Egypt-818 and Morocco (295, 593 and 935) were on all evening local time, 10/9. A good thing I heard the Russian on 935 the previous evening as they could not have gotten through Morocco, there, last night. USSR on 836 was a strange one, as conditions did not seem that good. Therefore, I feel this station is more than 20 Kw. Also, thought I heard Russian on 764 but not very sure. - Bill Grant, Mass.

I’ll squeeze in a few words here. Getting the house mean video-see to Covington plans - maybe next year, with a closer location, I hope. Our address is this: 147 Marcellus Rd., Mineola, New York and this is about a half mile south of Jericho Tpk. (Rt. 25), a major east-west artery on Long Island; and about 4 miles south of the Long Island Expressway, taking exit 37 (Willis Ave). Any and all DXers are invited to visit Kathy and myself. Address, though, for club mail will remain Box 211 as I find I need a separate line on the Merrick, as a day advance on delivery. I’ve got the G-90 RKD and the HQ-150 set up; an up every MM nowadays. Phone is 516-248-4394, as before. I’ll be buying Rick Heald’s HQ-129X; he’s returning to California but is still actively interested in DX and hopes to rejoin NRC in a few months after getting relocated. DX was great here, too, on 10/9.-Bob Fongarth.
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<tr>
<th>Código</th>
<th>Nombre</th>
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<td>VYUR</td>
<td>R. Codesur, San Juan de Manapiare, Venezuela</td>
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<td>560 1</td>
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<td>ZP26</td>
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<td>R. Espectáculo, Villarica, Ecuador</td>
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<td>ZYH280</td>
<td>R. Calaca, Porto Alegre, Brasil</td>
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<td>1010 1</td>
<td>CDL1</td>
<td>R. Cooperativa, Puerto Montt, Chile (former Llanquihue)</td>
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**Notas:**
- c = call
- f = frequency
- p = power
- n = name
- f = location
- p = power
THE FINAL WORD

Here are the official wavelength changes for medium-wave stations in Great Britain as provided to us by the BBC via NRC'er Pete Taylor.

The following note has been prepared to assist those who will be affected by the changes on September 2 and in particular those who will need to explain them to the public.

The reasons for the changes are: firstly, to prepare for the introduction of commercial local radio; secondly, to enable the BBC local stations to broadcast on medium waves and, thirdly, to release an additional medium wavelength for use by the BBC's External Services.

The changes affect Radio 3 medium wave, Radio 4 medium wave and Local Radio only. Other services, including all the vhf services are not affected.

RADIO 3

Of the eleven low-power transmitters at present radiating Radio 3 on 1546 kHz six will be closed down and five will be frequency-changed to 647 kHz.

Stations to be closed down on 1546 kHz:

Brighton, Fareham, Leeds, Liverpool (closed 7/31/72) Preston, Stockton

Stations to be frequency-changed to 647 kHz:

Belfast, Exeter, Plymouth, Redruth, Swansea

In both cases listeners should be advised to retune to 647 kHz or to vhf. In the case of the first group (Brighton etc.) listeners will probably suffer some drop in signal strength. The two transmitters at present using 1594 kHz serving Dundee and Bournemouth will continue as before.

RADIO 4

For Radio 4 in England there will be only four wavelengths instead of the present seven and all Radio 4 medium-wave transmitters in England will have to radiate the same programme at all times (with the temporary exception of the North-East mentioned below).

The new allocation of Radio 4 wavelengths in England is as follows:

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<tr>
<th>692 kHz</th>
<th>908 kHz</th>
<th>1052 kHz</th>
<th>1151 kHz</th>
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<tr>
<td>Moorside Edge</td>
<td>Brookmans Park</td>
<td>Start Point</td>
<td>Stagsheath</td>
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<td>Whitehaven</td>
<td>Clevedon</td>
<td>Droitwich</td>
<td>Scarborough</td>
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<td>Gomer</td>
<td>Redruth</td>
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<td>Bartley</td>
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<td>Brighton</td>
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<td>Ramsgate, Swindon</td>
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* The Swindon transmitter is a temporary one, which will provide only very local coverage.

The use of 1151 kHz by Stagsheath and Scarborough is temporary and these transmitters will be changed to 908 kHz some time in 1973.

LOCAL RADIO

Of the twenty BBC local radio stations it is expected that fourteen will be ready to start on medium waves on September 2; these are:

- London 1457 kHz (10 kw)
- Medway 1034 kHz (2 kw)
- Brighton 1484 kHz
- Solent 998 kHz
- Bristol 1546 kHz
- Birmingham 1457 kHz
- Leicester 1594 kHz
- Stoke-on-Trent 1502 kHz
- Humber 1484 kHz
- Leeds 1106 kHz
- Sheffield 1034 kHz
- Blackburn 254 kHz - BBC
- Newcastle 1457 kHz
- Teesside 1546 kHz

The remaining five stations will start on medium waves as soon as the necessary transmitter installations have been completed. The wavelengths, as far as is known, will be as follows:

- Oxford 1484 (due to start 9/20)
- Derby 1484 kHz
- Nottingham 1484 kHz
- Manchester 1457 kHz
- Merseyside 1484 kHz
- Carlisle 1484 kHz

(These 6 transmitters didn't start on time (9/2) because of RF problems relating to the use of existing TV towers. - Pete Taylor)

MORE INFO FROM THE BBC

"As most DX-ers know, a QSL Card from the BBC is a great rarity. But in November this year, when the BBC celebrates its 50th Anniversary, there will be a chance for listeners to the BBC World Service programme, World Radio Club, to possess one of these rarities - a Genuine BBC QSL (golly gee - BGC), verifying reception of the Club's 50th Anniversary Edition.

World Radio Club is broadcast on Thursdays at 1245 (1330 from 5th October, 1972), Fridays at 2345 and Sundays at 0815 GMT in the World Service, and anyone who reports accurately on reception of the Anniversary Edition on Nov. 9th, 10th or 12th, will receive this special QSL. ADDRESS: Joy Boatman, World Radio Club, BBC, Bush House, London."

NRC'ers should try for medium-wave relays of those programs from stations like Cyprus (638), Perim Island (701), Malta (1511).
One wonders where it all started. In the early days of DX, a listener had either heard all the countries on the air or he hadn't. How many didn't really matter. In those days a DX'er could actually expect to hear all the countries on the air given a bit of luck and some perseverance. By the early 1930's, however, the DX hobby was hit by a socialization process; a process which brought about the concept of DX clubs for mutual aid and whatever else have-you. This was the beginning.

By this time, it was no longer an easy thing to hear every country due to more stations, more powerful stations, and longer schedules. Then the idea of keeping country totals and qualifications for definition of countries for DX purposes became the various DX clubs decided to give DX countries the greatest impetus from the ham operators who frequently staged DX-contests to areas where there were no operators to get more "countries" heard. The definition of countries is, of course, a far cry from, in fact, that of the United Nations. There are hams who can make a reasonable justification for having worked 360 such "countries".

This points out one obvious problem immediately, namely, the number of countries one has heard depends in great respect on what country list he uses. A DX'er who belongs to three or four DX clubs may well have a wide variety of total countries heard over a range which may well exceed ten from highest to lowest total. It's almost a shame the League of Nations never made it big in 1919 or maybe the whole silly business of DX countries would be governed by the acceptability standards of that august body. But, alas and alack, that is not the case, with the result being that the whole idea of DX countries is a shimmering edelweiss of confusion, confusion, confusion, amounting to gross inconsistency, just waiting to boil over into a major confusion.

To explore the whys and hows of this phenomenon, let us investigate the most commonly-accepted (and yet differently-interpreted) criteria promulgated by the various DX clubs concerned with Medium Wave DX for the delineation of DX countries. Basically, these criteria come under four major headings, so we will deal with them accordingly. One such is political sovereignty. As one would expect, that nebulous term means many things to many people. By chance, the DX enthusiasm of some prior decade decided that the United Kingdom of Great Britain and Ireland should be divided into the countries of England, Wales, Scotland, Northern Ireland and the Isle of Man; and that the Union of Soviet Socialist Republics really exists as the same implies, as a series of individual republics. These same people chose to consider the U.S. as only one country, and Canada as only one. Thus the distinction is a matter of degree, but why should it be so? For a hobby which boasts of verifications of reception as its hallmarks, the impression of the foregoing is indeed strange. By the same token, these folks chose to count the Netherlands Antilles (Bonaire, Curacao, Aruba, and Sint Maarten) as one, while counting the British West Indies as separate entities (i.e. Grenada, Antigua, British Virgin Islands, St. Vincent, etc.).Ah, consistency! The political realities of the two groups are quite similar -- the autonomy granted the individual islands is not particularly large.

A second example is that such things as protectorates, territories and dependencies of a given country shall be counted separately for DX purposes, assuming that they are not adjacent geographically to the parent country. This one is the only one to which glaring contradictions are not immediately evident. It could get fantastically interesting when the Antarctic is opened up a bit more.

A third criterion is geographic separation. A country (politically speaking) may count for two or more if one part of it is separated from the rest (or the others) by a body of water measuring not less than fifty miles in distance, or by land on all sides which is (again, politically) an entirely different country. This one boasts the only known specific restriction in country lists -- namely, the Hawaiian island of Kauai. That is one very glaring inconsistency. This allows West Berlin, Guantanamo Naval Base, Kaliningrad, etc. to qualify as countries and ostensibly allows the Netherlands Antilles to be separated also. This is part of how the Isle of Man and Northern Ireland could really be counted as two separate entities justifiably. A myriad of Pacific island groups would have to be dealt with by exception (the Kauai way) assuming that they were to sport MV stations.

The fourth major delineation is one which has no great number of applications, and that is that when a country occupies space on two continents, it shall count as two countries -- Asiatic and European Russia, separated by the Ural Mountains. But what about the small area of Egypt which is East of the Suez? And where should the division between Asia and Oceania (which isn't a continent anyway) be drawn? Well, it also happens that circumstances crop up which don't quite fall neatly in place as above. For instance, what about the areas of Israeli occupation in the Middle East? And we cannot forget the unwieldy confusion surrounding the various emirates, amirates and trucial states in the Persian Gulf area. All of these, however, pale in comparison to the biggest fly in the ointment -- International Waters. Many DX'ers count a myriad of "International Waters" as a country. This would presumably be fine if all of the stations in international waters were located in the same general part of the world, or even in the same ocean. But what possible justification can be made for including R. Veronika, R. Caroline, R. Harmski (New Zealand) and the proposed station off the California coast as one country? Or on the other hand, how can you justify or possibly divide the large bodies of water in the world into different areas so that one can count the pirate stations located there to be counted as several separate countries when in fact none exist?

The whole subject becomes progressively sillier by the day. There appears to be no easy answer, because DX is still to a great degree an individual hobby and is in many cases governed not only by criteria arbitrarily set by DX clubs, but on the individual DX'er's own particular codes or beliefs. Many DX'ers who have gotten to the point of having to really work to hear new countries can sympathize with the recent comments of one international DX'er who declared that he didn't care about countries, or totals of any kind any longer. His log was sufficiently large that the prospects for growth were not at all great, so he came to a decision to confine his DX activity to noting and reporting changes in stations and data for his particular geographical area. Several other veteran DX'ers, whose accomplishments are well known have unofficially and individually gravitated toward DX'ing in a manner which is useful in promoting new developments in equipment design or scientific studies of various physical phenomena. Perhaps these are the only answers. Perhaps the veteran DX'er must of necessity in this day and age become a totally altruistic listener, devoting his time to helping others to log what to him is "old hat".

Maybe, though -- just maybe -- there is another answer which can be universally accepted by DX'ers for measuring achievement. Even now, it is often more telling to judge an accomplished DX'er's authenticity by what others have heard which he hasn't assumed essentially similar circumstances. Or better still, DX might possibly reach the point where comparisons and competition between individual DX'ers were no more than when we took it to new. Let each one do his best and not try to compare it with others unless their outlook is exactly the same. But even then, how can we be completely certain that radio waves exist at all?? The mind boggles.
26
Portuguese for DX'ers
(who know some Spanish)

Ron Schatz

With geomagnetic activity declining the chances for hearing Brasil are steadily increasing. During the last few years the author heard no fewer than two dozen Brazilian stations, including some of over 100 watts. Brazilians however, speak Portuguese, not Spanish. Fortunately Portuguese, especially the Brazilian dialect, is quite similar to Spanish in vocabulary and syntax so that anyone who understands spoken Spanish heard over the air can do the same with Portuguese by following a few simple rules. Results are not guaranteed, of course, but success is likely if you put your mind to it. If you don't know any Spanish at all, skip this article and read on elsewhere. For the rest of you, class has begun:

First of all, you should become familiar with the sound of Brazilian-Portuguese. Here are the two best sources:

Rádio Trans-Mundial 300 kHz 0030-0115 & 0745-0900 GMT
A Voz da América SW 2300-0100 & 1000-1100 GMT

When listening to the above broadcasts, note the following differences from Spanish:

1) Portuguese final unstressed "O" is pronounced "ô": "lado" (lah-doo), "rádio" (rah-dyoo), "sábado" (sa-bah-doo), "todo" (too-doo), "latino" (lah-tee-noo), "frico" (freeh-coo), etc.

2) Portuguese final unstressed "E" is pronounced "ee": "carne" (kah-reen), "classe" (klahz-see), "entre" (ahn-try), "grande" (grahn-dzhoo), "parte" (pahr-tay), "sobre" (soh-boo), etc.

3) Some vowels coming before N or M are nasalised, something like in French. There are 5 nasal sounds, compared to only 4 in French. Nasalised "A" sounds like English U in "sung": "antes" (ahn-tay), "bando" (bohn-doo), "cama" (kah-mah), "grande" (grahn-dzhoo), "lindo" (lee-doo), "mundo" (moo-noo), "pronto" (prohn-toh), "setenta" (say-tehn-tah), etc.

4) Portuguese is missing L and N in many words: "nação" (nah-seehng), Sp. "manzana," "irmão" (ehrn-mahn), "pôr" (puh), "poner" (pohn), "sair" (sah-eehr), "ter" (tehr), "vir" (veehr), "ver" (vehr), etc.

5) All Spanish words with TE and UE ("siempre"), "luego" appear in Portuguese as E and O respectively: "certo" (shehrt-toh), "escola" (ees-koh-lah), "governão" (go-veh-ron-oh), "logo" (loh-goh), "nove" (nah-voeh), "sebe" (sheh-beh), "des" (dehs), "jornal" (hohn-yahl), "quente" (kohn-yehntt), etc.

6) Portuguese final L sounds almost like English W; the L is dropped in the plural: "local" (loh-kuhl), PI: "locais" (lo-kihl), "portugai" (pohr-ter-goo), "Brasiil" (brah-ZW).

7) Words with -OIN and -CIONES in Spanish have -CÃO and -ÇÕES in Portuguese: "nação" (nah-seehng), PI: "nações" (nah-seh-seehng).

Certain high-frequency words differ considerably from Spanish. The definite article is O, A, ÓS, ÓS (note rule 4 above): "A República do Brasil," "A Voz da América," "o senhor". The O is pronounced "ô". Note the following contractions:

de + art. = do, da, dos, das  em + art. = de, de, dos, das
s + art. = so, a, os, as
por + art. = pelo, pela, pelos, pelas

"Bom, boa, bons, boas" is the opposite of "mau, má, maus, mães". The adverb "cmd" is the opposite of "mal" (Sp. "bien" and "mal"). A Brazilian station will leave the air with: "Muito boa noite".

The personal pronouns are: eu, elle/les & nós, elles/elas in the nominative case. Direct objects are: me, te & nos, eles. The word for "you" as used in the air is "você", or "vocês" in the plural. They correspond to "tu" and "ustedes" in American Spanish, so that there is no "second person" form used in Brazil.

Possessive pronouns are: meu/minha, seu/sua & nosso/nossa, seu/sua. Add "s" to form the plurals. Portuguese generally uses the definite article with these forms: "O meu amigo".

The Portuguese verb is very similar to the Spanish verb in conjugation and use, but there are added features:

1) There is a future-subjunctive tense, archaic in Spanish, used mostly after "if" clauses (where Spanish uses the present indicative): "se vocês puderem", Sp. "si ustedes puedan"

2) There is a "personal infinitive" (formerly the Latin imperfect subjunctive) that is conjugated: "nós irmos", Sp. "nuestros going"

3) The compound tenses are generally formed using "ter" (Sp: "tener"), more commonly than they are with "haver": "eu tenho comido", Sp: "yo he comido".

4) Some irregular verbs are so different from their Spanish forms that they deserve special attention:

    IR: vou, vai, vamos, vão. Prest: fui, foi, fômos, foram.
    Haver: hei, há, havemos, hávem. Prest: houve, houve, etc.
    DIZER: digo, diz, dizemos, dizem. Prest: disse, disse, etc.
    FAZER: quero, quer, queremos, querem. Prest: quis, quis, etc.
    TRAZER: trago, traz, etc. Prest: trouxe, troux, etc. (TRAER)

The numerals are also similar to Spanish, except that the word for Sp. "dos" has a separate masculine and feminine form: "dois homens" & "duas mulheres".

So much for the differences between Portuguese and Spanish; most everything else is the same. So please on the VOA and PBR, then work those Brazilians!
PLEASE NOTE

All persons and organizations mentioned in the Captain Glotz cartoon strip are totally fictitious and in no way are connected to people and things in the Real World.

THE TRIUMPHANT RETURN OF...
CAPTAIN GLOTZ

I AM THE GREATEST!

Yes, Captain Glotz, that intrepid NRC do-gooder is back! You may recall that Glotz's latest assignment was to spy on renegade member Stan M. Cramer II. Stan was plotting the eventual overthrow of the two major MW DX clubs. Glotz's mission: Find out how Cramer, no longer an NRC member, still gets DX news, and how he perpetuates the hoax that he is the hobby's only "professional DX'er."

Join Glotz now, locked in Cramer's dungeon as we seek the answer to:
"THE FLYING TRANSMITTER MYSTERY"
(CONCLUSION)
CAPTAIN GLOTZ FALLS INTO A SUBTERRANEAN CHAMBER WHERE HE FINDS:

STAN CRAMER'S SECRET STASH OF DX NEWSSEDS! HOLY HEAVEN! I'VE GOT TO REPORT THIS TO NRC CONTROL!

NOT SO FAST, GLOTZ!

CRAMER: MAAKA WAH!

YES, CAPTAIN GLOTZ, WHEN THE ADMIRAL_THREW_ME_OUT_OF_NRC_YEARS_AGO, I SWEAR I'D HAVE REVENGE AND NO, MY TIME HAS FINALLY COME. TOMORROW I WILL TAKE OVER THE NRC... AFTER THAT...

THE WORLD!

YOU'RE MAD, CRAMER! YOU'LL NEVER GET AWAY WITH IT! I WON'T LET YOU!

YOU CAN'T STOP ME. I'M GOING TO KILL YOU.

ANY LAST WORDS?

ON THE OTHER HAND, WHAT'S A LITTLE PAIN AND SUFFERING BETWEEN FRIENDS.

I SEE YOU'RE A COWARD, GLOTZ. I LIKE THAT IN A MAN.

WHAT? NO ONE ACCUSES CAPTAIN GLOTZ OF COWARDICE!! I COULD KILL YOU NOW...

I SUPPOSE YOU'VE COME TO SOLVE THE FLYING TRANSMITTER MYSTERY. VERY WELL... I'LL EXPLAIN IT ALL TO YOU FROM THE BEGINNING. THE WAY I LOG ALL MY DX CATCHES IS THIS: I HAVE SEVERAL DOZEN AIRPLANES WITH LOW-Power RXs. ONE IS LICENSED IN BOTSWANA, ONE TO SWAN ISLAND, AND SO ON. THEN I BORE AN ENGINEER FROM THE STATION I WANT TO LOG. HE FLIES THE PLANES OVER CRANBERRY BEACH WITH THE RX ON, AND I LOG IT SIMPLE. NO?

STAN CRAMER, I'D HOPED TO AVOID THIS, BUT...

WAKE UP, GLOTZ!

ZEEE... WHAT? OH! SO THAT'S YOUR EVIL METHOD!

YES, GLOTZ... AND NOW THAT YOU KNOW... YOU DIE!

I THINK NOT, CRAMER. WHY NOT?

GMH! GMH! GMH!

MY HIGH-POWERED DRONE GUN!

GLOTZ BREAKS INTO CRAMER'S HANGAR AND STEALS A PLANE!

GLOTZ TO BOSTON... COME IN, BOSTON!

WHAT? WHY?

HE LOST THE NRC"ELECTION. HIS POWER-PLAY FELL THROUGH. AS SOON AS HE FINDS OUT, HE PROBABLY WILL DO SOMETHING DESPERATE. LIKE WHAT?

OH, JOYNNO... BLOW UP ALL OF CRANBERRY BEACH OR SOMETHING... UH... IS YOUR INSURANCE ALL PAID UP?

AW, SHUT CLOWNING, PERCHEE. PEACH?

HE WASN'T CLOWNING, GLOTZ! THIS IS CRAMER... I HEARD IT ALL...

STAN! NO!!! DON'T DO IT!

I'M TUNING ALL OF MY FLYING-TRANSMITTERS TO BOO KILZ, GLOTZ. AS SOON AS THEY START RESONATING WITH CRAN, IT'S ALL OVER! AND OUT...

BUT STAN IS ALREADY OFF THE DEEP END! HE'S SUICIDAL! HE'S...
another  
SPR-4 test  - Robert Fischer

1. SENSITIVITY.

Two SPR-4 receivers, serial numbers 1413 and 201, were compared with a 1970 model HQ-180A and a realigned National HQ-180A. Both tube receivers were known to be in peak operating condition. Antennas used were a 100 foot long wire and the SW-2. The two SPR-4's proved to be just as sensitive as the tube receivers, #1413 had slightly greater sensitivity and slightly lower internal noise than did #201. John had some trouble with noisy mixer transistors in #201 shortly after the warranty expired. The manufacturer made the repairs and paid shipping charges...at no cost to John. He said the company was most cooperative.

A Canadian DX'er reports that the very expensive Collins 5151 and 65151 receivers are no more sensitive on the B+B than the HQ-180 (and therefore, no more sensitive than the SPR-4). (Refer to ARRL DX Monitor, p. 13, Aug. 12, 1972 issue) Receiver specifications on B+B sensitivity were given as:

<table>
<thead>
<tr>
<th>Receiver</th>
<th>Signal required for 10 dB SNR/N (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collins 5151 with preselector</td>
<td>5 uW on 3.5 MHz</td>
</tr>
<tr>
<td>Collins 65151</td>
<td>10 uW on 10 MHz</td>
</tr>
<tr>
<td>HQ-180A</td>
<td>1-1.5 uW typically all bands</td>
</tr>
<tr>
<td>Drake SPR-4 (manufacturer’s specs)</td>
<td>0.5 uW PA, SW</td>
</tr>
</tbody>
</table>

In my opinion the two SPR-4's reviewed easily meet the manufacturer's specifications. I might add that the receivers were compared on the SW bands as well as on the B+B.

To get good long wave reception with the SPR-4 the antenna impedance must be matched exactly to the receiver input using an electrical pi network device.

2. SELECTIVITY.

Using the 1000 kHz calibration signal, plots of the receiver selectivity were made by first calibrating the receiver to exactly 1000 kHz, then switching the receiver to the AM, CW, USB and LSB modes and taking S-meter readings at 200 Hz intervals. This receiver has a crystal filter in the 5645 kHz 1st IF and an LC filter in the 2nd IF (50 kHz). The results are shown in the four graphs. In terms of selectivity, the most significant finding was the very steep slopes of the SPR-4 in the AM filter, giving the receiver excellent deep skirt selectivity even though the filter was 4.9 kHz wide on the top for the AM frequency. The shape factor of the AM filter was 1.4 which is nearly as good as a mechanical filter. The slope of the selectivity curve is considerably sharper than that for the corresponding 6 kHz selectivity in the HQ-180A receiver.
2. SELECTIVITY (continued)

The graphs shown are for SSB #1443. Briefly, the receiver’s deep skirt selectivity was found to be much better than the manufacturer’s specifications.

<table>
<thead>
<tr>
<th>MODE</th>
<th>MANUFACTURERS SPECS—BANDWIDTH</th>
<th>SSB-4 #1443 ACTUAL SELECTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>at 6 dB</td>
<td>at 60 dB</td>
</tr>
<tr>
<td>AM</td>
<td>4.8 kHz</td>
<td>10.0 kHz</td>
</tr>
<tr>
<td>USB</td>
<td>2.4 kHz</td>
<td>7.2 kHz</td>
</tr>
<tr>
<td>LSB</td>
<td>2.4 kHz</td>
<td>7.2 kHz</td>
</tr>
<tr>
<td>CW</td>
<td>0.4 kHz</td>
<td>2.7 kHz</td>
</tr>
</tbody>
</table>

Of course, one should realize that AM signals on the RGB are much sloppier than the one generated by the crystal calibrator, which puts out about a 15–20 dB over S-9 signal on most bands.

In brief, the AM filter is quite broad at the top but it has steep slopes. Double peaks were noted on both #201 and #1443. On #201 the variation was about 2 dB, and on #1443 it was about 4 dB.

The peaks have no significance in actual receiver operation.

3. DIAL ACCURACY

Calibration is accomplished by switching the receiver to SSB or CW mode and tuning for zero beat on the 100 kHz harmonics. The dial can be slipped so that the receiver can be calibrated exactly.

On set #201, the dial accuracy was within 200 Hz when calibrated at the nearest 100 kHz harmonic. Maximum error over the 500 kHz band was 1 kHz without resetting the calibration.

On SSB, #1443, the VFO was almost perfectly linear. Dial accuracy was within 100 Hz (and typically zero, or 50 Hz) when calibrated at the nearest 100 kHz harmonic. Maximum error over the 500 kHz was only 100 Hz without having to reset the calibration. I doubt if a receiver could be calibrated much better than this.

The two relative maxima in the crystal filter do not interfere with calibration or determining the exact frequency (to 100 Hz or less) of an unknown station. I might add that all crystal filters (except very expensive ones) probably have a few maxima and minima.

In switching from 1 band to another, the maximum change in calibration (1.1 kHz) was on the 11.5 MHz band. The drift for the other bands was: 9.5 MHz: 800 Hz, 6 MHz: 400 Hz, 15 MHz: 200 Hz, 17.5 MHz: 200 Hz, 0.2, 0.5, 1.0, 1.5, and 21.5 MHz: Zero. 7 MHz: 100 Hz.

4. S METER

The meter works well. It produces a noticeable deflection on a weak signal but does not pin except on extremely strong signals. Meter needle deflection is roughly a function of the logarithm of signal strength. (The meter has a wide dynamic range.) It gives very true indications of relative strength of signals. On many receivers, including the RA-180 and the RX-150, almost any substantial signal will pin the meter. I do not consider this to be very useful after all the function of an S meter should be to measure signal strength.

5. IMAGE REJECTION

The SSB-4 is free from images. No cross modulation was observed when tuning to a 50,000 watt station 5 miles from John's home near Philadelphia using a 100 foot long wire or the Space magnet.

6. BIRDIES

The SSB-4 does have some. They are not operationally significant. On #1443, only 3 major birds were found on the 0.2, 0.5, 1.0, 1.5, 6.0, 7.0, 9.5, 11.5, 15.0, 17.5, and 21.5 MHz bands. (The only bands I have on this receiver.) These birds were at 9698, 9963, and 15334 kHz. The 9698 kHz birds measured out at 3–9 on SSB and 3–8 on AM. The other 2 birds did not produce an S meter reading. Besides these a few other very weak spurs were found. Only the nominal 500 kHz ranges, plus or minus 50 kHz on the ends of each band, was considered.

John reports there are some birds on the 4.5 and 5.0 MHz bands, with one on 4.973 kHz being very strong. The birds tune out sharply and I do not consider them to be a handicap to reception.

7. NOISE LIMITER

Each noise blanker must be aligned to match the receiver it is installed in. This is not a difficult process. John aligned the noise blanker in his set and discovered that LORAN impulse type noise was reduced by as much as 40 dB.

8. NOTCH FILTER

The filter must be tuned carefully because of the very sharp null. Null depth ranged from 30 to 60 dB on SSB and CW, and was typically 65 dB or more on the AM function. John reports that the RA-180A filter is slightly more effective but the SSB-4 filter seems to be able to get the job done.
9. AGC RESPONSE TIME

Without the noise blanker operating, a strong noise pulse may cut out the audio for 1/2 to 1 second, because of the slow AGC response time in the AM mode. When the noise blanker is operating properly, the AGC should be affected only by a received signal and not by the noise pulses. I have not had the adjustments made in the blanker in my set, so I cannot comment on this at the present time.

10. AUDIO

The audio quality was judged to be good. The MS-4 speaker yielded somewhat better low frequency response than the one built into the set, on a qualitative judgement.

The RF gain switch, when set at zero, caused the S meter reading to jump to 60 dB over S-9. This is due to circuitry design. S meters on some Collins receivers behave similarly. I don't consider this important because when I listen I do not set the RF gain to Zero, and I don't think anybody else would either.

The volume control, when set at the minimum volume setting, does not shut off the audio completely. Again, I have no qualms about this.

11. FINAL COMMENTS

In light of our experiences with these two receivers, we believe the SPR-4 is an excellent receiver and probably the best receiver available in its price range. The SPR-4, reviewed by Mr. Behr undoubtedly does not measure up to other SPR-4's. It is unfortunate that a few "lemons" did escape the factory.

One could hope for a "narrow" AM filter, but, even without this, the SPR-4 does quite well. Of course, reception of splits very close to strong domestic stations may be difficult.

The SPR's strong points are, in review, excellent frequency stability, very accurate dial calibration and frequency determination, high sensitivity, excellent signal handling capability and image rejection, and a good S metering system, as well as excellent deep skirt selectivity.

The only improvements that might be made on this receiver might be the addition of a "narrow" AM filter, and a choice of AGC response times for a given reception mode. Perhaps the noise blanker could be included as standard equipment and adjusted at the factory during the manufacturing process.

I might add that I observed no frequency shift in the SPR-4 when changing from AM to CW or SSB. The apparent shift is due to the shape of the filter selectivity curve. By tuning the signal to zero beat you notice no frequency shift.
Zero represents the center of the carrier frequency, in this plot the upper sideband is suppressed.

Zero represents the center of the carrier frequency, in this plot the lower sideband is suppressed.
RECEIVER HOT-RODDING HINTS

By Ray Moore

Just as the teen ager can modify an automobile to outperform the most expensive factory-built car for a specific purpose, such as drag racing, so can the interested DXer modify a receiver to outperform the factory-built set for a specific purpose, such as BOB DXing. For such interested DXers here are some notes and observations.

The Detection Process

The detector is really a mixer in which two frequencies beat against each other to produce a new frequency. In AM reception, the carrier beats against the sidebands and the difference frequency is in the audio range. The original and sum frequencies, which are also present at the output of the detector, are filtered out with R/C elements.

An important characteristic of a detector is that it is controlled by the strongest frequency present. If the strongest frequency at the detector is the desired carrier, everything else will be demodulated against it and we have a readable signal. If the strongest frequency is a sideband component from another station, the output of the detector will be unintelligible.

The carrier of a properly modulated AM signal is from 6 to 20 dB or more stronger than any individual sideband component. This insures the proper relationship at the detector in the absence of interference.

What can we do to present more desired signal and less interference to the detector and thus recover more usable audio? There are three basic things to do:

1. Use steep sided, narrow IF filters so that only the band of frequencies that contains the desired carrier and one set of sidebands is accepted.

2. Limit all signals, except the desired carrier, to the level of the desired sidebands.

3. Exalt the carrier within the receiver by increasing its level in relation to the desired sidebands and interference.

IF Filtering

Nelson's article(1) thoroughly covers the use of mechanical filters in the IF strip and is a must for anyone interested in DX receivers. Here are some observations based on much practical experience with mechanical filters.

Use of more than two mechanical filters in an IF strip is a futile exercise because of the limited dynamic range of existing front ends. Ordinary receiver front ends cannot simultaneously handle two signals that differ in strength by more than 50 to 100
dB without blocking, cross modulation or intermodulation. The average receiver will be closer to the 20 dB end, only special military receivers reach 100 dB. Two cascaded mechanical filters, properly shielded and filtered, will have an ultimate rejection between 120 and 140 dB, much more than can be used in practice. A third filter can, at best, make a small improvement in shape factor at the expense of a decrease in the already borderline bandwidth, and increased complexity.

Cascaded mechanical filters should be separated by amplifier stages rather than connected end-to-end. One of the filters should be placed directly at the input to the IF strip to knock down the undesired signals a few notches before they hit the amplifiers. The other filter can be located one or two stages further along. (Figure 1) If the two filters were placed back-to-back at the input to the IF strip your receiver front end would be looking into a unit with a noise figure of 20 dB or more, kamy front ends are not quiet enough and have insufficient gain to overcome such a handicap. Secondly, if the filters are separated by amplifier stages you will have less stringent interfilter shielding requirements. Third, if the filters are lumped at the input to the IF strip the three following amplifier stages can generate considerable wideband noise. (7,8)

The center frequencies of cascaded filters must be matched within a few hertz since any mismatch will reduce the combined bandwidth which is already near the minimum that can be used for intelligible audio. The effective bandwidth of a given filter is much greater for SSB than for AM since the carrier is placed at a point 20 or 30 dB down the side of the filter response for SSB. This adds perhaps 500 Hz to the upper audio frequency that is passed compared to that which can be passed for AM where the carrier must be within the passband of the filter.

Don't spend too much time trying to flatten out the passband of your IF strip. Experience has shown that peaks and valleys in the passband or rounding off of the edges, up to 5 or 10 dB, has little effect on the intelligibility of the signal if the exalted carrier technique is used. Even when it isn't, passband ripple is hardly noticed but rounding of the edges (as in Fig. 3A) can be annoying.

An instrument for visually displaying the response curve is helpful in working with IF strips. One of the best and least expensive instruments is the Heath SB-620 Spectrum Analyzer. Set the SB-620 at its minimum sweep width position which will be about 0.7 kHz per division and manually sweep a steady signal across your IF passband, either with a signal generator or by turning your receiver back and forth across a local BC station. The result is a nice picture of your IF passband down to more than 40 dB. See Figure 3.

Exalting the Carrier

There are a number of ways to exalt the carrier of an AM signal. Some don't work well when the carrier is obscured by noise and others are very complex. The best and the simplest of the methods which have been tried for ecb DX is to use a 4 Multiplier to peak the carrier frequency relative to the other frequencies in the passband. The peak can be moved from one side of the passband to the other so that either the upper or lower
sideband can be received.

The use of the Q multiplier for exalted carrier reception was explained in some detail in the original article in Electronics in 1952 and is good reading for anyone interested in the subject.

One of the little known advantages of exalted carrier reception is that it adds perhaps 200 to 300 Hz to the usable bandwidth of a given IF strip because the carrier can be placed somewhat down the side of the passband and then brought back up with carrier exaltation.

Exalted carrier reception is useful in receivers not equipped with mechanical filters. It provides the usual exalted carrier advantages and, in addition, steepens the side of the passband which has the most QRM. The HQ-150, which has a built-in Q multiplier and a crystal filter, can also provide exalted carrier reception by placing the crystal filter in the medium position, tuning so that the carrier is down the side of the crystal selectivity curve by about 6 dB (one "S" point) and then tuning the Q multiplier peak to the carrier.

AM reception on the SSB positions of modern receivers is seldom satisfactory because the locally generated carrier is not phase locked to the original carrier. The carrier of an SSB signal is down about 70 dB at the detector, 50 dB at the transmitter and 20 dB in the receiver, thus there is no relation between the original suppressed carrier and the local carrier.

How much carrier exaltation is desirable? The carrier should be exalted at least 15 to 20 dB relative to the rest of the passband, based on experiment. This coincides well with the SSB recommendation that the local carrier be 14 to 20 dB greater than the signal. Less exaltation does not achieve the characteristic clarity of exalted carrier reception.

The Q Multiplier

There are no Q multipliers on the market today. You will either have to purchase a used one or build your own. Much of the circuitry can be eliminated if the Q multiplier is for exalted carrier reception. The circuit in Figure 2 provides excellent performance. Q1 can be an HEP-801 or HEP-802 or most any general purpose N-channel FET. L1 can be a SSB loopstick or antenna coil (Miller A-5495-4, for example) with primaries and other extraneous windings removed. The coil winding should be positioned so that it is a couple of inches from any other objects. The unit can be built into a mini-box large enough to give the proper coil clearance. The lead connecting the Q multiplier to the receiver should be coax no more than 10" to 18" long. Route the transformer to which the connection is made. A switch in the supply voltage lead will turn the unit off and on.

The Q multiplier will superimpose a peak on the receiver passband if the decoupling resistor, R3, shown in the inset in Figure 2, is added. Curve A in Figure 3 results when a 22K resistor is used and Q was taken with a 10K resistor. The larger the resistor the narrower the peak and the less its amplitude. In the 22K resistor the peak is so narrow as to make tuning very difficult and it is not high enough to give sufficient carrier

![Vertical axes in dB](image)

Horizontal axes 0.7 kHz/Div.

Figure 3 - IF passbands as displayed on SB-520 Spectrum Analyzer. (A) IF strip of three amplifier stages and two Kokusai mechanical filters and two IF transformers. (B) Same IF strip with Q multiplier set for exalted carrier reception, R3 of 22K. (C) Same except R3 is 10K.

exaltation. The 10K resistor is much better. In practice the straight Q multiplier without the resistor does a good job and allows more carrier exaltation. The Heath Q-1 and GD-125 Q multipliers have a 27K decoupling resistor in their broad positions.

Where should the Q multiplier be connected into the IF strip when it is intended for carrier exaltation? The best point is just before the second detector, Figure 4. If your receiver has a diode detector it will either be necessary to change it to the infinite impedance type or move the Q multiplier to the primary of the last IF transformer. The reason for placing the Q multi-
plier at the end rather than at the beginning of the IF strip is
that it is protected from strong, off frequency signals by the
mechanical filters and because it must come after the IF limiting
which must be done late in the IF strip.

How To Tune The Exalted Carrier Receiver

Tune to the desired station with the Q multiplier off and de-
terminate which sideband has the least interference. Then tune so
that the desired sideband is in the receiver passband with the
carrier at the extreme edge as evidenced by a 6 to 12 3D (1 or 2
"S" units) drop in the "S" meter reading. With experience the
correct point is easily found audibly. Then the Q multiplier is then
switched in and peaked on the carrier. The Q multiplier feedback
control should be advanced nearly to the point of oscillation,
when properly tuned there is a pronounced sharpening of the clar-
ity of both the background and the desired signal.

When the desired station is very weak it is sometimes better
to perform the above set-up on a nearby, stronger station and then
tune back to the desired station and peak it with the receiver
tuning, leaving the Q multiplier alone.

A slow tuning rate is required when using a large amount of
carrier excitation. Many receivers are deficient here and need
some help. Either a mechanical or electronic bandspread capacitor
across the oscillator tuning capacitor will do the job.

Receiver drift must be low otherwise you will be chasing the
signal across the band. Once set up, the retuning to maintain the
carrier on the peak should be done with the receiver tuning rather
than the Q multiplier tuning otherwise the position of the peak in
relation to the passband will change.

IF Limiting

After we have narrowed the bandwidth to only that required
for one sideband and have excited the carrier we can reduce the
amplitude of QRM and QRM to a level equaling that of the desired
sideband by limiting. This will insure that the desired carrier
will be the strongest component at the detector. The type of lim-
iter described here is particularly effective against short, sharp
bursts of sideband energy from a nearby station. It is also effect-
ive against short individual static crashes. It will not improve
readability in the presence of continuous QRM or QRN although it
may save your ears.

The simplest and best IF limiter tried to date is a pair of
silicon diodes across the last IF transformer. (Figure 4) The
diodes appear as a short across the transformer to any RF volt-
ages above the diode threshold, about 0.6 volts. Below that point
the diodes are an open circuit. The 6-60 pF capacitor is a mica
trimmer to tune the transformer when the diodes are cut out. The
diodes, trimmer and switch should be mounted as compactly as poss-
able around the bottom of the IF transformer.

Tune-up consists of switching the diodes into the circuit
and peaking the transformer, T. Then switch the diodes out and
peak again with the 6-60 pF trimmer. Operation of the limiter is
best with the AGC off. The RP gain control is advanced until
clipping occurs, as determined audibly, and then the IF gain con-
trol is adjusted for a comfortable listening level.

Audio clippers and limiters are of little value to the AM DX
listener. The IF limiter is much superior because:
1. the limiter should be ahead of the carrier excitation
point so that noise and QRM can be cut down to the level of the
desired sidebands
2. noise and QRM will produce in-band IM products if they are
not attenuated ahead of the detector
3. the IF filter in the detector circuit will stretch and in-
tegrate noise pulses if not previously attenuated
4. distortion products of audio clipping and limiting will
be largely in-band
5. distortion products of IF limiting are largely out-of
band.

IF limiting is the least explored of the methods of im-
proving AM DX reception. Much experimenting remains to be done. The
use of biasing on the diodes to adjust the threshold as an alter-
native to the above method, which fixes the threshold and adjusts
the signal level, should be investigated. Pappenfuss (3) suggests
that the limiter would be much more effective if VFL (Fig. 1) were
a Gaussian type filter (two or three IF transformers in series)
and the limiter placed just ahead of VFL. Perhaps there are suit-
able germanium diodes. They have a lower threshold voltage and
could be placed nearer the front of the receiver. See Ref. 5.

Receiver Gain and Gain Control Requirements

The Q multiplier operates, not by peaking the desired fre-
quency, but by attenuating all frequencies except the desired one.
Therefore, when the Q multiplier is used for exalted carrier re-
ception the sidebands are attenuated up to 20 dB. Add to this the attenuation of a couple of mechanical filters, an IF limiter and an audio filter and you have perhaps 40 dB of attenuation in the signal path of the receiver. Many commercial receivers do not have the reserve gain to handle such a situation. In a homebuilt receiver I have found that a minimum of three IF and three AF stages are required. An RF stage will help but at the expense of signal handling performance.

The receiver should have a manual gain control for each section in order to provide optimum gain distribution for various receiving conditions. If, as is usual, the RF and IF are controlled by a single control they should be separated and a separate control installed for the RF stage. Better yet, remove the RF stage from both the manual and automatic gain controls and install a 2K potentiometer across the primary of the antenna transformer to act as RF gain control. This controls the strength of signals without degrading the RF tube signal handling ability as you do when you change its operating point. Every dB of attenuation ahead of the receiver reduces cross-modulation by 2 dB and IM products by 3 dB while reducing the desired signal by only one dB.

Audio Filters

A low pass filter has limited usefulness in a receiver with adequate IF selectivity unless the filters are lumped at the input to the IF strip in which case the amplifiers can produce a wideband noise that produces a hiss in the receiver output. Some detectors may generate distortion which can be reduced with a LPF.

A high pass audio filter, on the other hand, will sometimes make a marked improvement in the intelligibility of signals which have passed through a narrow filter by eliminating the boominess and muffled sound characteristic of such signals. It has been shown that when the higher audio frequencies have been removed from speech (by the IF filter) that some of the lower frequencies should also be removed to maintain speech naturalness and intelligibility. (4) If the upper frequencies are cut off around 3000 Hz, as they are with a mechanical filter, the lower frequencies below 300 Hz should also be attenuated.

Figure 5 shows a simple method of reducing the low frequency response of a receiver. Experiment with the value of C1 to get the most effective value for your personal hearing characteristics.

Bi-aural Reception

A little known technique is bi-aural reception in which the two sidebands are separated and one sideband is sent to the left earpiece and the other to the right earpiece of a set of phones. The desired signal information is identical on each sideband but the QRM and noise is different on each and the ears and brain separate the signal from the noise so that the signal stands out. There is a sort of stereo effect and you can concentrate on the signal and ignore the noise much as you listen to a conversation in a noisy room.

One way to achieve bi-aural reception is to use two receivers each capable of exalted carrier reception. One receiver is tuned to the upper sideband and the other to the lower and the outputs
are fed to stereo headphones. I have used an EQ-150 for one side-band and my homebuilt receiver for the other and had really good biaural reception. One of the switch positions in Figure 6 is for biaural reception.

Headphones

Many DXers believe that the low impedance stereo headphones are the best and most comfortable for DXing. The two earpieces can be paralleled either by rewiring the plug or in an external adaptor. Most modern receivers have low impedance headphone outputs which will accommodate the stereo headphones but older receivers may have a high impedance headphone jack in which case you can wire a headphone jack in parallel with the speaker output terminals.

Putting It All Together

The serious foreign DXer interested in maximum performance needs a second receiver and a tape recorder. He will also want to be able to use either headphones or a speaker. The second receiver is used for checking WWV, listening for SW parallels and general band scanning during dulls in tapping or logging the primary station.

Figure 6 is a switching arrangement that allows very flexible use of the equipment. S42 switches in either a speaker or stereo headphones. Position 1 of SW1 is for listening to receiver 1. Position 2 places receiver 1 on one earpiece and receiver 2 on the other earpiece of the stereo headphones. Position 3 is for receiver 2. Position 4 is for the tape recorder. The switches, jacks and wiring can often be placed in the speaker cabinet.

Reference 6 has some good ideas on the receiving end of DX station design.

2. "Flexible Selectivity For Communications Receivers," Villard and Horden, Electronics, April 1952
5. "Noise Limiter For Mobile VHF," Bishop, Electronica, June 1953

Well, folks, we're back weekly again. We would like to take this opportunity to remind you of a few of the ground rules for DDX. First, be sure to weed out routine loggings from your submissions. We look primarily for items of major DX interest: changes, unusual receptions, in other words, the good DX. All items submitted should be separated into the various subsections of DDX and then ordered by frequency. This saves vast amounts of editing time. If there is some compelling reason why you cannot separate into Day, SSN, Night, changes, & r/c's, then please order your stuff by frequency at the very least. Double spacing isn't essential, but is nice between items. Typing also not necessary but preferred. Also no need to put name or initials after each item unless you're copy-sheeting for another club. It doesn't get in my way, but may take up your time. So much for that. Now on to DX:

* 920 WTMN-WJ SCH: 0600 (0700ST) - 0000 (Tom Sundstrom, Willingboro, N.J.)
+ 960 WERC-AL ex-WERC
* 1090 KAAI-DE SCH: 0600 (0700ST) - 0005 (0800)
+ 1260 WLBH-WJ SCH: 0530 (0730ST) - 0005 (0800)
*** 1520 WLVW-IL Last issue's comments re this were meant for the following station: I couldn't read my own scribbling, hi - RJE
*** 1550 WLLX-DE Ordered off air by 11/23 (unless owner takes court action) for repeated violations of FCC rules.
+ 680 KKKX-UX ex-KEAT
+ 620 WVM-IM SCH: delete NSF-AN,

call applications

1100 WYCO-ON req. WWAY
1230 WFAP-AY req. WHTO
1580 WKOZ-IL req. WYVR

DX TESTS NOT HDR OF LATE (per TRS,PT, RJE) include:

R/F's


A couple more notes here: 1) it would be more helpful if more of you f/c DXers would report. 2) All reporters please try to list rx, ant. , etc. so we can include this info as space permits.
**SUNSET & EVENING**

1270 WJOK-CA Hrd 10/4 1735 w/local nx (Leo Lister, Rahway, N.J.)
1290 WJOK-WE Hrd 10/4 1910 w/ CBS nx (LA)
1300 WJOK-VA 10/4 1830 w/ wx, CBE events at U. of Va, S/off 1615 (LA)
1310 WJOK-WV Hrd 10/4 1905 w/ wx, nx, wx, (LA)
1330 WJOK-WL Hrd 10/4 1930-15 w/ wx, and reminder about motor vehicle inspections.
1350 WJOK-WD Hrd 10/4 1815 w/ wx, good ID's, (LA)
1550 WJOK-WA S/off 19/7 1930 after 1 hr rel. PM. (TR)
1340 WJOK-WB alone c/OCD & 1955 s/off, SSR, good sig. (TR)
1560 WJOK-WI Hrd 19/6 fairly cI @ 2000 s/off SSB c/OCD (TR)

**MIDNIGHT TO SUNRISE**

730 WPXK-VA Announced ST 0017-15 19/5 w/ TT (Ron Ausco, Windsor, VT.)
740 WJMK-FL Noted 10/2 atop din w/ID, TC 0215, weak, following SBE s/off 0107 (TR)
790 KERD-IL First really ID copied 0300 10/2 at termination of KGHL r/c. This freq. is a mess. (Paul K. Hart, Ft Worth, TX.)
800 XLDX-WZ Hrd 0255 19/7 w/ID, relig. message & quick s/off SSB 0300 (WZN)
950 XLDX-GO Hrd 10/2 a surprise of/NLOF w/PEN off. Had ANI tele-talk to 0230 ID, later a promo of an unit ID name, wekt, 0210 (TR)
970 XLDX-TH Hrd 9/11 w/TEL, nx on hour & 1/2 hr, Good sig 0235-0502. Had one PM prom (John Tull, Kansas City, Mo.)
980 XLDX-TX S/on copied 0600 9/11, noted off again 10/2, must have at least 2.5 SP again now. (PHX)
*990 WJMK-TN Very mushin evidence even after 0700 10/2. NSPP?? (FKH) **Yes they have been for some time now - RJE
1010 WJMK-WS 19/6 0703-0729 w/ chs, many local spots, TC's after many record and many ID's (Tull)
1060 WJMK-WO Hrd 9/23 0705-0812 w/ TEL, nx, wx, S1g, just above the noise level. New station. (Tull)
1080 WPXK-CT Quite good on POF test here 0020-0055 $9/10 (Wes Bogd, Youngstown, Ohio) Hrd 0000-0105 w/ mostly TT, modulation on voice ID's weak, one clear one 0103. Talked to GE 0015, lekda TT really tore WPXK up. (TR) Hrd TT only, no ID's here. Called OE 0020, asked for WW ID's w/lekda. TT & 10% modulation, but we had no luck.
1130 WJMK-PA Hrd 9/25 0725 w/ MOD, nx, wx, one PSA. S1-3 level w/ KELD off for state # 37. (Tull)
1150 WJMK-NC Hrd 9/15 0710 w/ID, TD 0315. CTwx n/OCD muddled (TR)
1220 WJMK-ON Hrd 9/15 0715 w/ID, TD 2335 w/ ABU w/CDM muddled. Difficult at best to follow programming. (TR)
1230 WJMK-WA Hrd 9/17 w/ID, TD in rr G2L3. Hard to follow in din, but mostly dominant. (TR)
1260 WPXK-PA Hrd ending mx 10/6 0700 ID into nx w/ Whisk off & WHEE muddled. WPXK-PA First time hr, despite beam; so close. (TR)
1290 WJMK-MN w/ mx, OC, ID copied 0306 10/2, tremendous signal (RJH)
1310 WJMK-TX S/off time is erratic, off by 0105 10/2 (PHX)
1350 WJMK-XI Very nice ID copied after mx 0130 10/2, then only OC 'til WJMK-TX in a minute. (PHX)
1360 WJMK-PX Hrd 9/23 andmg. 0125-27, apparently the one w/ OC 0115, In- to nx 0030. Surprisingly no sign of NSF-CHAT. (TR) All for Jerry Lewis Telephone 9/4; Strom; for 250 watts. CF to be on by end of Oct. per variance. (RJH)
1380 WJMK-QI Hrd 9/23 ID. Almost over but two phonetic ID's: hour 0125 27 buried w/ WPXK which is very hard to null. (TR)

**MORE LATE CHANGES**

* 010 WJMK-VA ex-WSLS
  * 1000 KERD-VA Has r/c 0220-0230 lth or last MM. (Hart)
  * 1070 KNX-CA CP is on. Now U1
  * 1230 KATQ-AZ Will stay here 1000/250 U1. Delete move to 1360.
  * 1250 WPXK-CA ex-WSLS
  * 1300 KATQ-AZ w/le 1230
  * 1150 WPXK-GE CP is on.
  * 1170 WPXK-MA CP is on.
  * 1490 WPXK-PX ex-WARD
  * 1520 CP-MA Clayton, 25250; 5000 D1 (8/9) **Not sure if this is initial decision or grant = RJH

**Note**

Also note again that several CPs listed in 8/29 issue including Canadians may only be initial decisions. The brand new "AM Applications Pending" list shows all kinds of things which are either on or granted or deleted already. One suspects that maybe many of the grants listed are pending a minor change or an extension of completion date. This may also hold for others, but at any rate, short of an excommunication of the FCC files, we'll have no really accurate info.
TRIPPING WITH

Ron Schatz

Between September 1969 and March 1970 I took a "luxury" cruise around the Pacific, compliments of the U.S. Navy. DX was via a Hitachi AM/FM-stereo portable until I bought a Sony TR-1500 in Hong Kong. As best as I can remember there are my observations:

HAWAII. Most DX, what there was of it, was from Pearl Harbor.

Locals are so much and numerous that I heard nothing outside the islands until I had the chance to visit with Richard Wood one night in Kailua, and there he showed me Papaste-1400 and other goodies. Strongest station to E92A from Jahu should be KBE-1120, not counting the obvious QRM on the channel. The other Honolulu stations would put in powerful signals to E92A were it not for the large mountains that block low-angle skip. Honolulu stations, unheard nights enroute from San Diego, dominated the dial almost to Samoa.

AM: S10A. The locals pronounce it "SAM-mo", and the capital, Pago Pago, is "FONG-go". The local word for " Aloha" is "Talofa". This is a true South Seas paradise, unlike bustling Honolulu, and the native influence is dominant. The local station is WMU-1120, which had few ID's and carried a lot of AFRTS material. Across the way, 2AF-1120 in Apia ("a-Pee-eh") had more local announcements and plenty of commercials - sounding very much like ZMG-1140 back home. The semi-local was ZGF-1020, never heard in English, otherwise the daytime dial was dead. All three stations carried mostly vernacular, and that enthralling native music - similar to a community sing.

NEW ZEALAND. Visited Auckland, Gisborne, Taumarunui and Rotorua in that order. In Gisborne I co-hosted Graham Bolton's "KO-90" rock programme one afternoon for two hours by reading spots, running the contest and introducing the US hits of the time to the locals; this over ZGF-1060. On my way to Rotorua I passed by the tower of ZGF-1060 in a hamlet called Te Puhe ("Te" is Maori for "the", hi - nothing unusual about it. This was October 1969, before private nuclei was legalized. Radio Auckland was booming on the high seas, and "The Big Fm" was working with rented NZBC facilities in Auckland. NZBC fare was: "National Programme" with distinctly separate programmes and no commercials and few local ID's and announcements. "Commercial Programme", locally originating with spots and plenty of rock. "Yo Programme" with all classical music. Music stations, the ZMG's with standards, located only in the 4 main centres. There is but one TV channel, and no FM.

PHILIPPINES. We sailed through the San Bernadino straits and landed in Cagayan, vice capital of the island. The local station was KO-90L, a stereo station whose harmonic on 1050 was just as strong. The Filipino language is English, if one cares to honour the local vulgar dialect with such a title. Tagalog is being spread as a national language, but is not yet the everyday language like English is. Spanish is all but dead; nobody speaks it. Broadcasting in English and Tagalog, and the two tongues aren't necessarily treated distinctly; both may be heard alternating in a single spot! Except on the better stations the English has a heavy Filipino accent; in fact, it's almost unintelligible at worst. Otherwise the accent is American. Stations that can proudly announce their network affiliation: "A member of the Bayanian Network", etc. Most of the music is rock, the beautiful native music is rarely heard on the air. The impression of broadcasting in the Philippines is one of Colombia, etc., speaking English.

JAPAN. We visited Nagasaki from our base in Sasebo. Japan has a standard of living comparable to ours - colour TV and Toyotas everywhere! The NTK has two AM networks (the second becoming more cultural and educational), one stereo FM, and two TV networks - all colour. The Far East Network is the local AFBS, ID'ing locally as "15-70 on your dial, Far East Network, Sasebo!", all FM stations ID similarly. DX from Sasebo found Shanghai-1040 coming in like a local, also a few Korean stations. Naturally, I was too busy to do much DX'ing, Japan being such a fascinating country.

KOREA. This place deserves all the charming publicity it has gotten, but we won't go into that. Local radio was exactly as per K1JTH, with the Chinese outlets heavily jammed. Red China was all over the dial with "The East in Red" every half hour and "Mao & Cheng" every other word. I found Macau-775 in Cantonese and some Portuguese music, but I could not find the Portuguese-language service. Taiwan was also noted days with rock instead of Mao.

VIETNAM. We anchored in the harbour at Da Nang and shot our guns. The language sounds like Chinese, and the name of the country is "Viet-Nam-Cong-Boa". The south has the VTN, distinguishable from the TNVN of the North by more Western music and less propaganda. We were there Christmas day 1969, and Hanoi Hana, via 1200 kHz, had a special "Don't you wish you were home with your family" programme for us. But the American Forces Vietnamese Network dominated the dial with professional Drake programming, including singing jingles!

GUAM. We stopped here on our way back to San Diego. KUAM-690 in Agana ID'm as the "Voice of the Western Pacific" and sounded like a typical MOR station back home. A local AFBS station was also noted, but I don't recall the frequency. KJDR-1550 in Saipan had a good signal east of Guam.

And that was your luxury cruise - a long-overdue report. Next report should be from San Andres (Isla), Colombia, this spring.
Bill Karsell - 1148 Booth Pl #2 - Kansas City, Kansas - 66103

9/4. Greetings, etc. I really enjoyed talking via phone with Ron Schmitz and EWC in Miami at the Convention the evening of 9/2. It sounded like they were having a great time. One of these years I’ll make it to a Convention. My congrats to the people in the Birthing Room for their hard work. Just one more reason the NEC has got to be the greatest organization for DXers in the world! And I’m really proud to be a member. DX has been almost nil this Summer but things have started to pick up. 8/11 WEM-1404 heard W/D in promo @ 11:17pm. Now of KWH, only 60 miles to the W/ 9/4 WEM-1200 w/off-SEL on 28/29. I can’t believe we can hear components of KB9M 6/30/29 both in Miami and Canada. In this is a regular SP packet @ 1200, announced 0400 on. Another new apartment here is pretty good for DX. Most of KB7M is from TV but living within 3/4 mile of KB9M’s tower produces static, etc. I can really sympathize with WRC and the rest of the FNV City DXers. I’d better off DX and I have some DXers can get some space. Best of luck to all during the coming DX season. May you all have a bag 20 on every DX session on the 73.

Sam Wareing - Box 111 - Comanche, Texas - 76442

Greetings to all NECers! New member #804, Salina; Hi. By way of intro, I’m 15; a sophomore at Comanche High, have been DXing for about nine months. On 27/28 in Kansas, last part of DX was pretty impressive. No other stuff went up in smoke, literally. As a consequence, I’m reduced to listening on an ancient RCA 5063. However, the DXers always carry on. I have been listening as much as poor CW will let me. Not really too much to report, but here goes. 8/27 produced a batch of oldies, WHO-1040, KB5-1100, W2X-500, W2X-1200, W2X-720, and a couple of new ones, KHIQ-100, AMJ-750, and WR45-200, Monterrey. 8/30 brought in KE2N-880, Lexington, Neb. and XW-700, Mexico City, 9/9 heard a few odd ones with KG9-1100 Salina, Kans., KPH-1270 Witchita. Kansas, Kansas 123 heard. On some night I logged a real freak, 50W KRI-1000 faded just long enough to let me hear harmonic of WW with bleep tones and announce saying “179” and CQ. 8/27KRI-1000 a guess that was correct. When the log was over, I called 8/27, KRI-1000, from Ohio. Not as strong as KRI-1000. Once we had DXers in town I was not able to hear tone as KRI-1000 came back. Explain that, you SWL’s! Later I heard new KXY-880 (formerly KHIQ) San Antonio, which you want to note in your little black books. Here’s where I let my inexperience show. EWC, would it be possible to put in a list of abbreviations for some of us rookies that get lost trying to talk DX? When reading DX reports, I can’t always tell if they are out of four, and it gets downright discouraging! Sorry I couldn’t make Carol’s, but my bicycle cracked a rim, hit. Peace to all. (Welcome to the NEC, Sam, & there is such a list, in the New Member Kit, which is sent out of Boston. Have patience - you’ll get it soon - EWC)
GRAY SHERIDAN - 227 Hanna Rd - Toronto 350, Ontario
Seven tries for XJ lately, but nothing worth reporting until Thanksgiving morning, 10/9, for all listed below. The west from Europe were quite good, with audio at 8:46 level or better from 1330 1535 1370 1290 1265 1088 851 818 773 regular at around 1:20. 1106 was audible, but it seemed to have Auroral flutter. Siena Leone's IS cut out France on 1205 1515, 1313 had two stations @ 1:20, with Spain the weak signal on top (both undistinguishable). XJF-647 was quite weak, but appeared to be /-1056 strong at 1515, when WWX was @ 1068 (977 kHz on 784). I tried WWF on the new 1407 station, but the signal was quite good and recording at 3:01. 900 there! Too many of the other frequencies were plugged with semi-local non-1KQ testers. My worst catch of the morning was a weak DX from a station on 1320, under - turned out to be KKEV! It's been caught on before, too. I don't know what my aims are for this year's season, but the first would be one new station, @. 71.

J. ALEX BOWIE - WXXI (FM) - Box 6689 - Jackson, Mississippi - 32912
WXXI pulled the #1 rating (average 2 hour shares) in city's latest Pulse. Our 19 tapped WXXI-1560's 17 share (we're both soul outlets). Landing general market stations are WWJ-930 (11), WWJ-1300 (11). In has come of age in Jackson! On AM: WMAQ-660 Forest Park for some time now has been constructed a four-floor, 10,000 ft 3 for 850. Vandalism damage has delayed completion. Meantime they went ahead & changed to 850 w/1,000 D-1. In New Orleans: WYNN-990 dropped SS, went back to old calls WWHL & r&r oldies format - retains SS Sundays on WYNN. Last in New Orleans plus a clear SS: WWJ-1430 WWJ-1430 @ 1:20 in downtown - I figure it's a fantastic daytime DX location, since it juts far out into the Gulf (70 miles below N.O.) But the thunderstorm location was ferocious - listening was virtually impossible. I figure one could hear almost everything from Tampa Bay to Corpus Christi, plus Cuba and Yucatan. I'll try again under (hopefully) better conditions next time. Station heard there had been interesting. In Mobile: WWMN-1770 (suburban Piccadilly) dropped c/w & now simulcasts its beautiful FM PM, WWJ-91.4. My accauals - Pattern Book is priceless.

AS YOU CAN SEE, WE ARE BARELY, SADLY, IN NEED OF MORE MESSAGES. THIS IS THE NATIONAL RADIO CLUB, NOT THE EAST PENNSYLVANIA RADIO CLUB. CERTAINLY WE CAN EXPECT MORE THAN JUST FOUR PAGES OF MESSAGES FROM A MEMBERSHIP OF AROUND 600!

LET'S START STARTING TO MUSE! REMEMBER TO DOUBLE SPACE AND TO CONFINE YOURSELVES TO 30 LINES OF IX NEWS SPACE. USE ONLY OUR ABBREVIATIONS, AND FROM NOW ON, E.S.T.

KEN O'NEILL - 1256 Page Court - Apt. 2 - Blue Island, Illinois - 60406
Hello again. Sorry I haven't kept in touch with NQs but since DX has improved since I moved to Blue Island last month I've been getting excellent readings of KOTA-1030 on my way to work between 7:15 & 7:45 a.m. last week just before I tune in on the local DX over WGO-1600 at quarter of eight. However tonight, 10/7, their 50wv are nowhere in sight as the WRX Celtics are playing. The propagation was fairly good for DX tonight. Tunnel cloud was sighted in So. Illinois tonight, 10/7, I tuned the DX Watch at 8:05 on WGO-1600 but nothing interesting. Friday night 9/23 I caught good reception of the Dodger-Giant game on KFI-1140 amid the middle of a bowling alley. That attempted to hear a pin drop - KFI-1140. Again I was frustrated in my efforts to catch XRF-1000 c/w off at 9 pm. DX was dominated. However as it was late, more work on just about any DX, people calling in from all over. Thanks to all the others who put together the Pattern Book, a real treasure. Now to await the day pattern book, where my main IX interest lies. However in the last week my punch-out isn't still 6pm at work, so we'll see what time off from work. My one year at Century Steel is Oct 20, but as of today I have no plans. I captured two stations all summer, a real disgrace. I had a little fun around 9pm on 1680. The Janders on KELD and the Red Sox on WITC with the Domettians a bit stronger. I've got but five lines to go so I sight as well close. I am looking forward to more frequent issues of IX NEWS in the mail. 73.

RICHARD ROES L - Billings, Oklahoma - 74620
Although I have been a member of the NQG since last August, this is my first Musing. First, an introduction. I am 27 years old, single, and only recently graduated from Oklahoma State w/ a B.S. in History. I have been DXing since 1961, but only since 1967 on the BCB. I became interested in medium wave DX while I was in England where the hobby is growing rapidly. This is much easier to catch on that side of the Pond. My interests increased while I was stationed at Bemle AFB, California, where CO was great for BCB DX. My accomplishments aren't too great, but I really enjoy the hobby. I still listen to SW, as I am a technical monitor for Deutsche Welle and Nederland, as well as a member of the Radio Frame Club. I use a Pioneer S-40 R/M Stereo RX connected to a PC frame receiver. The receiver has moderate selectivity & high sensitivity. For SW, I use a Heathkit SW-171, useless for BCB DX. My goal for this DX season is to log one DX & I will be attempting to work the BCB stations. My location is in a rural area where noise levels are low & CO are good. This past season was marred by an early appearance of local thunderstorms & the associated DX. It is a great DX season. I am almost close for now. 73. (Welcome to MUSINGS, Richard, and please make yourself one of our regulars! - EBC)

ALAN MERRIAM - Box 6 - Fairfax, Virginia - 22030
I enjoyed the Convention & am looking forward very much to November in Jersey. I just got a new RX, mw K-430 & am in the process of building a new loop. I hope this season lives up to expectations but so far CO are not that good. A few Europeans noted 10/7 but nothing exceptional. Only new one was the new BSC Foreign Service RX on 1398. He had a good signal around 9pm. new domestic DX: 6/ 26 KAG-1390 w/ DCF, ID @ 20: 9/8 WGO-1390 w/ ETR/tw at 1/43, good signal on crowded frequency. 9/9 WGO-1390 EN/ET/tw at 21:55, EOT, according to ver. 9/9 WGO-1390 EN/ET/tw at 24:25, 9/9 I found ID 1/29: w/14000 ID @ 1390: 10/2 KAG-1390 good on AN @ 2:28. KAG-1390 logged for call change @ 3:40. New vesiion of KAG-1390 from FOR-SW, KAG-1390 WGO WRA & WSC. That's all from here. 73.

59!