STATIC ROM HQ

The recent NRC Lincoln convention was a good one and all there reported it was a fun weekend--thanks to the Lincoln Convention Committee for the super job! Along that line, the convention voted to change the method of selecting future convention sites--effective this year each city wishing to host will submit a written (2 pages 8½x11") proposal by Nov. 1 to headquarters. The proposals will appear in the first November DX News and all club members will vote on the site, with announcement of the winner in January. So far two cities (Atlanta and San Francisco) have expressed interest in the 1978 NRC Convention--are there others? If so, send in your proposal (what activities, room rates, etc.) in the next few weeks and may the best city win! Sadly, we record the passing of Buyers & Sellers, the equipment exchange. They inform us they ceased business as of 9/16 due to other commitments and a business decline. Lastly, please muse and also support all DX News columns. This time of year, when things are still slow and most members are busy, contributions are especially needed, so don't forget to send in your contributions! Also, our congrats to Ernie Cooper who recently was made an Admiral in the Nebraska Navy--long may he wave!

CPC TESTS

This is the first test schedule for the season--we also remind anyone who is thinking about arranging a test, but hasn't yet done so, to make haste!

Sept. 24 0100-? KSEO-750 Durant, Okla. 250 w. Will use 1000Hz tone & IDs ever 5 minutes. V/S Bill Coxsey, PD.


Oct. 24 0630-0700 KCTE-1140 Southwest City, Mo. 250w. Will use c&w instrumental music. V/S Don Williams, CE, KCTE, Box 258, Southwest City, Mo. 64863.

Nov. 20 Time TBA CJGX-940 Yorkton, Sask., Canada. Will be another special program for DXers, similar to one last season. More details to come.

THANKS: To Ron Schiller (KSEO); Harry Hayes (WAEN); Dave Schmidt (WSFD); Brett Hanavan (KCTE); and Kelly Andrews (CJGX), for arranging our first tests of the season!

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Also, assorted clippings an Afr graph and other items to strike the fancy and interest the minds of DXers tired from a summer of heat, humidity, static and other such repulsive and seedy things!
This graph shows the daily variations in $A_p$, the Fredericksburg (VA) index of geomagnetic activity in the earth's magnetic field. High values (above 20) indicate MW signals in upper latitude paths will likely be absorbed, thus resulting in "auroral conditions", with signals from the South and from local stations predominating. Low values over a period of time indicate a likelihood of more receptions on the higher latitude paths—more, and more northerly TA's and TP's. Several days of low values following higher ones are needed for conditions to return to "normal", due to residual absorption. Long periods of extremely low values (6 or less) are necessary to raise the possibility of good high latitude conditions throughout the entire MW band, although this is not the only requirement. For more information on the use of the $A_p$ and related indices as a DX tool, consult the NRC Reprints List for relevant articles — Russ Edmunds.
AUSTRALIA 4BH Brisbane, Qld. 1037-1100w. 1100z WBCS s/on. (Maguire)
SOUTH KOREA GWANGJU HLKH fair 1300 8/31 w/KK ddama, HLKH ID and four pips. (Toner)
SOUTH KOREA/JAPAN HLKH and JOPK Shizuoka both quite audible 1m: 1322-1328 8/18. HLKH on top starting at 1328 at excellent volume. (Wilkinson)
FIJI R. Fiji II Lautoka 1028-1110z. (Maguire)
1090 NEW ZEALAND 3YC Christchurch 1132-1200z. KARL QRM. (Maguire)
NEW ZEALAND Tauranga: ZS the best and most regular NW on MM's, 7/18 good for MM's, 0800 am, 0900 w/"R. New Zealand News" intro, wv, many old pops. KOMO off (alternate MM's) with TT and no TT. (Seaver)
1020 INDONESIA Jayapura Irian Jaya probably the excellent carrier 8/16 at 1216, 8/22 at 1035 with some audio. This is listed at 10 kw, but is the closest INO (7000 miles) and the most southerly path. LS5 is about 1205 in Sept. Excellent freq select for us. (Maguire)
INDONESIA Banjarmasin only a weak carrier 8/22 at 1045, LS5 at 1043. This is 50 kw on Kalimantan. (Seaver, last 2)
1190 CHINA powerful stat (Kumming 500 kw) with lively folk songs 1318-1329 8/8. No use logging-they don't verify. (Wilkinson) location unknown, fair 1240 9/2 w/CC opera. (Toner)
AUSTRALIA 2EO Newcastle, NSW 1330-1500z. (Maguire)
EASTERN CAROLINES W2ZD Ponape, 1006-1130z. Another report in hopes of obtaining a verie. Earlier report plus two follow-ups have yielded no reply. (Maguire)
PHILIPPINES FBRC Tagalog 0943-1000z. (Maguire)
SAHAB Kota Kinabalu 1112-1141z like a local. (Maguire) R. Malaysia Kota Kinabalu in Tagalog (probabilities) 0/68 at 1127 tune-in for several minutes. This is my key for DVL5A and Indonesia. This stat is possible every AM-not heard every AM but possible due to the low path-297 degrees. (Seaver)
USEN W6ZD good carrier and ci across 1315 fadeup 8/31; heard thru strong domestic sloop. (Toner)
AUSTRALIA 2BE Taree NSW 10410100z. Looking for 12X, N.Z. (Maguire)
THAILAND KRLA Cheju Island at tremendous volume 1324-1330 2/8. Gave call letter ID at 1330. (Wilkinson)
THAILAND VOA still strong 1942z. (Maguire)

FEATURE FILLER...
from NADXHA-the USSR has erected 100 kw on 647 at Iman, 500 kw on 1079 at Kysyl, and 250 kw on unk freq at Ulan-Ude. Via Arctic Radio... England BBC is broadcasting a "Open University" pgm on 647 after Radio Three closedown. France the new address for Limoges 791 is 32, rue de Jannes, P-57000 Limoges. (Maguire)
Morocco the EBU reports Agadir 935 on 936 and the new 777 stat on 774. However the editor reports that they are both on freq at latest check.
Morocco address for the new 10 kw on 945 is 78 Lantors Road, PMB 1084. Abokuta, V's O.O. Apampa. Haiti new powers for R. Lumiere stats are 660 5 kw, 726 1 kw, 740 1 kw, 760 20 kw, and 780 .5 kw. Panama L.V. del Baru is 100 kw. Columbia 660 HJMN now RCH, ex Tobago, same HJMS 980. HJMN R. Sonar 1260 ex T100, HJMN 1310 now 10 kw, HJMV R. Canoa 1520 ex 1540. Paraguay R. Presidente Stroesser 885 ex 890, R. Paraguay 1305 power 20 kw. (Maguire)

**INTERNATIONAL DX ACHIEVEMENTS**

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Oceania best without country shown are Australia. # = Their start time. T.V. = Total verified. #T.V. members will be dropped from standing unless they update their totals. When updating, please give us the totals for all countries. Thank you. We wish to acknowledge Benzin for a new country. I managed to add Kuwait, Romania, Vatican, Rhodesia, and Indonesia. Next issue will feature South American totals and best veries. Good health and good DXing during the coming season. Allah.

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**NRC Certificates**

The National Radio Club issues two series of certificates free to all members, based on total verifications and total countries verified.

The total verification certificates are issued in increments of 500 veries (500, 1000, 1500 etc.) This award is issued on the honor system.

For the country certificates (issued for 25, 50, 75, 100, 125 countries verified), please send the awards manager a list of countries verified plus data for any station confirmed from that country.

The awards manager reserves the right to request any detailed verie (or copy of the verie) if there is any doubt that a member has a station verified. To date, we have not had to make any requests for proof of verification.

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**DX NEWS**

issue number 1, volume 45 will appear on October 10, with another issue on October 24. We are on regular schedule until Christmas/New Year holidays. Tentatively, an issue during the holidays is planned. Contributed please!!!

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| Norm Maguire | Honolulu, Hawaii | SPR4, Sanserino Loop |
| Randy Seaver | Chula Vista, CA. | HQ810, Sanserino Loop |
| Randy Tomer  | Arcata, CA.     | HQ810, Sanserino Loop |
| Hank Wilkinson| Santa Rosa, CA. | HQ180, SP600, Sanserino loop |
Another month has passed, and another never-tracking edition of *DXL* is upon us! As it stands right now, the next column will be by Anthony, Ala., and will be unavailable for comment... Please send stuff here, as usual, but be sure to put "DXDL" on the outside of the envelope, or they will be forwarded by a non-DXer, who may not know a DXDL report from the rest of the junk I get... Not much else new here; DX is at a standstill, and I'm sending school will keep that from changing very soon... Anyway, on with it...

**SUNSET TO MIDNIGHT:**

1040 WMTQ *VA* **HURRICANE:** 8/22, s/off w/0200. (RC-N1A)

1310 KNIX **INDIANA:** 8/13, w/s/off 0200. (RC-N1A)

1550 KBRVA **VINTON:** 7/21 JX *KSEA* (2000) w/VA s/off.

Biggar again, *UNC*...

**MIDNIGHT TO SUNRISE:**

560 WHBQ **NASHVILLE:** w/513 G27/TC in fr 8/30 0445/55+C ON SSB.

570 WJAS-NB **MEMPHIS:** w/ID 30060 0400 s/off.

610 WGBZ-400 **TOLEDO:** 8/22 ID w/0600 (ID-N1J)

620 WJZJ **JERSEY CITY:** 8/22 ID w/0600/7/18 (RC-N1A)

690 WFFD-400 **ALBANY:** 8/22 ID w/0600 (ID-N1J)

860 KOMA **SEATTLE:** 8/22 ID w/0600 (ID-N1J)

930 CPBC **VANCOUVER:** WZ 1690 w/0430 0600.

940 W2MIX **BURLINGTON:** 7/21 0600 0600 0600.

1010 KJAM **JERICHO:** 8/22 ID w/0600 s/off.

1060 WBNR **BOSTON:** 8/22 ID w/0600 (ID-N1J)

1130 WCRJ **BURLINGTON:** 8/22 ID w/0600 s/off.

1140 WCFC **BURLINGTON:** 8/22 ID w/0600 s/off.

1150 WJNU **WILMINGTON:** 7/21 ID w/0600 s/off.

1320 WMJZ **BOSTON:** 8/22 ID w/0600 s/off.

1360 WRFL **BURLINGTON:** 8/22 ID w/0600 s/off.

1440 WBZ **BOSTON:** 8/22 ID w/0600 s/off.

1500 WOR **BOSTON:** 8/22 ID w/0600 s/off.

1520 WEEI **BOSTON:** 8/22 ID w/0600 s/off.

1550 WPRO **BOSTON:** 8/22 ID w/0600 s/off.

1600 WJZ **BOSTON:** 8/22 ID w/0600 s/off.

1630 WEEI **BOSTON:** 8/22 ID w/0600 s/off.

1700 WOR **BOSTON:** 8/22 ID w/0600 s/off.

1730 WRFL **BURLINGTON:** 8/22 ID w/0600 s/off.

1800 WEEI **BOSTON:** 8/22 ID w/0600 s/off.

1830 WJZ **BOSTON:** 8/22 ID w/0600 s/off.

1900 WBZ **BOSTON:** 8/22 ID w/0600 s/off.

1930 WEEI **BOSTON:** 8/22 ID w/0600 s/off.

2000 WOR **BOSTON:** 8/22 ID w/0600 s/off.

2030 WRFL **BURLINGTON:** 8/22 ID w/0600 s/off.

2100 WEEI **BOSTON:** 8/22 ID w/0600 s/off.

2130 WJZ **BOSTON:** 8/22 ID w/0600 s/off.

2200 WBZ **BOSTON:** 8/22 ID w/0600 s/off.

Note: *ID* = ID from the rest of the junk I get... Not much else new here; DX is at a standstill, and I'm sending school will keep that from changing very soon... Anyway, on with it...

Eric Rittenhouse is still in Alaska for new call. Has 31% memohs in 7/27, newie w/O1canada.
The chart below was designed by myself to help decipher CPC Tests.

Annual membership dues in the U.S. and Canada are $15. Air mail to Mexico and the Caribbean is $18. Air mail to other areas is $22 and surface mail to all other areas is $18. New member fee is $1. Checks and money orders (payable in U.S. funds only) go to NRC Membership Center, P.O. Box 118, Poquonock, Conn. 06884.

Since we have a little space here, we'll include a little information on the current NRC membership dues. Yearly dues in the U.S. and Canada are $15. Air mail to Mexico and the Caribbean is $18. Air mail to other areas is $22 and surface mail to all other areas is $18. New member fee is $1. Checks and money orders (payable in U.S. funds only) go to NRC Membership Center, P.O. Box 118, Poquonock, Conn. 06884.

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**NCG TEST TIME CONVERSION**
Konstantine Rychalsky

The chart below was designed by myself to help decipher CPC Tests. Time, listed as ELT, is useless to anyone living in a different time zone. Conversion to each listener's time is necessary. At a glance, the chart below will help, I'm sure.

Last season, there were a number of West Coast tests run towards sunrise time. Any chance of the test being heard in the East was nil due to stations who had already begun their broadcast day. Likewise, a test in Ohio at midnight will have a hard time reaching the west coast since stations there have not yet signed off the air.

In conclusion, the ideal time to schedule a test would be 0800 GMT, that is 0400 EST. 0300 CST, 0200 MST or 0100 PST.

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**NRC REPRINT LIST**
PAST ARTICLES FROM DX NEWS

**ANTENNAS**

A1 HIGH PRECISION DIRECTION FINDING ON THE BCB, PARTS I & II. G.P. Nelson. Part I uses Maxwell's equations to derive the equations describing MW direction finding with a loop. Part II is a non-technical discussion of how loop antennas operate on the BCB and how to get the most out of a loop antenna.

A2 A ZERO SHARPENING DEVICE FOR A BCB LOOP. T. Holmes. If you're having trouble obtaining sharp nulls with a standard loop, this simple device may help. The 1965 forerunner of the Pattern Controlled Loop.

A3 A VERSATILE LONGWAVE ANTENNA COUPLER, R. Foxworth. How to get the maximum amount of signal from your longwire.

A4 ROLL YOUR OWN (LOOP THAT IS...). D. Fischer. Loop won't tune the entire band? This article describes what's wrong and how to cure it.

A5 LOOP DISTORTION: WHY GET SKewed? G.P. Nelson. Discusses the origin of distorted loop patterns. Unique technical material not available elsewhere; a must for those interested in designing MW loop antennas.

A6 PATTERNC CONTROLLED LOOPS, PARTS I & II. G.P. Nelson. Introduction to the theory and practice of pattern controlled and cardiod loops for the BCB DX'er.

A7 THE FLORIDA BEVERAGE. J. Conrad. Jerry describes the fantastic results with a Beverage antenna and compares it with others he's used.


A9 DOWN TU KANTH GROUNDS, G.P. Nelson. Hints on making low resistance ground connections for terminating a Beverage antenna.

A10 A CALIFORNIA BEVERAGE. Fr. Jack Pejma. Another article describing the spectacular results obtained with a Beverage antenna.

A11 THE SUPER SIGNAL SNATCHER, D. Fischer. This article describes the theory of the Beverage antenna. Includes equations, tables and many diagrams.


A13 USING TWO ANTENNAS TO GENERATE ASYMMETRICAL RECEIVING PATTERNS. M. Levinson. Shows and describes a simple way to skew your loop's pattern to effect a null that will permit reception of a station impossible to receive on a figure 8 loop antenna by itself. Reading of reprints A13 and A14 are a requirement for the understanding of this technique.

A14 A NEW MEDICAL BREAKTHROUGH FOR CARIOADCs. C. Clayton. Instructions on how to build an inexpensive loop antenna for LW.

A15 REVIEW OF THE DWEK DA-3 ANTENNA, Pete Taylor, with notes by R.J. Edmunds. Evaluates this recent development in BCB antennas and its application to MW DX'ing.

A16 MORE ON BEVERAGE ANTENNAS. Wes Boyd. An update on Beverage antenna theory and application.

A17 AN FET LOOP PREAMPLIFIER WITH COAXIAL OUTPUT, James Hagan. This article describes a highly effective balancing amplifier for the air core loop, usable with unbalanced receiver inputs, and featuring power tapped from the receiver and switchable attenuation controls to prevent overloading.
A32 A WHIP ANTENNA COUPLER FOR USE WITH PORTABLE RECEIVERS, James Hagan. A simple construction project to inductively couple a whip antenna to the internal ferrite rod in many portable multiband receivers.


A36 A GOOD LOOP IS EASY (AND CHEAP) TO MAKE, J. Tull. Construction plans with photographs for a simple loop amplifier system.

A37 THE WEDEE ANTENNA, C. Wolff. Plans for construction of a revolutionary alternative to the four foot box loop for those with limited space.

A38 A STURDY AND EFFECTIVE FLOOR STAND AND MOUNTING ARRANGEMENT FOR LOOP ANTENNAS, M. Maloney. Still another method for mounting air core loop antennas.

A39 A LARGE APERTURE FERRITE CORE LOOP ANTENNA FOR LONG AND MEDIUM WAVE RECEPTION, James Hagan. Details and theory for the construction of this new type of DX antenna.

A40 A NOVEL APPROACH TO BUILDING YOUR OWN BCB LOOP, M. Maloney. New ideas for improvements in the ease of operation and sturdiness of loop antennas.

L2 FREQUENCY CHECK LIST, J. Fela. Many U.S. stations run equipment tests at regular intervals and times; this is a listing of frequency checks that will permit many new loggings. Updated yearly.

L6 THE CUBA MATION LIST, R. Schatz. A list of all the MW stations in Cuba, Jamaica and Haiti.

L14 BEACON STATIONS, compiled by Finlands DX Club and the NRC. Listing of CW aircraft beacons operating on or near the BCB.


L18 A SURVEY OF LA SPLITS, Ron Schatz. A list of all Latin American stations presently operating on split frequencies. Updated yearly.

L20 BRAZILIAN INFORMATION, R. Weltmejer. A current list of all MW stations operating in Brazil.

RECEIVING EQUIPMENT AND TECHNIQUES

R1 SPURIOUS SIGNALS AND SPURIOUS SIGNALS REVISITED, R.J. Edmunds and G.P. Nelson. Many DX'ers hear stations on frequencies where they don't belong. These articles describe the causes and cures of spurious MW signals. Especially valuable if you have powerful local stations nearby.

R2 SINGLE SIDEBAND RECEPTION ON THE BCB WITH MECHANICAL FILTERS, G.P. Nelson. Few commercial receivers covering the MW band have adequate selectivity to cope with BCB interference—especially in the presence of powerful local stations. This article explains how to fit mechanical filters to an existing receiver for the ultimate in adjacent channel rejection. This technique is widely used by many top MW DX'ers.

R3 SUBAUDIBLE HETERO DySES ON THE MW BCB, G.P. Nelson. Details on a technique which permits the MW DX'er to detect and characterize signals too weak to hear at the time; also allows the DX'er to count the number of stations on a channel; even if no programming is audible and permits direction finding on channels with several stations present.

R5 THE TRACKING PROBLEM AND HOW TO CURE IT, G.P. Nelson and T. Holmes. Many excellent receivers are poorly designed for MW DX operation; this article describes one of the most common design faults and how to cure it. Very useful if you have strong locals.

R6 ELECTRONIC VERNIER TUNING, R. Moore. Detailed instructions on how to fit a varactor to a MW receiver to provide fine bandwidth.


R14 UP THE CARRIER, # Bailey. Dig the weak DX out of the mud with this form of exalted carrier reception.

R15 PRECISION FREQUENCY MEASUREMENT, Ron Schatz. How to use the frequency counter, an instrument now within the budget of a DX'er.

R17 THE FMR-1 FREQUENCY MARKER STANDARD, R. Foxworth. A review of operation, how to make the proper connection to the receiver, and some modifications incorporated by the author to permit full use of the unit's capabilities.

R18 SINGLE SIDEBAND RECEIVING ADAPTERS, T. Sundstrom. How to sharpen your receiver's IF bandwidth using a B&W #770 receiving adapter.

R19 REVIEW OF THE AUTEK Q-BOX, T. Sundstrom. Describes the uses of this new noise filtering device and its applications in MW DX.

R20 REVIEW OF THE HEATH SB-620 SPECTRUM ANALYZER, R. Foxworth. A comprehensive and detailed analysis of the unit's operation and uses as used by MW DX'ers.

R21 THE WORCESTER LONG DISTANCE AM RECEIVER, J. Worcester. A stage by stage description of the construction, theory, and circuitry of a new type of AM DX receiver.

R22 BUILD YOUR OWN AUDIO FILTERS, P. Sullivan. A somewhat technical theory and construction article on inexpensive homebrew audio filters for the DX'er.

R23 THE RUSTRAK R-88 RECORDER, R. Schatz. Explains the operation and use of this versatile chart recording marker and its applications to the studies of propagation in MW DX'ing, and gaining insights into potential loggings.


R25 A FREQUENCY COUNTER FOR RECEIVER TUNING, R. Foxworth. A very thorough paper on the new digital readouts and what to look for in the various models. Discusses the technical theory of these devices and provides circuitry to enable the experimenter to build a counter for use as a "digital dial". Very thorough.

R26 FURTHER RECEIVER HOT RODDING HINTS, C. Hutton. Tells what you can do to further improve the performance of even the best commercial receivers, and some problems with the older receivers being used.


R28 THE LYONODYNE CRYSTAL WIRELESS RECEIVER, R.W. Tuggle. The concepts of voice and carrier radio are incorporated in these detailed construction plans for this simple receiver, offered as a "sporting" alternative to modern receivers; yet it has the potential for real DX.

SEND REPRINT ORDERS AND PUBLICATIONS ORDERS TO NRC PUBLICATIONS CENTER, P.O. BOX 401, GALE'S FERRY, CT 06235.
DOMESTIC DX

D1 1570-1580 STATION LOCATION MAP. Two maps pinpointing the location of all domestic stations operating on these two superb sunrise/sunset skip channels. A valuable aid to the sunrise/sunset DX'er.

D2 IT TAKES TWO TO VERIFY, PLUS HELPFUL HINTS, J. Murley and R. Schiller, respectively. If you are unhappy with your domestic QSL returns, read this article on the station's attitude toward reception reports. Also, veteran DX'er Ron Schiller gives some useful tips on increasing your returns.

D3 CANADA'S WILDERNESS RADIO: THE LPRT. F. Taylor. In depth study of those 20 and 40 watt Canadian stations that you hear, but don't understand. A must for the domestic DX'er.

D4 WHAT IS A PRE-SUNRISE AUTHORIZATION? R.J. Edmunds. Some U.S. stations are authorized to operate with powers such as 14.3 watts during certain hours; this article explains why.

D5 CHANNELS AND CLASSIFICATION, M. Collins. Explains how the FCC allocates channel assignments and station power in accordance with the NARDA treaty.

D6 NIGHTTIME LISTENING, M. Collins. A variety of programming can be heard on the high power clear stations which cover most of the nation at night.

D7 NETWORKS, M. Collins. Explains how the four major networks operate.

D8 THE NSF SITUATION, J. Starr. A look at this problem from the broadcasters' side of the fence.

D9 DX FROM THE TWILIGHT ZONE, P. Sullivan. For various reasons some stations are audible at sunrise or sunset. This article tells the reasons.

D10 GRAVEYARD DX, R. Foxworth, with addition by M. Levintow. This article tells you how to DX those cluttered local channels and get results.

FOREIGN DX

F3 PORTUGUESE FOR DX'ERS, R. Schatz. Describes the important and unusual features of this language; a must if you DX Brazil.

F5 HUNTING THE LATINS BY MUSIC, R. Schatz. Describes the various types of Latin American music indigenous to various countries and tells how to ID LA's using this information.

F6 BOTTOM DX, Clarence Freeman. Lists a number of stations operating below 540 kHz. This article tells how to modify your receiver to hear them and lists the stations.

F10 TRANSATLANTIC RECEPTION DOES EXIST, J. Murley and G.P. Nelson. A highly experienced West Coast DX'er gives a full rundown on how to hear, identify, and QSL transatlantic stations; much practical information.

F11 DX'ING POLYNESIA AND BEYOND, J. Murley. Very detailed account of the stations in the Pacific that can be heard in North America.

F13 THE ODDS ON EVEN TA'S, R. Schatz. TA's can be heard on some of our 10 kHz channels; find out which ones and when to listen.

F14 DX'ING RARE AFRICANS....SYSTEMATICALLY, R.J. Edmunds and Page Taylor. A country by country rundown of where and when to listen for the hard to hear stations in Africa.

MISCELLANEOUS ARTICLES

M2 LOCAL SIDEBAND SPLASH: HOW MUCH IS TOO MUCH? G.P. Nelson. Many MW DX'ers complain about certain local stations overmodulating and producing large amounts of QRM. This article describes the federal regulations which govern permissible sideband radiation on the XA band; also describes certain types of station originated spurious radiation.

M3 MODULATION ANGLING, J. Starr. Discusses a frequent but rarely discussed cause of BCB interference originating at the station that can wreak havoc on the MW band.

M4 SUNRISE-SUNSET TABLES, G.P. Nelson. These charts permit the DX'er to determine accurate time of sunrise and sunset at any point in the world on any particular day. Very useful for international DX'ers.

M5 QUASIMONTHLY PATTERNS IN ATYPICAL MW DX RECEPTION, G.P. Nelson. A large body of data on TA reception gathered by R. Wood in England. Information is analyzed in an attempt to prove or disprove the Lunar Phase Theory.

M7 UNRESTRICTED RADIATION, G.P. Nelson. Discussion of carrier current stations and how to hear them.

M8 RF POLLUTION, G. Hauser. General discussion of the radio interference problem and steps necessary to control it.

M9 PATTERNS, PARTS I, IIa AND IIb, P. Hart. An understanding of the directional patterns used by North American MW stations is vital for the active domestic DX'er. This series of articles explains in authoritative detail what patterns mean and how the DX'er can fatten his log by understanding them.

M27 PRECISION FREQUENCY ANALYSIS, R. Schatz, with notes by R.J. Edmunds. A discussion of the technique of analyzing the characteristics of a station's frequency over the long term as an aid to the identification or elimination of stations as possible DX catches at any given time.

M29 MORE ON HOW DIRECTIONAL ANTENNA PATTERNS ARE PRODUCED, Wes Boyd. Supplementary information to the articles contained in the 1975 edition of the NQ Night Pattern Book.

PROPAGATION


P2 SOLAR CONTROL OF DAY S BLANKETING ON THE BROADCAST BAND, G.P. Nelson. Discusses the effects of the sun controls the fadeout time of transatlantic and transpacific stations.

P3 EAST-WEST SYMMETRY AND THE FADE-IN PROBLEM, G.P. Nelson. Explains how the sun controls the fade in times for MW stations.

P4 SUMMER RECEPTION ON THE BROADCAST BAND, G.P. Nelson. First article describing the seasonal patterns in solar terminator location which makes summer MW reception from deep South America and Africa possible. A must for the international MW DX'er.


P7 THE AURORA OF NOVEMBER 6-9, 1970, G.P. Nelson. Traces a classic MW auroral attack from its origins on the sun to its effects on MW reception; a must for understanding the auroral effects on the MW band.

P9 SKYWAY TO UK GROUNDWAVE RECEPTION? G.P. Nelson. How to tell whether the signal from a station you are listening to is arriving via a groundwave or skywave or both.

P10 A BEGINNER'S GUIDE TO THE IONOSPHERE, Fr. J. Pejza. Radio wave propagation is influenced greatly by the conditions in the ionosphere. This article explains the processes which change the ionosphere and the effects of these changes on radio waves.
P11 THE LIMITS OF MIDDAY MW DX, G.P. Nelson. Comprehensive article describing the factors which influence radio wave propagation and reception during the late morning and early afternoon hours.

P12 LIMITATIONS IN THE USE OF THE A-INDEX, G.P. Nelson. While the A-Index is a valuable tool for MW DX'ers, it is easily misinterpreted. This article shows why.

P13 BCB RECEPTION DURING PERIODS OF HIGH AURORAL ACTIVITY, G.P. Nelson. Describes the author's research into the effects of the aurora on MW propagation.

P14 SKYLINE BLOCKAGE, Fr. J. Pejza. Mathematical derivation of the formulae needed to calculate the effect which terrain has on signals.

P15 SKYLINE BLOCKAGE, SOURCES OF UNCERTAINTY, G.P. Nelson. Takes into account the possibility of signal propagation by some less common modes which are subject to blocking by the horizon.

P16 HORIZON BLOCKAGE: CAN PERSPEX DIFFRACTION BE IGNORED? G.P. Nelson. No, it can't. This article shows how signals that should be blocked by the horizon can sometimes be heard.

P17 TRANSPOlar DX RECEPTION, R.J. Edmunds. Are you looking for Asian DX more exotic than Urunchi-1525? This technical article relates to the transpolar reception of central and eastern Asiatic stations at sunset in North America.

P19 OBSERVATIONS OF TRANSATLANTIC MEDIUM WAVE RADIO SIGNALS, C.W. Bailey. The results of a lengthy survey of TA receptions made over a one year period.

P20 PROPAGATION AT MEDIUM WAVE FREQUENCIES, P. Sullivan. Discusses some aspects of the factors that control signal reception on the BCB.


P22 DOMESTIC PROPAGATION-ANSWERS TO FREQUENTLY ASKED QUESTIONS, R.J. Edmunds. A brief discussion on some of the propagational factors that affect domestic reception.

RECEIVER REVIEWS

RR4 HEATH GR-78, R. Schatz.

RR5 BARLOW-WADLEY XCR-30, M. Hardester.

RR9 A NONTECHNICAL REVIEW OF THE WORCESTER LONG DISTANCE RECEIVER, J. Starr. A user's critical commentary on this revolutionary receiver.

RR10 MCKAY-DYMEK DR-22, J. Clements. A detailed, non-technical pre-production review of one of the "new breed" of receivers; mentions features, performance and how it measures up to the receivers now in use.

PRODUCT SUMMARIES

P51 UMKAS SSM-1 RECEIVER, R. Foxworth.

UPDATES TO THE NRC LOG AND PATTERN BOOK

UDL A year's set of updaters to the NRC Domestic log is available to members for a flat fee of $1.00; non-members $2.00.

UPB A year's set of updaters to the NRC pattern book is available to members for a flat fee of $1.00; non-members $2.00.

DX-PLANATION FLYER

A two-sided bookmark type flyer explaining the birth of DX'ing, how the NRC was formed and the importance of SSLs to DX'ers. Useful for trying to obtain "tough" verifications and as an aid in arranging DX tests. 50 flyers for $1.00.

NRC PUBLICATIONS

The National Radio Club is proud to announce its list of booklet publications. All of these items are available from the National Radio Club Publications Center, P. O. Box 401, Gales Ferry, Conn. 06335.

DOMESTIC LOG

This spiral-bound volume contains listings of all U.S. and Canadian AM stations including locations, addresses, powers, antenna operations, networks, schedules and other useful information. Cost is $6.25 to members and $7.50 to non-members.

RIGHT ANTENNA PATTERN BOOK

This spiral-bound volume features the nighttime directional antenna patterns of Canadian and U.S. stations on map pages of 11 x 14 inches. These patterns are drawn to scale from official government sources. Commercial publications of this sort cost more than ten times as much for this most valuable DX reference. Cost to members is $6.50 postpaid and to non-members $7.50 in U.S. and Canada. (New edition 1975)

ANTENNA REFERENCE MANUAL

This manual is a compilation of numerous articles on the subject of antennas for MW DXers which have appeared in the pages of DX NEWS over the past several years in one handy volume. Includes data on air- and ferrite-core loops, antenna tuners for longwires, and beverage antennas, along with various coupling devices. 60 pages, 5½ x 8½ booklet format. $2.25 in the U.S. and Canada.

GETTING STARTED IN MEDIUM WAVE DX'ING

This booklet is designed to assist the novice DX'er in pursuit of the hobby. It includes introductory articles on foreign and domestic DX'ing as well as related topics. Included are articles on reception techniques and safety and preventive maintenance of your DX gear. All members who pay the New Member Fee automatically receive a copy of this booklet. For non-members the cost is $1.25 in the U.S. and Canada.

RECEIVER REFERENCE MANUAL

This manual is similar to the above manual on antennas, except that the subject is DX receivers. It includes useful articles on receiver modifications and accessories, and reviews of many of the commonly used BCB DX receivers currently available. A must for the serious DX'er/experimenter. 72 pages, 5½ x 8½ booklet format. $2.50 U.S. and in Canada.

LOG & PATTERN BOOK UPDATER

Periodic updaters for the NRC Domestic Station Log and the NRC Night-time Antenna Pattern Book are published in the pages of DX NEWS. Non-members may obtain reprints of these updaters in composite by ordering them through the NRC Reprint Service. Cost is $1.00 for members and $2.00 for non-members, covering all updaters from time of the most recent edition of the Log or Pattern Book to the date of the order.

**Note: Orders from other than North America, please inquire for applicable rates and methods of shipment.**
Hi again. This is about DX. I sure a looking forward to a productive DX season this Fall. I just got the word Thursday that I'm finally going to return to the first shift after 16 months on second. Back to normal, SRS & SSB DXing. I've gotten plenty of targets to listen for. Recapitulating the summer, the KARC in St. Louis, IL was on the air during my shift. It was nice to see Dan Meyer, K7K, but Mike Good, Rich Pilstak, John Zondlo, Mike Hogan, plus a few others I can't remember. It was a real combo of K7-MN-S3-IV etc. so you had to fish around for MW DXers. It was plenty warm, too, with the humidity well up in the 80-90% range. Dubuque, IA, where I enjoyed five days of sight-seeing & dial tripping. Daytime stations by states: IA-24, WI-25, IL-28, MO-4, MO-23, MO-3. Dubuque stations WDUBA-1940 & KDUT-1700 plus a live DXer were in East Dubuque, IL in sight of our motel 12 miles East, near Galena. KDUT's serving the Tri-State area is sort of Utopian folk with much interest in local DX. Their ISS pattern change was very obvious at the motel. They protest K73 & four others. No wonder I've heard 'em only once. Labor Day weekend I took my family up to Milwaukee for two days. Our motel in Madison was practically next door to soul station WAW-1993. Their two towers run E-W. I had a pleasant visit to Bob Wessolowski's Saturday night. He mentioned his problems with the Chicago stations up here but was really stunned to hear K7-MN-S3 so strong up there. Wisconsin has several fulltime stations, more than Illinois I believe, but man are they difficult back home? Sunday night 9/24 after WDUBA-1930's off the only thing I could make out of the WAW was WAW-1470. Only visibility was WXBR-7C. Though no WD was heard, it'll be SRS DXing one's ain tomorrow AM. I'm happy to say. Only two subway cars of 74% left to go for Y.C.T.A. Amen. I don't believe Pullman Standard will ever have as big an order again. Oh well. Looking forward to my frequent DXing as time rolls on. I sure like the new look. So, best of DX from the Oregonian with the TRF & Diet Pepsi. 73s.

MIKE HOPPES - Box 7 - Houston, KS - 68856

A few weeks ago I asked "What is an F6D-7?" Just by coincidence I received a spec sheet from Yasso. Thanks to the member who put my name down or thanks to Yasso. It is a good looking rig. Now someone tell me how it performs, by Yassing, latter, Domestic DX, old International club's latest. I have not yet wasted a dime on it. I haven't yet been able to try out a DX session with my TRF but I did pick up K77L, a 10 meter fan, 1kW 1/25 with us. I work at night and when I get home, I am washed. I turn on the K73 to put me to sleep. standing in bed. How manygone rock n roll, how will you have tried out the calculator trick. It works, don't t I? I don't have a copy of the international log yet. What station is on 650 announcing "S. Scandinavia"? I have lost Mr. S seriosini's address, if someone would be so kind and give it to me. Good catch, 500W, El Paso station. What is the name? Can you give us another coming up? So we can clean up our shack for more stuff. Friday morning I received my R-302 and got my SP-600-IX out of the shop. The R-302 is great for splits. My DX coral is building up. I have (2) R-302, SP-600-IX, TRF, SM-1, and many bird traps. I mean, antennas. 73.

ERLE COOPER - The Cape Tip DXers - 5 Anthony Street - Providence, MA - 02905 - 617-497-9337

ERLE COOPER - "The Cape Tip DXers" - 5 Anthony Street - Providence, MA - 02905 - 617-497-9337

I got a call last week at the ELC conventions, especially at ours, and a tremendous job was turned in by the NERDS, and thanks to them for this wonderful weekend, including ferreting out and to/from the airport! You were GREAT, guys! DX and verticals are at a standstill, alas. I've been a tun-in', as follows: WM-5/35-9km, WM-4952-1470 kHz, FT-1215-9kHz, strong, ind. strong, ind. SW-17-165a-1650 kHz 11:15 3/4 off, not loud enough to get the ID or even the country; I suspect 'em Costa Rica. Mauritania-1940 noted 2:30J but too late to hold 'em for a report - they had AD-chanting. 8/52, 8/52 perhaps-modulated SS on about 1630 kHz, 1246, soon lost to static. Unifying 77 on 1400, 1030, in a mother one on 1500 kHz 11:15-00, no announcements. WMK was off around 11/1. 3/11 WMK again off, also WZ3-970 seems to have pulled, for the US DX-1700 kHz 1:45. I'd bet but couldn't catch it here. 9/52 - Low-chanting from 1500 kHz 1:30 kHz, 8:00 8:00 DNL-293 kHz, ID 107 kHz, 8:00 ID, stop 800 kHz 1:00 kHz, stop 500 kHz 2:44 kHz, ID only as "398. 5" 9/11 ft. on 11/10 kHz 12:34, could have been W9A which is silent SSW now. A fund-raiser noted on 1490 giving the phone number of 74-3203, I believe 'was only a FFR, W9A-3203. WM-125-125 was built for 1950s calls and retuning to playing cards at 1:15; they had 6 off by 2:30, next look-in on that channel. We ran till 3:50. Today, then. WMK then KOH-760 kHz 1/07 kHz 11:15 kHz 135 kHz, WZ-116 kHz, recently verified, has a 340kHz, and had KSL perhaps. Probably all of 1153. I read my "fax" in last issue - no go, fax: I've had lots for some ten years, only just now it has been identified by the local networks. I'm actually better off now, for now I have a medicine to help alleviate the sensation. It's some of W9A earlier this sister to avoid religious holidays and winter snow and low the wind - will be on Sat. 11/26, two days after Thanksgiving.
TUES. chance to Back to I Of course at the b But Well I fortunately Only

W- of night for several HUK night crmu

On fire. VHF me he ranld

Wden abut 0:06

I'll 860. 4:04.

day; CP for 50.000 nights is &

I asked change info for the uho have the

He told me he was at the day I was amazed to see the Los Angeles Times that other

This is a great place to stay, the air was nice, the room was clean and the staff was very friendly. I will definitely return to this hotel on my next trip to the area.

The hotel is located near the airport, which made it convenient for arriving and departing. The room was spacious and comfortable, with a king-sized bed and a seating area. The bathroom was clean and well-equipped with all necessary amenities. The hotel also offers free Wi-Fi, which was very useful for staying connected.

Additionally, the hotel provides a free breakfast, which was a nice surprise. The breakfast options included a variety of items such as eggs, bacon, toast, and fresh fruit. The staff was helpful and attentive, ensuring that all guests were comfortable and had everything they needed.

Overall, I highly recommend this hotel for both business and leisure travelers. The location, amenities, and friendly staff make it a great choice for anyone visiting the area.
Now, in this issue, we have exactly 50 entries. Send the deadline (signed), we are planning to Wooll. The new season should get Now. We mentioned it at the foot of one of 50, *Image 0x203 to 373x211*

Given under my hand in the City of Lincoln, State of Nebraska, this 12th day of October, 1977. You local

Raska. He is therefore called to diligently discharge the duties of Admiral by and knowing him to be a good fellow and a loyal friend and counselor I have been a member of his good behavior, and the pleas-

Text of special citation presented to

THE GREAT NAVY OF THE STATE OF NEBRASKA

To all who shall see these presents GREETINGS

Know ye, that reposing special trust and confidence in the Patriotism, valor, fidelity, and abilities of ERNEST R. COOPER

and named to be a good fellow and a loyal friend and counselor I have nominated and do appoint him an Admiral in the Great Navy of the State of Nebraska. He is therefore called to diligently discharge the duties of Admiral by doing and performing all manner of things thereunto belonging. And I do strictly charge and require all officers, seamen, tars, and goldfish under his com-

mand to be obedient to his orders as Admiral - and he is to observe and follow, from time to time, such directions as he shall receive, according to the rules and discipline in force during the period of his good behavior, and the pleas-

ure of the Chief Admiral of the Great Navy of the State of Nebraska.

Given under my hand in the City of Lincoln, State of Nebraska, this 12th day of August, 1977 in the year of our Lord. (signed) J.J. Exon, Governor.

State seal affixed.

Harry J. Hayes
Star Route, Box 256
Gouldsboro, Pa., 19926

I hope the brand new NM season is treating everyone well. The season should get everyone in the mood to contribute those class IVs and get those new imports or updates to Gy Achievements. The column has turned up a few new faces, perhaps at my urging from last time. * denotes pre-1960 logging

**Gy Achievements**

I hope the brand new NM season is treating everyone well. The season should get everyone in the mood to contribute those class IVs and get those new imports or updates to Gy Achievements. The column has turned up a few new faces, perhaps at my urging from last time. * denotes pre-1960 logging
KHVH, KPOJ to Change Frequency

WASHINGTON — The Federal Communications Commission has approved the requests of two Honolulu radio stations, KHVH and KPOJ, to change frequencies.

The change is expected to take place within five weeks. At that time KHVH, Honolulu's only all-news radio station, will switch from 670 to 960, while KPOJ, with the KIWI call letters, will move to 1050 kHz. KHVH's frequency was changed in 1960 to 960 kHz and KPOJ has been on the air since 1949.

The FCC stated the change involves no monetary consideration, as exchanging of property, equipment or assets.

Honolulu Star Bulletin
Via Norm Maguire

The FCC said the changes involve no monetary consideration, nor exchanges of property, equipment or assets.

One Honolulu resident objected to the change the FCC approved, but it said it rejected the petition filed by the program's owner, who did not dismiss the issue under question. The station is subject to FCC approval because the station encountered no change in the U.S. Postal Service.

The FCC said the changes could be taken up by the stations' licenses. No change in frequency is expected for KHVH or KPOJ.

Still more coming! Great support, gang! — NEC

Honolulu Star Bulletin
Via Norm Maguire