

SEPTEMBER 1960

40 CENTS

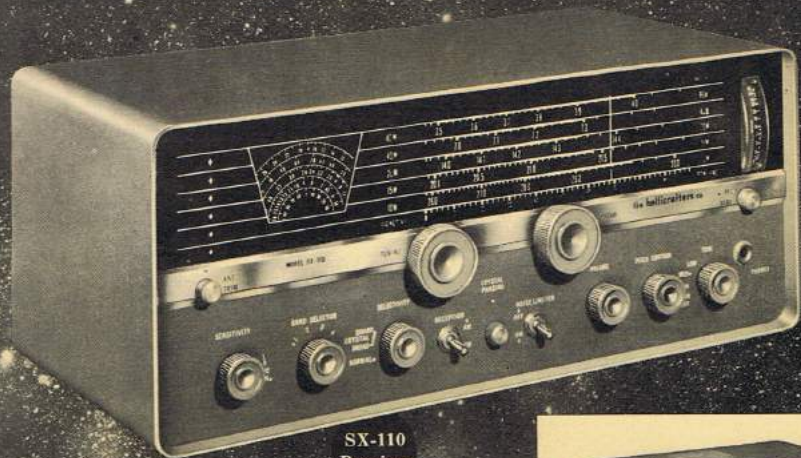
DXing HORIZONS



**"DX
AND THE SUN"**

(PART TWO)

DEVOTED ENTIRELY TO RADIO AND TELEVISION DX RECEPTION



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NEW: SX-110 Receiver. Advanced features and design make the SX-110 an exceptional value for the radio amateur and short wave enthusiast alike. Standard broadcast plus three short wave bands (540 kc-34 mc). Slide rule bandspread dial, calibrated for ham and citizens' bands; built-in "S" Meter, antenna trimmer, crystal filter. Seven tubes plus rectifier.

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At Sign Off

WELCOME MEDIUM WAVERS!

In our ever expanding devotion to cover all phases of weak signal reception, DXing Horizons this month welcomes Medium Wave (Broadcast Band . . . 540-1600 kc.) DX enthusiasts around the world. We know from the hundreds of letters received in the past month concerning this one new section alone, that DXers feel this is a much needed addition to the DX coverage of DXH. Many special projects are underway in the MW field. Watch for details.

EXPANDED VHF BOOSTER COVERAGE

With the October issue, the weak signal industry With the October issue, the Weak Signal Industry section in DXH will break down into two sub-sections . . . "Cable Drop" for Cable TV Operators (due to begin in November) and "Booster News," for VHF Booster-Repeater Operators. Incorporated into the new VHF Booster section will be the news of the National TV Repeater Association, Tri-State TV Repeater Association, and the other state groups, all handled by the very able Jim Beamer, of Livingston, Montana. Beamer is Secretary of the NTRA, and Tri State group. DXH Booster News will be "the news" of the Booster world.

NYC UHF TEST READING

The FCC is still shooting for an early '61 start for two high power UHF stations, to be located (tentatively) with antennas atop the Empire State Building. Several committees have been set up by the FCC to watch over this test. Watch for a special DXH announcement regarding our participation in this 12-month program.

WITH THE FCC

Comments are due September 16, in Washington, relative to the FCC proposal to shoehorn in more VHF channels in the already overcrowded East.

September 23 will see 23 UHF construction permit holders appearing before the FCC for a chance to hold on to their inactive permits.

The California move to make Fresno-Bakersfield markets all UHF is running into headwinds. Fresno switch is going ahead according to schedule, while lone VHF KERO-10, Bakersfield will fight the move.

NEW TV

KSOO-13, Sioux Falls, S.D. took to the airwaves officially July 31, via DX, it was seen that day as far east as Indiana, south to Kansas. Station operates with 316 kw. video, 1,117 foot tower, and is interconnected with KORN-5 (Mitchell, S.D.) and KMMT-6 (Austin, Minn.).

KERA-13, new Dallas educational station expects to be airboud September 12th.

New England's only VHF channel vacant, channel 6 New Bedford, Mass., is back in New Bedford. Providence, R.I. move apparently is out.

KCRA-3, KXTV-10, KOVR-13, Stockton-Sacramento have received FCC permission to build a joint tower 22 miles south of Sacramento, 20 miles north of Stockton. The tower . . . will be a 1,500 footer!

WJDM-7, Panama City, Florida has changed its call to WJHG.

VHF BOOSTER RULES RELEASED

In a report and order adopted by the FCC at its regular Wednesday meeting July 27, and released by the general FCC staff August 1, the long awaited operational rules for VHF Booster-Repeaters were written into Communications Law. The rules are essentially those proposed by Booster operators, with only minor dissent in the FCC ranks. This came from Commissioner Robert E. Lee (see DXH, page 11, June 1960). Lee said in his dissenting statement, "I agree to licensing existing VHF operations, which now operate without authorization, to avoid a general disruption in the services they are rendering. However I have urged that NEW Translators should be licensed to operate only in the UHF portion of the spectrum . . ." Lee continued, stating that he feels strongly that all TV services should move to UHF ultimately.

Under the new rules, all existing VHF Booster Stations (as of July 7, 1960) have until October 31, 1960 to file with the FCC an application for temporary authorization to continue operation pending adjustment and modification of the existing unit to the new FCC rules and regulations governing VHF Booster operations. Such applications will be filed on FCC Form 347-A.

Next, the operator of an existing VHF booster must file with the FCC, on or before February 1, 1961, FCC Form 346, for authority to replace or modify the facility to conform with the new regulations.

Existing Repeaters may not be modified, and no new VHF Booster may be constructed prior to the issuance of FCC approval of the application Form 346.

Temporary authorization to continue operation with existing equipment will be valid only until October 31, 1961.

RUMORS SQUELCHED . . . THE REAL THING!

Section 4.702, (B)—Any one of the 12 standard VHF Television channels (2-13) may be assigned to a VHF Booster. This appears to squelch the rumor over non-use of channels 4 and 5.

Section 4.702 (E, F)—No minimum separation between VHF Boosters operating on the same channel is specified. No adjacent channel assignments will be made to Boosters intended to serve the same area.

Section 4.703 (A, B)—If interference develops between VHF Boosters, the problem shall be resolved through mutual agreement. It will be the responsibility of the Booster operator to correct at his expense such interference conditions.

Section 4.731 (A)—VHF Boosters provide a means of retransmitting the signals of TV broadcast stations to areas in which direct reception of Television broadcast stations is unsatisfactory due to distance, or intervening terrain.

NON-INTERMIXTURE

Section 4.732 (D)—A VHF Booster will not be authorized to serve an area which is receiving satisfactory service from one or more UHF TV broadcasting stations, or UHF Translators, unless such intermixture of UHF-VHF service can be justified (i.e., by the proposed VHF operation).

(Continued on page 11)

DXing HORIZONS

SEPTEMBER 1960
Volume 1, Number 8

"A monthly news publication, devoted to active Television, Shortwave, Medium Wave, and FM long range enthusiasts throughout the world. DXing Horizons is the official news publication of the World Wide DX-League, an international organization of DX listeners-watchers. DXing Horizons is registered to Robert B. Cooper, Jr., 1960."

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SUBSCRIPTION RATES

U.S.A., Canada, Possessions

One Year \$ 4.00
Two Years 7.00
Three Years 10.00

Airmail — One Year 7.00

Foreign Rates

One Year 4.00
Two Years 7.50

Application to mail at second class postage rates is pending at Modesto, California, U.S.A.

PUBLISHING DATA

DXing Horizons is compiled by and for long range-weak signal reception enthusiasts.

DXing Horizons maintains a technical advice service, and an experimental laboratory.

ADVERTISING DATA

Advertising rate card, circulation information upon request.

Monthly Shortwave Broadcast

DXing Horizons airs a monthly shortwave "DX NEWSCAST" over Station WRUL, New York City, U.S.A. This broadcast is beamed to Europe-Africa at 2015 GMT on the third Saturday of each month; to South America—the South Pacific at 2345 GMT, the third Sunday of each month.

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WORLD WIDE DX-LEAGUE

The Shortwave—Medium Wave—TV and FM Departments of DXing Horizons sponsors this international organization of listeners—watchers for the sole purpose of enhancing the pursuit of DX Radio-TV signals.

The World Wide DX-League provides listening awards—certificates in recognition of DXer achievement. Full information on league membership, and awards can be found monthly within these pages, or through the league's office in care of DXing Horizons Magazine.

DXing Horizons . . . "The DXer's Equivalent to the Ham's QST."

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Please enter my subscription to DXing Horizons Magazine commencing with the October issue. Enclosed is

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Modesto, California, U.S.A.

Note to All Medium Wave — Shortwave Readers

Many requests for a single sample copy magazine are being answered this month in your fields. **Subscribe today! Don't miss a single fact filled issue in the DX season ahead!**

(All Readers: See pages 26A, 26B for late **World Wide DX League** news of great importance!)

RUGGEDIZED Antennas For Weak Signal VHF

(Conclusion)

By F. R. Voorhaar
The Technical Appliance Corp.
Sherburne, New York

ERRATA: On page ten of the July DXH (part two of this series) the last line of column 1 reads "impossible." This should read possible."

In two previous articles on this subject (June-July DXH) the general specifications of the true Ruggedized Yagi Antenna, and the combination of two or more such antennas into an array to achieve sharper patterns and higher gain for long range VHF was discussed.

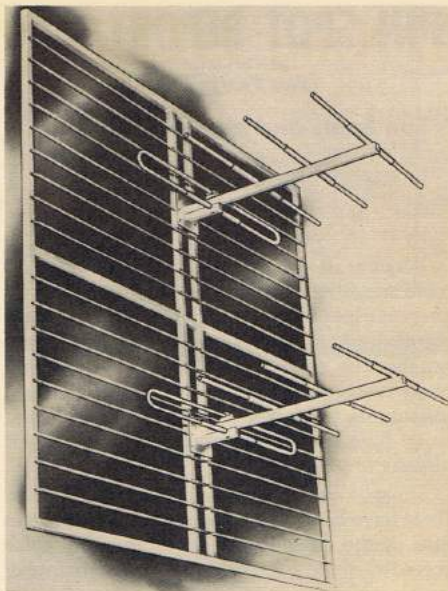
This third, and final part, will be concerned with a special use of any Yagi antenna system with an eye towards combatting severe co-channel (same frequency) interference.

SCREEN REFLECTOR ARRAYS

In many areas of the U.S.A., especially in the midwest and east, the problem of reducing, or eliminating co-channel interference is foremost in the design of any array. Tests have shown that the tolerable level of interference on a video screen is on the order of a power difference between the primary and secondary signal of about ten to one. (i.e., 500 mv. signal from the primary signal, 50 mv. from the secondary.) A lower ratio, with more signal from the secondary (non desired) station increases the video beat bar offset interference to a degree the primary signal is degraded and often unwatchable.

The amount of signal present at the receiving site, from the secondary station (or stations) is usually of a low enough order that the normal yagi pattern will reduce it below the interference level. However, the geography of some locations is such that when the receiving antenna is directly on the primary station, the secondary signal or signals approach from the "backside of the antenna," or near backside, and the single, or double reflector system does not cut the unwanted signal down to a tolerable level. This is a case where the screen reflector type array can be a decided asset to the user.

A screen reflector may be added to any existing yagi array with only minimal attention



Two ruggedized Taco four-element antennas mounted in front of a screen. Phasing lines couple the antenna to a single feed line for maximum gain.

given to the existing impedance and pattern. The addition of a screen reflector will in all cases raise the front to back ratio considerably, and in many cases improve the front to side and even frontal lobe pattern.

The frontal lobe gain of a screen reflector array will also be slightly higher than an antenna using the same number of driven and directive elements with parasitic reflectors. In the case of a single channel yagi, the substitution of a screen reflector for a parasitic reflector may broaden the antenna's frequency response somewhat.

SCREEN REFLECTOR SPACINGS

Most single channel yagi antennas have reflector spacings of from .1 to .15 wavelength, on the operating frequency. Needless to say, so-called all-channel yagi arrays cannot have a single, double or even triple reflector system that is spaced back from the driven element so as to give "maximum reflector guard" on all 12 VHF channels. In the compromise present with "all channel" yagis, the front to back ratio will perhaps suffer most. The reflector spacing in the case of screen reflectors is not nearly so critical as with parasitic reflectors. This means, then, that the screen reflector is something the TV DX fan can duplicate and add to his present antenna, making a worthwhile addition to

(Continued on page 17)

SUN SPOT REPORT - '60

(Part Two of Four)

Sun Spots and Medium Wave DX

Raymond Moore
Associate Editor
DXing Horizons

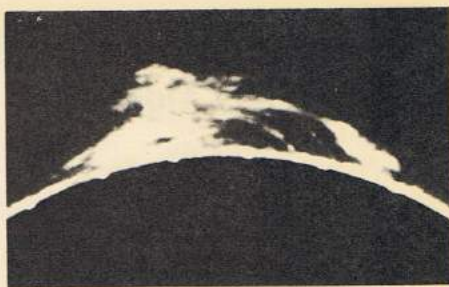
Possibly no portion of the radio spectrum is more sensitive to the fluctuations of the eleven year sunspot cycle than the medium wave broadcast band. As the present sunspot cycle number 19 approaches the minima of 1965 many veteran DX listeners who have been missing for the last few years can be expected to be back at the dials again adding to their already impressive logs.

Sunspot counts in the form we now know them have been made daily since 1750. We are now on the downward slope of the 19th cycle recorded since that time. The accompanying graph (1) gives a detailed picture of the fluctuations in sunspot count for the past 30 years, which encompasses almost the entire history of medium wave DX listening as well as giving the anticipated count (dashed line) for the next five years.

The current cycle, the 19th, has been the most intense ever recorded, reaching a peak in March of 1958 when a smoothed sunspot number of over 201 was recorded. Previous to cycle 19 the highest sunspot count for a single month in the over 200 years that records were kept was 159. *This figure (159) was exceeded for 29 consecutive months during the current cycle, from November 1956 through March 1959!*

As the sunspot count diminishes, the density of the ionosphere decreases and the density and area of the auroral absorption zones decrease. The auroral zones extend for a radius of about 20 degrees, from both magnetic poles, and the ionosphere above the auroral zone is extremely dense. Signals as low in frequency as the medium wave band, when the great circle radio path brings them through or even close to the auroral zones, are absorbed almost entirely.

Medium frequency waves suffer severe absorption in the ionosphere unless the density of the reflecting layer is very weak. *Past experience indicates that the sunspot count should be under 50, for really consistent long distance work on the broadcast band.*



Large solar prominences such as this one (132,000 miles high) August 18, 1947 frequently are associated with sudden auroral activity. Mount Wilson Observatory

THE PAST

For six years, 1930 through 1935, the annual mean sunspot number was under 50. Other periods of low activity were for five years, 1941 through 1945 and most recently for four years 1952 through 1955. The middle period of recent history, was during World War II, but the other two periods in the Thirties and the Fifties produced some amazing DX on the broadcast band.

During the early Thirties, when most foreign stations were comparatively low power, many North American listeners logged dozens of Japanese, Australian, and European stations on simple six and eight tube home radios. Listeners in British Columbia and Saskatchewan tuned in the whole world with comparative ease. One listener in British Columbia listed 22 European stations, in addition to India and Ceylon in the *International DXers Alliance* honor roll.

Fifty watt Australian stations were logged and verified in Massachusetts on at least four occasions. Other outstanding catches verified from Massachusetts include JBAK, Korea (150 Watts), ZBW, Hong Kong, XGOA, China, and dozens of Japanese stations down to 300 watts.

A Merced, Calif., listener listed on the IDA honor roll ZTD in South Africa, and stations in Portugal and France. Several California listeners verified VUB and VUC in India. A Nevada listener had verifications from Spain, Italy, Switzerland, Ireland, and France.

The sunspot minima of the Fifties presented more problems to the listener because of the tremendous number of powerful domestic stations, many of which operate 24 hours a day. More selective receivers helped some in coping with the interference and some enviable records were made.

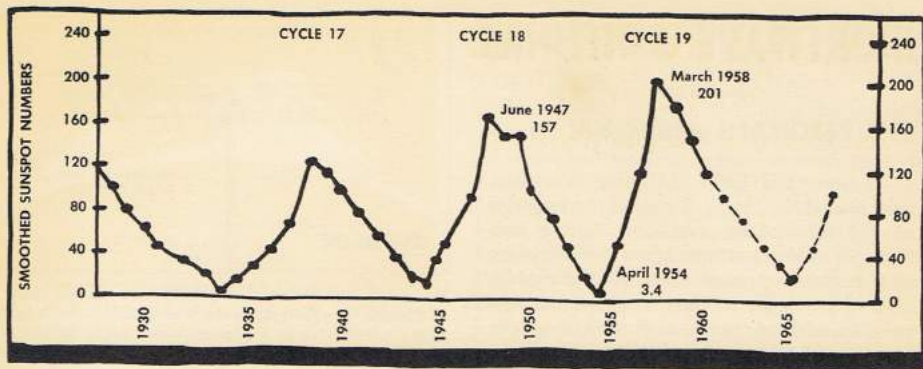


DIAGRAM ONE

Listeners along the Eastern seaboard could often count over 100 European stations at one time either in the afternoon or early morning, and reception like that would last for weeks at a time. The 100 watt WIND in Nouasseur, Fr. Morocco was frequently reported in the East. VRH in Fiji was often heard in the West.

Other outstanding loggings by Eastern listeners were KSAR and VOA Okinawa in the Ryuku Is., Abidjan, Ivory Coast, Cairo, WVTV Johnston Is., Greenland, VQO Solomon Is., Radio Peking, EAJ50 Canary Is., BED6 Formosa, KUAM Guam, and Philippines.

In the 50's, western listeners didn't seem to do quite so well although they logged dozens of Japanese, Chinese, Formosan, and Oceanic stations. A Washington DXer verified Germany on 1586 kc., and Texas DXers logged numerous Europeans.

THE FUTURE

The future looks very bright for medium wave propagation. Not only is the present cycle gradually receding toward the minima expected in 1965 but a review of all previous sunspot cycles indicates a very good possibility that the next few cycles may be comparatively mild.

Only five other cycles since 1750 have been as severe as the past three. In addition the more severe cycles seem to run in groups of three or four followed by several relatively mild ones. For example, since 1750, cycles two, three, and four were severe and they were followed by two cycles during which the mean sunspot count never exceeded 50 and a third cycle that got up to only 70. Again, cycles eight through eleven were severe and they were followed by three cycles that peaked at only 75, 85, and 65.

Thus this short glance at past sunspot cycles,

and the past three decades of Medium Wave DXing would tend to indicate a bright future for the years ahead. With each succeeding winter in the five years to come, long range world-wide Medium Wave DXing can be expected to improve considerably. How much the final improvement is will depend on how low the cycle dips.

SHORT TERM VARIATIONS

Old hands at Medium Wave work know that whenever a magnetic storm sends the auroral displays moving south into the northern U.S.A., radio paths such as Europe to the U.S.A. drop into the noise, as the auroral absorption increases. But at the same time, such auroral displays in the Arctic, and Antarctic often signal rapidly improving reception in the U.S.A. from stations in Brazil, Chile, Argentina, and other South American points. There have been numerous instances where DXers along the Great Lakes, and even Canada, have experienced extremely strong reception from South American stations on frequencies normally occupied by strong U.S.A. stations. This is possible when the U.S.A. stations' signals passing through the "southern extended" aurora are absorbed, clearing the channel for the DX reception. Thus even during periods of high magnetic activity, DX signals can and do frequently sneak through to the alert DXer.

NEW ALLIED RADIO CATALOG ... FOR '61

"Everything in Electronics"... that's the Allied Radio Catalog for 1961. With its 40th year, Allied Radio Corporation, 100 N. Western Avenue, Chicago 80, Illinois brings out a 440-page masterpiece of radio equipment listing. When you write for your copy, write to Department 133-J.

SHORTWAVE ANTENNAS

(Part Two)

"THE RESONANT ANTENNA"

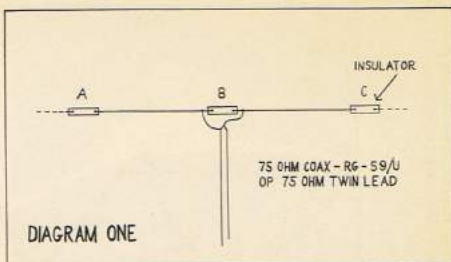
In the April issue of *DXing Horizons*, part one of this series discussed the vagaries of the ionosphere, and how fading and changes in skip patterns affect the reception of the shortwave enthusiast. At the conclusion of part one, a "four-way antenna system" capable of coping with the changes in the ionosphere, was outlined for the more enthusiastic builder. Part two outlines the procedures involved in building and maintaining an antenna, or antennas, for superior performance in one particular section of the shortwave spectrum.

Today's shortwave fan places more and more reliance on the ability of his receiver to "draw in the weak ones," forgetting for the moment that it is the antenna which must provide the signal to the receiver to begin with! A good antenna often makes a poor receiver out-perform a more expensive unit with a poor antenna system. And yet today, few shortwave fans seem concerned enough to erect anything more complicated than "a random length of wire suspended above the backyard, between a tree and the roof line." In the past decade, shortwave stations have continued to increase their operating power levels, improve their transmitting antennas, and most important, learned to apply the science of radio propagation to their coverage problems. All of this improvement on the transmitting end, coupled with the past five years of high sun spot activity, and excellent SW conditions, has made it increasingly simple for inexpensive receivers and hastily strung antennas to "do the job." This, we feel, has created a sense of apathy on the part of shortwave fans to get by with a minimal type skyhook.

But in the years ahead, with the rapid deterioration of shortwave reception on frequencies above 12 megacycles expected, the effectiveness of the antenna system will separate the DXer from the listener."

DIPOLE ANTENNAS

The dipole antenna takes many forms, but regardless of what it looks like, it is a resonant antenna cut to frequency. Because it is "cut to frequency" and is not merely a random length of wire, it is designed to give superior



The single wire dipole, fed with 75 ohm coaxial cable, or 75 ohm twin lead. Distance A to C (minus the length of the insulator at B) is one-half wave length. Insulators at A, B and C are E. F. Johnson 104's, or a unit equally suitable.

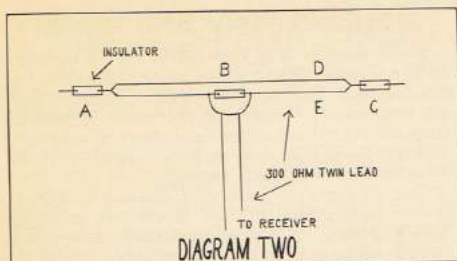
performance on one portion of the shortwave range. From the vantage point of performance, a dipole antenna, operating in the design frequency range, will give superior low angle DX results, far surpassing random lengths of wire. Its disadvantage is found in its narrow response characteristics. Instead of spreading its gain "out," over the entire shortwave spectrum (such as a random length of long wire does) it concentrates its gain in the range it is designed for. Therefore it will give decidedly superior gain "on frequency," and lower gain off frequency.

Therefore the dipole antenna can offer many low angle-superior gain characteristics to the DX enthusiast who wishes to specialize, or concentrate DXing efforts in one shortwave band in one, or two, directions.

DIPOLE IMPEDANCE

In boning up on antennas you will see frequent reference to the word "impedance." It applies to a hundred and one phases of receiver design, but in our case it refers to our antenna system. Just as a plumber must use the proper size of coupling joints to match a one-inch diameter pipe to a one-half inch diameter pipe, so must the antenna designer take special pains to match the output of the antenna first to his transmission line (between the receiver and antenna), and secondly, to his receiver. The transmission line is in a sense the pipe, which transmits, or carries, the signals from the antenna to the receiver. But unless the transmission matches the antenna, in impedance, and at the opposite end, the receiver, signal is lost through what is termed "mismatch."

Fortunately for the dipole antenna fan, the antenna can be designed in two convenient forms, one of which will certainly match the



The folded dipole, fed with 300 ohm twin line. The dipole may also be constructed from the twin line. Distance A to C (including the insulator at B) is one-half wave length. Lengths for dipole antennas can be found in Table A.

impedance of your receiver. In other words, for all practical purposes the receiver impedance will determine which type of dipole and consequently which type of transmission line you will use in your installation.

SINGLE WIRE DIPOLE

This is the simplest type of dipole antenna, the one most commonly employed by shortwave fans. It is constructed from copper-clad solid steel (not standard) wire, some convenient size between No.12 and 18. No. 14 is a good average for most installations and is heavy enough to support the insulators at points A, B and C, as shown in Diagram 1. Length A-C, as shown, is determined by the frequency which the antenna will be used for. Chart A gives the actual lengths, and frequencies, of the most popular shortwave bands. The insulators shown in Diagram 1, and 2, are the popular E. F. Johnson 104 porcelain models which net for twenty-five cents apiece at most supply stores.

The single wire dipole has an impedance of approximately 75 ohms, which means the transmission line from antenna to receiver can be either 72 ohm coaxial cable (RG-59/U, RG-11/U), or 75 ohm flat line (Amphenol 214-080, 214-079). The use of RG-59/U is recommended for several reasons: 1. Coaxial cable withstands weather better, and is less likely to be affected by rain, snow, etc. 2. Coaxial cable, because of its "shielded construction" is less susceptible to noise pickup from autos, power lines, neon signs, etc. 3. In the long run it is much less expensive, and will provide more hours of enjoyable reception. 4. It does not require special stand-off insulators (i.e., TV screw in types), as does 75 ohm flat line.

The flat line is nothing more than a Chinese copy of the popular 300 ohm TV flat line, in

use in millions of TV installations around the country.

FOLDED DIPOLE ANTENNA

The folded dipole antenna's advantages over the straight wire dipole are few, its disadvantages many. On the positive side, it matches *all* terminal strip type receivers in impedance (Diagram 3). Very few general coverage shortwave receivers have been manufactured which do not have 300 ohm input. As we wish to match the antenna to the receiver, this is an excellent place to begin.

Any receiver *without* an antenna trimmer, and designed with a "terminal strip" three point antenna connection must use the 300 ohm folded dipole. The use of anything else results in high mismatch and a very ineffective antenna arrangement.

But again the folded dipole antenna, like any resonant antenna, can only be resonant in one rather narrow range of frequencies. *However a folded dipole is somewhat flatter, and will be less frequency sensitive across a range of frequencies "within a single shortwave band" (i.e., 25-meter band, etc.), than the single wire dipole.*

A folded dipole will also act as a resonant antenna on third harmonic multiples of the frequency it is cut for (i.e., cut for the 40-meter I.S.W. band, it will also work well as a resonant antenna in the 13-meter I.S.W. band, approximately 7 megacycles and 21 megacycles respectively).

FOLDED DIPOLE CONSTRUCTION

The folded dipole may be constructed as shown in diagram 2 from ordinary 300 ohm twin line, the same type used as a transmission line, or it may be specially constructed using plastic spacers. The length A-C remains the same in both cases, although distance D-E (width) should not exceed six inches.

DIPOLE ERECTION

The user should be careful to erect or choose supports which line his antenna's pattern (Diagram 4) up with the region of the world where he wishes to concentrate his listening. Perhaps your current antenna system gives satisfactory reception from all areas but Asia, on say 25-meters. The obvious choice, then, is to erect a dipole antenna with its main beam towards Asia (from your location). This will give you the "extra gain" needed to make previously unheard Asian 25-meter stations "listenable" at your location. This same line of thought can be applied to any shortwave band, and any area of the world. Throw your an-

UTILIZING WWV AND WWVH

Radio stations WWV and WWVH are operated by the Central Radio Propagation Laboratory of the National Bureau of Standards. These stations are well known throughout the world as primary frequency standards as well as sources of extremely accurate time. They also perform several other services that are not as well known.

One of these, of particular interest to DXers, is the propagation notices. These are given by WWV during the time announcement intervals at twenty minutes after and ten minutes before the hour and by WWVH at ten minutes after and twenty minutes before the hour. These announcements concern propagation conditions over the North Atlantic and North Pacific paths respectively.

The announcements are given in International Morse and consist of a letter and a number. These letter number groups have the following meaning:

- W—Ionospheric disturbance in progress or expected.
- U—Conditions unstable.
- N—Normal conditions.
- 1—Impossible.
- 2—Very poor.
- 3—Poor.
- 4—Fair to poor.
- 5—Fair.
- 6—Fair to good.
- 7—Good.
- 8—Very good.
- 9—Excellent.

The notices are changed every six hours, namely at 0600, 1200, 1800 and 2400 EST. The announcements by WWV concern the North Atlantic path and those by WWVH concern conditions over the North Pacific path.

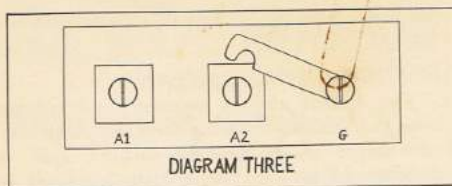
WWV, at Washington, D.C., transmits on: 2.5, 5.0, 10, 15, 20 and 25 mcs.

WWVH, at Puunene, Hawaii, transmits on: 5.0, 10 and 15 mcs.

Shortwave DXers can check these forecasts (in slow morse code) for an accurate up to the minute propagation report. TV DXers can utilize reports of "W" and "U" as indications of expected Auroral activity. Medium Wave DXers will find "W" and "U" indications of poor trans-Atlantic DX, improved South American DX.



This young man is Kjell Ekholm, Editor of the Malmo-DX-aren, house organ of the Malmo Kortvagsklubb (Short-wave Club), Fack 7026, Malmo 7, Sweden.



The terminal block for antenna connections as found in the majority of shortwave general coverage receivers. When the antenna is fed with 300 ohm line, the parallel sides of the transmission line connect to points A¹ and A². The metal strip connected to G is displaced from A² in this case. When the antenna is fed with 75 ohm line, the center conductor of the coax, or one side of the 75 ohm twin line connects to A¹. The shield on the coax, or the opposite side of the twin lead to A². In this case the metal strip from tab G connects to A² also.

tenna's pattern towards the area of the world where you experience the most trouble with reception.

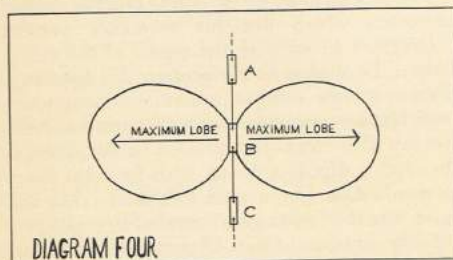
MORE "SHORTWAVE ANTENNAS"

Over the winter ahead the subject of shortwave (and medium wave) antennas will receive considerable space in DXing Horizons. Feature articles covering the following phases of SW and MW antennas are in the mill for early production:

1. The Vee beam antenna, with tuned feeders.
2. An antenna tuner for the medium wave band.
3. Very-very long-long wires.
4. A transistorized shortwave loop.
5. The medium wave loop antenna for DX.

CHART A
DIPOLE LENGTHS (Distance A-C)

Frequency	Meter Band	Physical Length
4.8—5.2 megs.	60	99 feet 9 inches
6.0—6.2	49	78 0
7.0—7.4	41	66 10
9.0—10.0	30	52 0
11.5—12.0	25	40 8.5
15.1—15.4	19	31 0
17.75—18.0	17—16	26 3
21.45—21.75	15—13	21 8



The dipole antenna pattern. The maximum gain lobe is at a right angle to the antenna, in both directions. Antenna gain off "the ends" of the dipole is at a minimum.

"What a Verification Means to Me"

By Robert B. Cooper, Jr.
Editor-Publisher
DXing Horizons Magazine

(Part One of a Series)

In the near decade of DXing I have done on all bands, I have seen the question of what constitutes a valid and proper "verie" crop up time and time again. Not only in the TV field, but in Medium Wave, Shortwave and FM as well. It has been said that the verification, to the DXer from the station involved, is the final courtesy . . . a final link in the DX contact which began when the DXer first saw, or heard the station identification.

One thing I have learned in a dozen and one verification squabbles . . . they never settle a single thing. I cannot recall a single squabble which has resulted in any constructive results. I can recall several which have split clubs and groups wide open . . . making bitter enemies of longtime DX associates, driving good, hard-working and conscientious DXers back to collecting stamps, and generally giving the hobby of DXing (no matter what form it takes) a bad name.

As Editor-Publisher of the world's first attempt to organize all DXers "under a single roof," DXing Horizons, I feel no useful purpose will result from more arguments . . . decrees or squabbles.

With the formation of the World Wide DX League, by DXing Horizons DXing departments, it would appear that some type of standards should be established within the hobby, if a high caliber and complete awards system as briefly outlined elsewhere in this magazine, is to ever become worthy of the paper it is printed on.

But, no one realizes better than I that any such standards must come from within the ranks of the DXers. Agreement on what is to be acceptable, for awards purposes, and what is not, must come from all DXers. Perhaps then the rules and regulations regarding "a standard form" for verifications will by necessity be very loose . . . perhaps even lax. Only you . . . as a partner in this great world of DXing adventure can determine this.

Your opinion is solicited . . . and many will be incorporated into this series, which will appear in several subsequent issues of DXing Horizons.

Your opinion, your feelings, and your history in DXing will be carefully weighed, en total!

AND ME . . .

My forte is TV DXing. I have dabbled in Medium Wave, Shortwave and FM . . . and have verifications in all. But to me, at least at the present time, TV DXing is my strong point.

When I began TV DXing, and for nearly three years thereafter, I had no contact with other DXers. In fact I didn't realize then that anyone else enjoyed the same thrill as I, when the snow folded away from a distant station. I was a loner . . . and my DXing verification consisted of photographing the distant station. But in the years which ensued, I discovered others enjoyed my hobby, and

Please-Accept This As A Confirmation of Your	
Reception on	June 5, 1955
of the	
WESTINGHOUSE TELEVISION STATION	
W B 3-7 U	
CHANNEL 4	
BOSTON, MASSACHUSETTS, U. S. A.	
Owned and Operated by	
WESTINGHOUSE RADIO STATIONS, INC.	
Remarks	Thank you for your interest in writing to us.

The author considers this verie card a valid verification of reception. This catch, in June 1955, was once the World's record for channel 4 reception.

some even wrote to stations, in hopes of receiving written verification for their reception.

Taking up this pursuit, I soon learned that responses from stations took two forms. (A) Those which thanked me for my report . . . and went no further, except perhaps to extoll the virtues of the station; and (B), those which thanked me for my report, and went on to state "we are confirming your reception of our television station on channel X, on (date)."

The latter appealed to me most, for it assured me (and my non-DX minded and skeptical friends) that I had indeed logged this distant station.

I also soon learned that not all stations would reply with the "we are confirming . . ." phrase. Inquisitive as to why, I evaluated my reporting method and soon discovered that in nearly every instance where I asked for the station's verification with this phrase "I would greatly appreciate your checking my reception report against your station log, and if it is correct, answering my report with a statement to its correctness" . . . I received just that. A statement verifying my actual reception . . . not merely thanking me for my interest, etc.

To me, a verification, even nestled away in a file in the DXing Horizons office with 150 or so others, is one of the most prized possessions I own.

I view with pride my station photos . . . I listen with excitement and a lump in my throat to taped ID's from distant stations. But I view with special pride the written verification which I know "other DXers" look upon with special favor. The written verification to me, over the signature of a station official, is the "greatest monument to my DXing skill . . . and luck."

PHRASES APPEARING ON MY VERIFICATIONS

(WMAR-TV, Baltimore, Md.) "From the description of programs and times mentioned, there is no question regarding the authenticity of your reception . . ." (KDIX-TV, Dickinson, N.D.) "This is to verify your reception of a recent date." (CMAB, Habana, Cuba) "Verificamos su reporte del dia Junio 28 y esta es exacto a la transmision que efectuamos en el dia de su reporte . . ." (WJBK-TV, Detroit, Michigan) "Thank you for your letter of June 6, reporting reception of WJBK-TV, Detroit. Please consider this a confirmation of your report . . ." R.B.C.

Next month, world famous SWL Paul Kary, Washington, D.C. discusses SW veries . . . his forte.

WEAK SIGNAL INDUSTRY

BRINGING TV TO MARATHON

(Conclusion)

The first two portions of this series outlined the procedures necessary to build and operate rhombic antennas in weak signal areas for beyond the horizon video reception.

RHOMBIC IMPEDANCE

The rhombic antenna has a feed impedance of between 700 and 800 ohms. Thus it is not possible to merely connect a length of 300 ohm twin lead to the termination point, run it to the receiver, and expect results.

A terminated rhombic (see terminating detail (C) page 16 August DXH) however will match fairly closely standard 450 ohm line (open wire line, manufactured by several companies. Gonset Line is recommended). 450 ohm line however will not match receivers, or boosters. The step down, of the antenna impedance, or the 450 open line impedance, to 300 ohms, is best accomplished through a 36 inch matching piece of 300 ohm line. By splitting a 36 inch length of twin line as shown in Diagram One, the user can feed 450 ohms into the top end, and get 300 ohms out of the bottom end! If the builder has a run from the antenna to the receiver, or first line booster in excess of 100 feet, open wire (low loss) line is recommended.

STACKING RHOMBS

Essentially, the addition of a second stack on the rhombic antenna will add 3 db average signal to the system. However the "peak gain," during periods when signal shift is experienced due to changes in the atmosphere, will be much greater. Often the signal level will shift out of the plane of one stack, and into a second. In such a case the "realized gain" will exceed 3 db.

Diagram Two shows all that is needed in the way of stacking detail. It of course concerns itself with the phasing of the two antennas, and how and where to connect the feed line. Note that the twin lead comes off the bottom stack, and is split 18 inches. If the 450 ohm line is used from the antenna, no stub is required.

Table one gives the stacking distance between top and bottom bay. This distance should be maintained as closely as possible throughout the entire antenna, especially at the four support poles. There is no physical connection between the two stacks except at the base end.

TRANSPPOSITION BLOCK

Diagram Three details the transposition block, which is a "phasing unit" to correctly "add the signal from both antennas together."

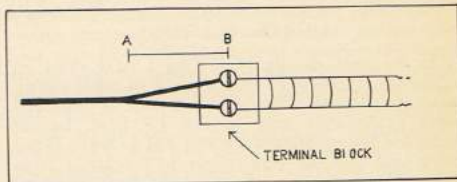


DIAGRAM ONE

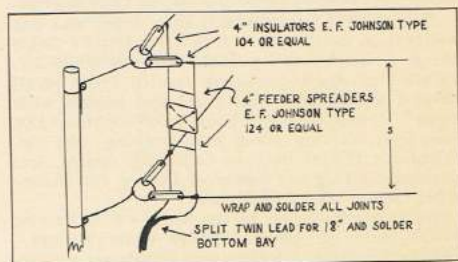


DIAGRAM TWO

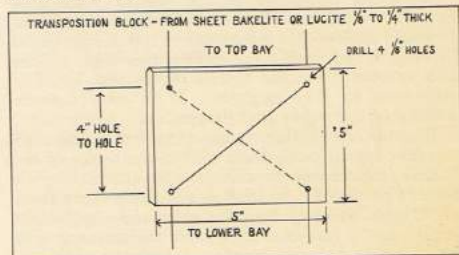


DIAGRAM THREE

AD INFINUM

Should any readers experience difficulties in designing, or constructing such an array for their use, the engineering staff of DXing Horizons is always available (as in any problem) to answer questions and advise.

TABLE ONE

CHANNEL	S
2	107 inches
3	96½
4	88
5	76½
6	71
High Band	30½

S is the distance between antenna stacks. It does not vary with size of antenna, only channel.

AT SIGN OFF

(Continued from page 1)

OPERATOR REQUIREMENTS

Section 4.734 (A)—A VHF Booster may be operated without a licensed radio operator in attendance if certain requirements providing for automatic shut down in case of unit failure, or input signal failure, are met.

POWER-UNIT AND ERP

Section 4.735 (A, C)—VHF Boosters shall operate with a maximum final stage output power (peak visual) of one watt. No limit is made upon the effective radiated power (ERP) which may be obtained by stacking antennas, etc.

ANTENNA LOCATION

Section 4.737 (A)—VHF Booster station operators will endeavor to select a retransmitting site within line of site of the area to be served.

EQUIPMENT—TYPE APPROVAL

Either custom built, or FCC type approved equipment may be installed by the Booster operator. Custom built equipment must be approved on a case by case basis, with the proposed unit data to be submitted to the FCC "on paper." This will consist of appropriate measurement data, to show that the custom built unit meets the requirements set forth for "type approved" equipment.

Type approved equipment (and custom built equipment) must maintain frequency tolerance of .02 per cent. The frequency converter and associated amplifiers shall be maintained so as to maintain the electrical characteristics of the original signal. The apparatus will contain automatic circuits to maintain the peak visual power (one watt) constant within 2 db when the input signal is varied over a 30 db range. The automatic power circuit must not allow the peak visual power to exceed one watt under any conditions. The unit must be designed to shut down when the signal input fails for any reason (i.e., transmitting station, loss of receiving antenna, input amplifier, etc.).

The transmitter will be equipped with an automatic keying device which will transmit the assigned call sign in International Morse Code within five minutes of the hour, and half hour.

TYPE APPROVED ONLY

VHF Booster apparatus which has been approved by the FCC will normally be authorized without additional measurements by the applicant. (i.e., The prospective operator need only file the correct form . . . FCC 346 . . . wait for a license, and then install the type approved equipment cited in the application.)

INSTALLATION

Section 4.750 (D, E, F)—Installation of custom built equipment (not type approved) must be done under the direct supervision of a person having the technical skill and engineering knowledge to make a proper installation.

Installation of type approved equipment must be under the direct supervision of a person having the technical skill and engineering knowledge to follow the manufacturer's instructions.

Simple repairs including tube replacement, fuses, other "plug-in components" and non-critical circuit adjustments may be made by an "unskilled" person.

FRENZIED ACTIVITY IN BOOSTER FIELD

With the formal announcement of the FCC rules and regulations for Booster operations, Booster activity assumed rocket proportions. Two members of the FCC staff, McIver Parker, of the Engineering Staff, and Dee Tincock, a General Counsel, accompanied by members of the FCC District Field Engineering Staffs throughout the west, set out to meet with booster operators in 8 western states. Meetings were held, or are being held, in the following towns as we write:

August 23—Prescott, Arizona
24—Pueblo, Colorado
25—Casper, Wyoming
27—Miles City, Montana
29—Great Falls, Montana
30—Wenatchee, Washington
September 1—Redmond, Oregon
2—Pocatello, Idaho
3—Salt Lake City, Utah

The purpose of these meetings is to clarify the licensing procedure and explain what the FCC expects of the Booster operators. With a legal counsel, and an engineer, all questions should have been answered.

Many TV and radio stations in the areas of these meetings have aired special public service programs outlining the new Booster Rules.

The meetings were set up jointly by the FCC and the National Television Repeater Association—The Tri-State TV Repeater Association.

The secretary of the last two mentioned groups, James Beamer of Livingston, Montana, joined the meeting caravan in Casper, Wyoming, traveling with it throughout Montana. A complete report on these meetings will appear here in October when Jim Beamer assumes the role of contributing editor for a new VHF Booster Section in DXH.

WITH THE MANUFACTURERS

DXing Horizons is advised that at least two manufacturers are working night and day readying units for FCC type approval. These are Benco, Ltd. of Canada and Blonder Tongue of New Jersey. Each of these two companies has also stated their intentions to establish "equipment depots" in the Northwest, where existing Boosters can be modified for approved FCC operation. It is now known that Benco Ltd. plans its depot for Spokane, Washington. Under current plans, Booster operators will be able to schedule their units for "assembly line modification" through the depots, sending their gear along at a pre-arranged date, when it will receive immediate attention, be modified, and shipped back for reinstallation with a minimum lack of air time.

Other manufacturers, including M.A.R.S., Eitel, and a new California firm have also indicated to DXH they plan type approved equipment for sale soon.

The Jerrold Company, Philadelphia is the sole Booster type equipment manufacturer which has not notified DXH of its intentions.

NEW TV TRANSLATORS GRANTED

Susanville, Calif. 70, to xlate KOLO-8.
Dermitt, Nevada 70, to xlate KTVB-7.
Alpine, Texas 81, to xlate KTSM-9.
Crystal City, Texas 70, to xlate WOAL-4.
Leadville, Colorado 75, to xlate KBTV-9.
Trego, Montana 70, to xlate KHQ-6.

(Continued on page 28)

TV Reporting

Deadline in Modesto, California for reports to appear in the October DXH is September 17. A reminder: Listings for the Over 50 TV DX Listing in October must be submitted, as outlined in August, by September 10.

QUESTION?

Is this year's increase in tropospheric (ground wave) DX, over the Eastern U.S.A. due to unusual atmospheric activity . . . or increased alertness on the part of DXers? We would like to believe the latter, but we feel we should solicit the opinions of other DXers before we form an official opinion. What do you think?

Certainly not all of the noteworthy DX of this year has been of an ionospheric nature. As a matter of official record, very few of the unusual DX hauls for the 1960 summer season have been via E skip. As one DXer so prosaically expressed the season . . . "Skip . . . NUTS! Tropes . . . WOW!"

And with that short introduction to the July-August reporting period, let's delve into reports. All times are EST (And to answer several queries . . . we find tabulation is much easier if we adopt one standard time zone . . . thank you for your cooperation!).

AUGUST 1-3 . . . DEFINITELY UNUSUAL!

Dave Janowiak, Milwaukee, Wisc. "I've been DXing on TV for four years and was never as stumped as now on this type of propagation. Every channel except KOLN-10, Lincoln, Nebraska looked like low band E skip. The weather reports showed a great many low pressure centers and "thermal

lows" located to the west of Kansas, and north of us in Wisconsin. It was hot and humid across the plains and midwest. Regarding the high band signals from Kansas and Nebraska seen here . . . signals were sometimes perfect, sometimes out entirely. Rapid fading accompanied all stations except KOLN. Large black bars (offset interference) appeared on channels 10 and 11 to the west . . . both channels are vacant here. Additionally, WKBT-8 and KROC-10 usually seen, were not viewable."

Some strange? It should . . . Janowiak apparently sat on the very northern extremes of an unusual ground wave phenomenon known as "ducting." The unusual part of this opening was that on east-west paths, such as Illinois and Indiana to Kansas and Nebraska, the signals from the DX area displayed the normal type of slow rolling fading associated with ground wave openings. On the north-south paths (i.e., Kansas to Wisconsin) signals would be in . . . and then out, subject to fading not unlike low band skip signals. The phenomenon is not unknown . . . but is rare.

SCOPING THE DXers . . . MIDWEST-GREAT LAKES

Once again this month, midwestern DXers, especially those along the Great Lakes, have proved they have more DX available than their co-horts around the U.S. and Canada.

From Walnut, Illinois, Bill Eckberg found the July 31-August 1 period the hottest of the report period.

In Chicago, Illinois, David Swanson caught his first identifiable meteor scatter during the perseids shower on the 12th . . . logged, WJXT-4 on test pattern, from Jacksonville, Florida, at 0632 EST.

Also from Chicago, AIPA Convention host Thomas Hidley found July 21st hot for VHF and

(Continued on page 14)



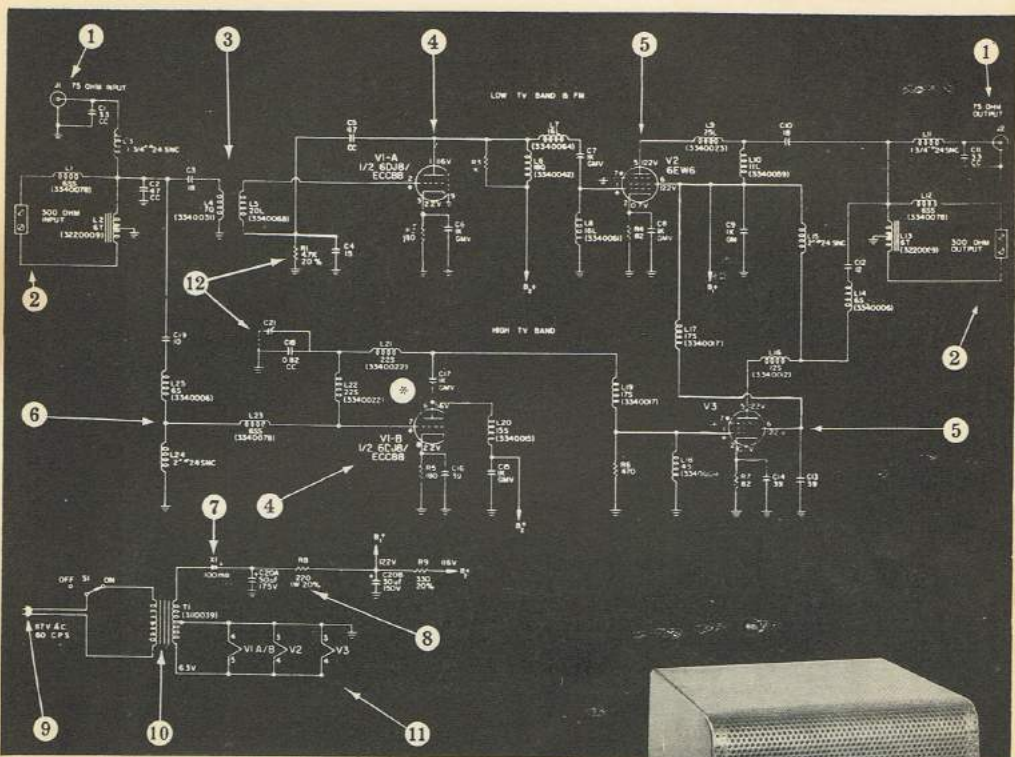
THE BIGGEST TV DX CONVENTION OF ALL!

This DX-hungry group represents many of the finest TV DX enthusiasts in the East and Midwest, gathered in Chicago, Illinois over the weekend of July 16-17 for the AIPA TV DX Convention.

Standing, left to right: Dick Nieman, Bill Eckberg, Jim Mitchell, Art Collins, Don Roller, Bob Seybold, Carter Bays, Bill Meers, Ferdinand Dambrowski and Dave Janowiak.

Seated, from left to right: Bill Nieman, Ed Rugel, Thomas Leu, Gary Olson, B. J. Bingham, Dick Bergen, Dave Roys, Ed Garrett and Jim Hughes. (Identification provided by AIPA President Art Collins.)

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BLONDER-TONGUE all-channel tv-fm amplifier model HAB only \$69.50 List



- ① Solderless radiation-proof 75 ohm coaxial fittings
- ② Exclusive B-T 300 ohm "NO STRIP" terminals. Patents pending.
- ③ Low-pass coupling - 54 to 108 mc.
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- ⑦ Solid state rectifier for longer life.
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 - ⑨ Low cost operation, draws only 0.24 amps.
 - ⑩ Power transformer isolates unit completely from power line.
 - ⑪ Parallel heaters for simplified servicing.
 - ⑫ Separate high and low bands of amplification consistent with maximum gain and wide band response.
- *U. S. Patent 2,761,023—triode neutralization circuit



Available at parts distributors, for further information write Dept. DX-9

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TV REPORTING

(Continued from page 12)

UHF tropes. Hidley added WKYT-27, Lexington, Kentucky at 0815.

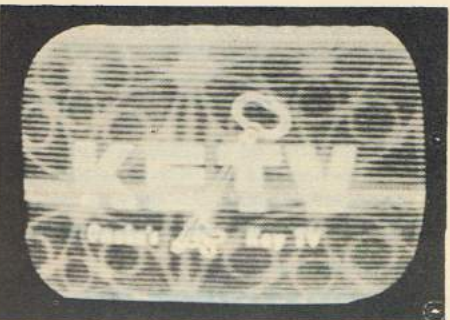
Still in Illinois, DXer Gary Olson of Barrington, added 9 new stations during this report period. Eight were via tropes and the ninth via rare short haul E skip. Olson caught (as new stations) KARD-3, Wichita (580 miles), KMTV-3 Omaha (410 miles), KAKE-10 Wichita, KOLN-10, Lincoln (460 miles), KGLD-11 Garden City, Kansas (740 miles . . . one of the best of the month) all between 12 noon and midnight on August 1. On the A.M. of the second, as the date changed, Olson continued with KTIV-4, Sioux Falls, Iowa (440 miles), WOW-6 (Omaha), and WIBW-13, Topeka, (460 miles). On the evening of the second, 1905-1930 EST, Gary caught KYTV-3, Springfield, Mo., and WLBT-3, Jackson, Miss., 450 and 700 miles respectively.

Further east, David Kanaar, Buffalo, N.Y., brings us up to date from his DXing den. On July 3 at 1140 A.M., Kanaar logged KHPL-6, Hays Center, Nebraska. An unusually good UHF haul for Kanaar on June 19 brought in WKYT-27, Lexington, Kentucky at 2330 EST, over a distance of 450 miles.

Vacationing above Detroit in Port Huron, Michigan, DXer Mike Navarre has been catching E skip and tropes in abundance with a stationary In Line
(Continued on page 17)



410 miles to KETV—Gary Olson, Barrington, Illinois. Note the herringbone interference across the bottom of the screen at 0144 EST.



515 miles to KETV—Jim Gould, DXH Test Center, Kokomo, Ind. Note the same herringbone interference at 0130 EST, in Indiana.

Eastern DXH TV DX Lab Report

James Gould
Project Engineer
DXing Horizons

This is our first report direct to TV DXers from this new, well-equipped experimental TV DX Lab in the heart of America's most profitable VHF-UHF TV DX region, the Great Lakes. Through the cooperation of leading TV DX equipment manufacturers, DXing Horizons has established this test research center to learn more about the "absolute limits of TV DX" under dead band conditions, and under DX conditions. The experiments under way now . . . the experiments of the future, will pave the way for new and more productive DX equipment for TV DX enthusiasts all over the world, in the months and years to come.

As originally conceived, this laboratory will operate in two departments.

Phase one is installation and observation. Using products built with possible DX-capabilities, we will observe their limits and report back to readers.

Phase Two is research and development. Using component parts with possible DX capabilities, we are building and designing, perfecting new and better ways of souping up receivers for DX performance in the video bands.

As we write, a set of Winegard Transcoupler Yagis (see July DXH, page 12) are in operation on the VHF channels, a Channel Master UHF Parascope is perking in the UHF band.

A test on the new Taco Thunderbird VHF antenna for deep fringe is planned soon.

Our Amperex-sized "ultimate TV receiver" is perking for VHF reception. A UHF converter is in the design stages.

On the construction bench, a 417A RF stage tuner (not booster-tuner!) is the present hot item.

MINIMUM DISTANCE RECEIVED DAILY:

(East) WIIC-11—328 miles

(West) KFVS—300 miles

DX LOGGED:

July 16: 1735-0212 (17th), logged KVTY-9, Sioux City, Iowa, 550 miles, KELO-11, Sioux Falls, Iowa, 600 miles.

July 17: 0935, KMBC-9, Kansas City, Mo., 458 miles.

July 20: 0640, WEAU-13, Eau Claire, Wisc., 407 miles.

July 21: 0643, WDBJ-7, Roanoke, Va., 420 miles.

July 22: 0648, WLOS-13, Asheville, N.C., 400 miles.

July 23: 0055, WTCN-11, Minneapolis, Minn., 480 miles.

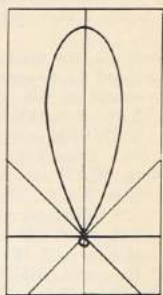
We have selected the best each day . . . during a fairly average summer period. The advantage of top notch equipment should be obvious. E skip has been purposely omitted.

The best period of the report period was around July 30-August 2. Top catches included KTVH-12, Hutchinson, Kansas, July 30 and August 1, 660 miles, KAKE-10, Wichita, Kansas, 642 miles, July 30, and August 1. KOLN-10, Lincoln, Nebraska, August 1, 552 miles.

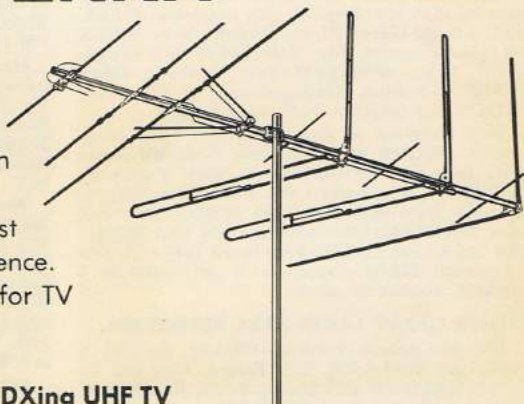
Our prize catch was KQTV-UHF 21, Fort Dodge, Iowa, at a whopping 440 miles. This is apparently the furthest east this relatively low power UHF pioneer in the tall corn country has been logged. KQTV was logged between 0045 and 0105 Aug. 2.

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For the very first time—a truly high-gain, **single-lobe** TV antenna for channels 2 through 13! The T-Bird brings you clean, crisp signals with highest rejection of unwanted interference. This is the antenna that's tops for TV DXing. Try one, and **see . . .**



. . . and for DXing UHF TV

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WRITE FOR COMPLETE DETAILS, OR ASK YOUR TACO DEALER

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TECHNICAL APPLIANCE CORPORATION, Sherburne, New York.

FM Reporting

By BRUCE ELVING
522 North 12½ Avenue East
Duluth 5, Minnesota

After a rather slow beginning, the 1960 FM DX season has developed into one of the finest on record. Skip and non-skip openings have been especially prevalent in August. As of this writing, a spectacular tropospheric opening has engulfed the Great Lakes region, extending far into the South.

Some 29 new stations have been added on Aug. 15, 16 and 17 to your editor's Duluth log, which now stands at 396. On the morning of Aug. 15, KWIX 102.5, KADI 96.5, KSTL-FM 98.1 St. Louis, Mo., WSMI-FM 106.1 Litchfield, Ill., and WRAY-FM 98.1 Princeton, Ind. were received. In the evening, WAJP and WJOL-FM Joliet, Ill., WPTH 95.1 Fort Wayne, Ind., and the 250-watt CKLW-FM 93.9 Windsor, Ont. were logged. Between 7 a.m. and noon CDT Aug. 16, WNES-FM 101.9 Central City and WFMW-FM 93.9 Madisonville, both Ky., and WSIX-FM Nashville, Tenn. were among those heard. During the 12-hour period beginning at 10 p.m. Aug. 16, such stations as WEBR-FM 94.5 and WGR-FM 96.9 Buffalo, N.Y., WRLX 98.7 Hopkinsville, Ky., WHLD-FM 98.5 Niagra Falls, N.Y., WFRO-FM 99.3 Fremont, Ohio, WFBF 95.1 Flint, Michigan and, at 825 miles, WDD5 93.1 Syracuse, N.Y. were logged.

Skip reception on Aug. 3 netted a Connecticut station (WGHE 95.1) and four from Massachusetts, including WOCB-FM 94.3 West Yarmouth. WSEF 93.7 Birmingham, Ala. was received Aug. 2. Another Birmingham station, WBRC-FM 106.9, plus WKLF-FM 100.9 Clanton, Ala. and WNSL-FM 100.3 Laurel, Miss. were heard July 6. A new 12-element FM/Q antenna is in use, replacing a stacked five-element array.

OTHER GREAT LAKES AREA REPORTERS

Bill McConnell, Toronto, Ontario, on July 3 picked up WFLA-FM 93.3 Tampa, Fla., and on July 6, KRLD-FM 92.5 Dallas, Texas. Jim Hughes, Saginaw, Mich. logged KRLD-FM Aug. 2. Other recent catches were WNWC 92.7 Arlington Heights, Ill., WQFM 93.3 Milwaukee, four of the Wisconsin educational network stations, and WREO-FM 103.7 Ashtabula, Ohio.

DXing from Shelbyville, Ind., John W. Comstock received KFAB-FM 99.9 Omaha, Neb., KCFM and KWIX St. Louis, WOC-FM Davenport and KROS-FM 96.1 Clinton, Iowa (the latter also heard in Milwaukee by Tom Mann).

Another Michigan DXer, Ed McMullin of Hemlock has added WFBM-FM 94.7 Indianapolis, Ind., CFPL-FM 95.9 London, Ont., WFRO-FM, WOC-FM, WCTW 102.5 New Castle, Ind. WFPK 91.9 Louisville, Ky. is his most distant catch.

OTHER DX

Using an exterior Amphenol dipole antenna, Robert W. Boggs, Lee's Summit, Mo., has added such stations as WSIU 91.9 Carbondale, WAMV-FM 101.1 East St. Louis, Ill., WPAD-FM 96.9 Paducah, Ky., WMCF 99.7 and WMP5-FM 97.1 Memphis, Tenn., KOTN-FM 92.3 Pine Bluff and



R. W. Boggs, Lee's Summit, Missouri in his FM DXing den.

KLCN-FM 96.1 Blytheville, Ark., and WAPI-FM 99.5 Birmingham, Ala. Kent Corson, Waterloo, Iowa, lists such DX as KADI St. Louis, WMIX-FM 94.1 Mt. Vernon, Ill., KCOM 96.1 Omaha, Neb., and WJMC-FM 96.3 Rice Lake, Wis.

Skip was recorded July 3 and 5 when Dennis Smith, Wasco, Calif., logged KGNC-FM 93.1 Amarillo and KRLD-FM from Texas, as well as KHFM 96.3 Albuquerque, N.M. Smith has also received KSFR 94.9 and KEAR 97.3 San Francisco recently. On the other side of the continent, Stan Harper, Lisle, N.Y. has added WKOX-FM 105.7 Framingham, Mass., WERC-FM 99.9 Erie, Pa., WASA-FM 103.7 Havre de Grace, Md. and WIKY-FM 104.1 Evansville, Ind.

Hank Holbrook, Bethesda, Md., has enjoyed more non-skip DX, including WYFI 99.7 Norfolk, Va., WNYC-FM 93.9 New York, WBCN 104.1 Boston, Mass., WGCN-FM 96.1 Red Lion, Pa., WLBR-FM 100.1 Lebanon, Pa., WKEE-FM 100.5 Huntington, W. Va., and WLIR 92.7 Garden City, N.Y.

Walter Jung, Forest Hill, Md., on July 2 heard WOHI-FM 104.3 East Liverpool, Ohio; WGH-FM 97.3 Newport News (also logged in the car) and WGBH 98.7 Boston were received July 18. WLOA-FM 96.9 Braddock, Pa., WSOM 105.1 Salem, Ohio, WNOB 107.9 Cleveland, Ohio and WKRT-FM 99.9 Cortland, N.Y. were logged June 18. On the 19th, WMIT 106.9 Clingman's Peak, N.C., WLIR. and WSTC-FM 96.7 Stamford, Conn. were heard.

Bill Moser, Uniontown, Pa. noted skip July 6 when KDDD-FM 95.3 Dumas, Tex., KCMS-FM 102.7 Manitou Springs, Colo., and KHOL-FM 98.9 Kearney, Neb. came in. Skip was had July 12 from Florida, when stations in Orland, Tampa and Miami were received.

FM/Q

ANTENNAE SYSTEMS

GET MORE FM STATIONS WITH THE WORLD'S MOST POWERFUL FM BROADBAND ANTENNAE

To be fully informed, send 30¢ for NEW Edition of "All About FM Antennae and Their Installations" by L.F.B. Carini. Contains Directory of FM Stations and Log.



FM/Q WETHERSFIELD 9, CONN.

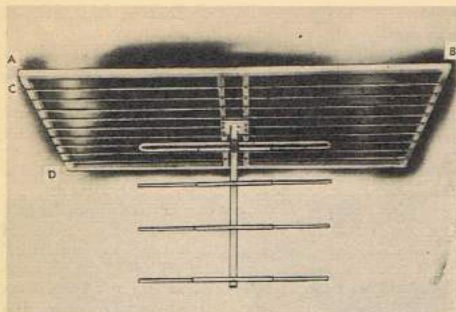


DIAGRAM ONE

RUGGEDIZED ANTENNAS

(Continued from page 3)

his antenna system performance. Cutting down signals from the rear of the antenna, improving front gain and pattern, and broadening the gain characteristics of the entire system are prime areas of improvement.

For single channel yagi arrays, the screen reflector should be spaced back from the driven element .1 to .3 wavelength. Spacing between 0.1 and 0.15 wavelength will give the highest frontal gain. Spacing at 0.22 wavelength will assure the user that the feed impedance of the antenna will not change (Note: the feed impedance of the array will be effected by the screen reflector at other spacings, but how much the effect, will depend on many variables. Essentially however, the peak in gain between 0.1 and 0.15 wave spacings is slight, and the array's gain will remain quite constant over spacings 0.1 to 0.25 wave. Therefore the user should aim for matching the spacing as a means of obtaining the correct impedance match . . . i.e., eliminating ghosting, etc. The DXer with little or no test equipment will know he has obtained a correct match when he has spaced his screen reflector at such a point that the ghosting present with mismatch disappears.)

CONSTRUCTION

For the high VHF band it is very possible to construct a single screen for two or more stacked yagis (photo one). On low band TV channels, the size of the screen becomes a problem.

As shown in Diagram One, the width of the screen (A-B) as well as the height (C-D) must be at least a quarter wavelength larger on all sides than the area of the driven elements. In the case of a half wave driven element, the total screen width (A-B) will be a full wave, while the total screen height will be one-half wave (C-D). At channel two this is LARGE! At channel 13 it is not nearly so oversized. As shown in Photo One, two such yagi arrays may be backed up with a screen reflector, and the same design data can be carried through to four, or eight antennas as the size of the screen and the size of the entire array allows.

SCREEN FRAME

When cost is no object, the frame can be worked up from lightweight steel, or aluminum. In the case of the DXer, and his rotating array, lightweight but tough hardwood can be used to advantage. It should be weather protected with several coats of

varnish. The screen material can vary from window screen (copper) to thick mesh chicken wire. Tests have shown that rods may be used (as in Photo One) and the vertical distance between rods can approach 0.1 wavelength before there is any noticeable difference between a solid reflector (i.e., aluminum sheet, etc.) and the rod reflector.

CONSTRUCTION DATA BOX

Project: Screen reflector, replacing parasitic reflectors, for greatly increased front to back ratio, broader frequency response, and increased forward gain.

Materials: Screening material (window screening, chicken wire mesh, or aluminum rods). Framing to hold the reflector screening, constructed of lightweight hardwood, or aluminum.

Size: The width of the array (A-B in Diagram One) can be calculated for each channel with the following formula:

$$\text{length (inches)} = \frac{11,080}{\text{Freq. (mc.)}}$$

The height of the screen can be calculated with the same formula, dividing the answer by two, as the height is half the width.

ET CETERA:

The manufacturer (Taco, Inc.) has detailed specification sheets on many Screen reflector model antennas which are available upon request.

F.R.V.

TV REPORTING

(Continued from page 14)

antenna directed on Detroit. Navarre caught the general Great Lakes area tropo the morning of July Eugene Rubin, Milwaukee, Wisc., found the August 3 Es opening worthwhile when he caught WUSN, WGBH and WESH, all channel 2.

In Pennsylvania, August 3 also proved to be a good day for Robert Martin, of Girard. Between 1025 and 1900, Martin logged WBRZ, KMID, KCKT, KARD and KNOP.

In Erie, Pa., Frank Wheeler added two new catches this report period . . . both via E skip. On July 9, Wheeler caught KFVR-5, Bismark, N.D., at 1229 EST, and on the 20th, WTHS-2, Miami, at 1550 EST.

Ohio DXers also fared well in July . . . but nothing like June, as reported here last month. John Dyckman, Canfield, Ohio found improved ground wave July 20-21.

John Parillo, Girard, Ohio, put his 50 foot Conic and Arvin receiver to work on July 22 for WLOS. Ashville, N.C., and during the August 2 tropo opening to snag WHO-13, Des Moines, Iowa. WHO was a haul of 700 miles, and mighty fine!

MIDWEST-GREAT PLAINS

DXer Bill Hauser, Oklahoma City, Oklahoma, read with interest our KLYD-17 tropo scatter report in the July DXH. As you may recall, it concerns the reception of a UHF station over a 218 mile path, at the DXH West Coast Lab, on a consistent reception basis. Hauser believes he has a similar situation . . . he is watching KVII-7, Amarillo, Texas over a 245 mile distance with amazing regularity. The signal level varies only slightly, except under improved tropo. Hauser

(Continued on page 20)

MEDIUM WAVE

Edited by DXing Horizons
Medium Wave Editor

Glen Kippel
1195 South Tennyson
Denver 19, Colorado

DXing HORIZONS

Medium Wave DXer Salute . . .

Your Editors are indeed proud to dedicate this initial BCB Section to the top DXer in the United States—if not the Western Hemisphere—Henry T. Tyndall Jr., 285 North Street, Burlington, Vermont.

But let him tell his story:

"My first DXing was with a Radiola 2-A, in 1923. A Radiola 4-A followed and in October 1924, a 4-tube regenerative Zenith was purchased, using 135 volts 'B' it had phenomenal receptive abilities. On one occasion, KPO, San Francisco, California was heard so strongly about 3 A.M. that we plugged in the speaker and were able to get room volume using the first stage of two tubes, and KPO only had 500 watts then. WQAM, Miami, a 100-watter, was heard in late afternoon, long before sunset. TJW, Hamilton, Bermuda, heard on a DX special, used 7½ watts. Many pages could be filled with the fantastic catches of yesteryear, with its clear channels unhampered by all-nighters. Started verifying in November 1924 and mainly because of Ekko Stamps being advertised over many stations as 'proof of reception.' Four loose-leaf albums are now filled with these stamps, backed, of course, by written confirmations."

Hank presently uses a 1941 Hammarlund HQ-120-X with an 80-foot inverted L antenna, 20 feet high. He gives credit to his location, which he describes as "one of the best in existence" for his astounding success in the BCB DX field. He continues:

"On the morning of February 16th, 1931, a DX broadcast from RUS, San Salvador was scheduled for 2:30 A.M. Just as we braced ourselves with bated breath, WEAJ boomed in with a test. CPC men contacted WEAJ and finally got them to sign off and while difficult to log, over 100 reports were received, glad to state that the most distant one came from Burlington! Those were the days when KFIU, Juneau, Alaska was heard using 50 watts. The power did not matter when you had a clear channel.



Leading Medium Wave DXer in the U.S.A. . . . perhaps the World. Henry T. Tyndall, Burlington, Vermont, with 5,560 stations verified in 126 countries!

"It takes a great deal of patience and one has to know when to tune and where to tune, in order to compile a good log of foreigners. My verified log of BCB is now 5,560 from 126 countries. All stations are on standard BCB 540-1600 kcs., with one exception of the German on 1602.

"In spite of all that has been written about locations, receivers and antennas, many still believe that there is still some 'secret weapon' involved. If there is, then I am not aware of it other than the fact that we have never spent any time on shortwave, ham, police bands, beacons, long wave and in fact, we do not nor have ever owned a TV set. Just one iron in the fire, but it has never lacked attention in nearly 37 years."

And that would be an excellent operating rue for any BCB DXer. *You can't log 'em if you don't try for 'em!*

DXer TYNDALL PICKS THESE AS HIS FIVE BEST!

- TJW—Hamilton, Bermuda, 1480 kc. 7½ watts, December, 1930.
- 6WF—Perth, Western Australia, 690 kc., 5,000 watts, October, 1932.
- Noumea, New Caledonia, 1500 kc., 500 watts, October, 1952.
- C13—Vienna, Austria, 868 kc., 300 watts, November, 1953.
- FBS-4—Nicosia, Cyprus, 1093 kc., 1000 watts, December, 1954.

The First

This is the first DXing Horizons BCB section, and since the DX season for those of us in the northern hemisphere hasn't yet begun, DX will look pretty sparse. We hope to be in full swing by the November edition, however.

Next month, we will issue, as a special supplement, a complete listing of every foreign station heard in the United States and Canada during the 1959-60 season, except for those stations which were heard during non-scheduled programming. This listing will be available to subscribers exclusively until November 1st, and then as the supply lasts—to any others. The postpaid price—and it is a bargain—is only 50 cents per copy.

It must be emphasized that DXing Horizons cannot at this time give full coverage to domestic stations, as we simply do not have adequate space. For those stations, it is suggested that you join a radio club. The National Radio Club, which issues a weekly bulletin completely devoted to BCB DX, is recommended. The NRC address: Ray B. Edge, Box 63, Kensington Station, Buffalo 15, New York.

REPORTING

It is asked that listeners in North America and Hawaii report only stations outside of the continental U.S. and Canada. There will be no such restrictions on other DXers.

Now for a run-down on how the BCB section will be run. We will start off with general material about DXing, a pictorial salute to a prominent DXer or station, and propagation forecast.

The station reports will be broken up into three divisions—AMERICA, covering North and South America and associated islands; ATLANTIC, including Europe, Africa and the Near East from Iran westward; and PACIFIC, covering Oceania, Asia from Afghanistan eastward, and Alaska. Within these divisions, the stations will be listed by frequency. Note that Alaska does not come under the AMERICA division, as it is heard during the same time block as the other trans-Pacific DX.

The most commonly used abbreviations in the BCB DX field:

- LA—Latin-American
- SA—South American
- CA—Central American
- SS—Spanish Speaker
- TA—Trans-Atlantic
- TP—Trans-Pacific
- s-on—sign on
- s-off—sign off
- RS—Regular Schedule
- AN—All-night
- f-c—frequency check
- ET—Equipment Test
- TT—Tone Test
- CX—DX Conditions

f-up—a follow-up reception report sent when the first one fails to result in a verification.
PP card—Prepared card; stamped, self-addressed verification card made up by the DXer and sent to the station for signature; generally a "last resort" when all other attempts at verification fail.
Verie—a verification

Following the station reports will be verification information and news about new stations, etc.

In reporting, it will be greatly appreciated by your Editor if you follow the above format in reporting your DX. Give the frequency, call letters (if known), station slogan, location, time and date of your reception in Eastern Standard Time (five hours behind GMT) and information as to whether the station was signing on, off, QRM conditions, etc.

VERIFICATIONS

When you report your verifications, it will be helpful if you list the stations by country, alphabetically, with call sign and/or slogan, frequency, verie signer and complete address. Also mention if they enclosed a pennant, and how long it took to receive the verie.

Verifications and procedures will be discussed in October.

Medium Wave Log Book

All times are in 24 hour EST. Please make your reports conform to the following standards.

AMERICA

630 Mexco — XEFX, Guaymas, heard on late 7-31 with special program. (Ed.)

670 Honduras — HRN, Tegucigalpa, hrd w-ID 2240, QRM from WMAQ. (Ed.)

750 Colombia — HJA "Voz de Barranquilla, over WSB 2225, 8-4. (Ed.)

750 Jamaica — Jamaica Broadcasting Corp., Port Maria s-off under WSB 0002. (Ed.)

752.5 Costa Rica — TIW, San Jose, noted at 2234. (Ed.)

775 Costa Rica — TIWW, San Jose, noted at 2350, fair signal. (Ed.)

825 Nicaragua — YNOL, Managua, s-off w-NA 2302. (Ed.)

1000 Unidentified — Weak stn noted 8-8 at 0409, sounded like Spanish but too much QRN. (Ed.)

1015 El Salvador — YSC "R. Mil Vientecino" San Salvador is best CA sig evs in Col. (Ed.)

1070 Unidentified — Two SS hrd 8-8 at 0355 one probably HJDZ, Medellin. (Ed.)

1075 El Salvador — YSEB, San Salvador, is consistent CA every evening, very good signals. (Ed.)

1080 Colombia — HJAT "Radio Reloj," Barranquilla, fine sig 8-8 at 0355. (Ed.)

1130 Brazil — ZYK34 "R. Relogio Musical," Recife, PE, heard with QSA4 at 2030. (Ericson, Sweden) Power is 1 kw., Director is Mr. Julio Jesus de Carvalho. Address: Rua Matias do Albuquerque, 260, Recife, PE, Brazil. (BDXC)

1160 Swan Island — "Radio Swan" has ENGLISH 2000-2100, Spanish 2100-s-off 2200, some QRM from WJJD and CMJK. Is 50 kw., ID's "This is Radio Swan, the International Voice of the Caribbean" and "Esta es Radio Swan—La Voz Internacional del Caribe." Radio Swan has verie signed by Horton H. Heath, commercial manager. (Foxworth, N.J., Duggan, Ga.) Address is P. O. Box 1247, Central Post Office, New York, N.Y. U.S.A.

ATLANTIC

1232 Morocco — Radio Maroc heard in Sweden with Arabic service at 1900, very strong. (Ericson)



DXer of the month Hank Tyndall and one of his proudest moments. Tyndall is shown accepting the "Jacob Goldstein Memorial Plaque," in late May, 1960, at the Cypress Inn near Asbury Park, N.J. Flanking Tyndall on the left, Newark News Radio Club prexy Irving R. Potts, and on the right, a Medium Wave champion in his own right, Harold S. Williams, NNRC V.P., and Awards Chairman.

PACIFIC

800 New Zealand—1YZ, Rotorua, noted 8-8 at 0405, severe QRN. (Ed.)

850 Hawaii—KIMO, Hilo, hrd nightly after 0205, but with QRN. (Ed.)

870 Hawaii—KAIM, Kaimuki, noted w-fair sig Mon. AM's. (Ed.)

880 New Zealand—1YC, Auckland, hrd weakly 8-8 at 0410. (Ed.)

SPLATTER

Australia—Northern Territory is now under the "8" prefix, call changes are: 8DR (650) Darwin, from 5DR; 8AL (1530) Alice Springs, from 5AL. (DX Times via Robinson, New Zealand)

Brazil—R. Nacional de Brasilia is using 1210 and 1280 kcs., with 10 kw. day, 1 kw. night. The 980 kcs. outlet is inactive. (Brazilian DX Club)

Midway Island—KMTH (900) is now AN. 250 watts. (DX Times via Robinson, N.Z.)

New Zealand—1 ZD (1000) Tauranga, 10 kw. is proposed. 2YA (570) Wellington, will be on soon with 100 kw. XR. (Robinson, N.Z.)

Okinawa—The new 100 kw. XR of the Far East Broadcasting Co. at Okuma is now in operation. Call is KSBÜ, 850 kcs. (Balbi, Calif. via Boord)

MEDIUM WAVE PROPAGATION FORECAST

The 1960-61 DX season appears to be beginning early, with quite a few pieces of DX being heard. Generally, the unstable weather conditions around the equinox will cause a bit of QRN. Latin-American reception is possible every evening, especially the "regulars" like YSC-1015 and YSEB-1075. Peak LA reception should occur around the 10th. On the quieter Monday mornings, you may watch 780, 800, 880 for New Zealand reception.

— GLEN KIPPEL

REMEMBER—Deadline in Denver is the 1st of each month, late items should reach me by the 10th of each month. BE SURE TO GIVE ALL TIMES IN E.S.T.!... 73... G.K.

SPECIAL MEMO TO MEDIUM WAVE FANS

If you have not already subscribed to DXing Horizons, you certainly will want to now! This is our brand new Medium Wave DXing Horizons... and speaking as Editor-Publisher, we are mighty proud of the job Editor Glen Kippel has done. In October, Kippel's "Foreign DX Station Log," listing all stations outside the U.S.A. and Canada, heard by North American DXers in recent years, will be ready for distribution. Actually, we will be mailing this log before we mail the October magazine, so place your order now... \$50 per copy, to insure that you receive one. Medium Wave DXer Larry Godwin, of Amarillo, Texas, had a sneak preview of the log, and was heard to exclaim (says Kippel) "This will be the most valuable book in my DXing den." Nearly 500 foreign stations, operating times, frequencies, etc., all listed.

In November, this column will burst forth into five full pages, as the DX season sets in. Medium Wavers... Welcome aboard!—R.B.C.

TV REPORTING

(Continued from page 17)

would like to hear from Amarillo area DXers who may be on the "other" end of the circuit.

B. J. Bingham, one of the country's top ground wave (troops) DX advocates continued to chalk up impressive "frequent and regular" hauls in the 300-450 mile range during the mid-summer session. phis (300 miles) and Louisville (270 miles). In the long haul DX department, July 29 provided WWTV-13, Cadillac, Michigan (580 miles), while August 1 brought KDLO-3, KPLO-6, KELO-11, and KSOO-13, South Dakota stations in the 500-600 mile range.

A new reporter to this section, but an old reader and real pro at DX, is Clarence Fleagle, of Abilene, Kansas. To acquaint DXH readers with the accomplishments of Fleagle's DX hunting, a few statistics: 246 stations logged since November 13, 1956. Longest high band haul to date... WTRF-7, Wheeling, W. Va., 871 miles. Longest low band haul, WCSH-6, Portland, Maine, 1,418 miles. New stations this report period, WTOM-4, WJPB-5, WJAC-6, WTOL-11, WKZO-3 and KSOO-13.

FROM THE SOUTH

DX-pert Donald Ruland was one of many AIPA TV DXers in attendance at the Chicago Convention. While home DXing at Holly, Hill, Florida, Don added a pair of new calls. July 14 brought KCTA-2, Minneapolis, E skip, while July 31 added WHBF-4, Rock Island, Illinois, on Meteor Scatter.

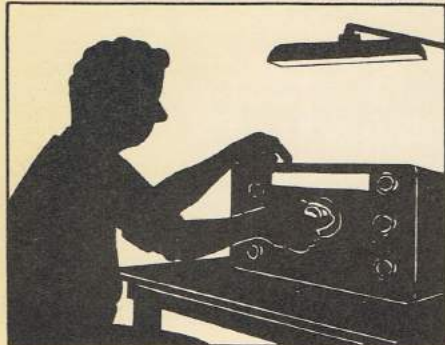
Franklin Brown, Easley, S.C. was just days late with his report last month, so his report period covers mid-June to mid-July. Brown reports E skip stations from the south and SE with "a hollow ringing sound" from 2005 to 2045 on June 19. Cuba and Puerto Rico are expected.

NORTHEAST REPORT

DXer Gary Burrows makes use of a '57 model Electohome receiver, and the Swastika, Ontario Community Antenna System (yagi on channels 4 and 6) to watch for his DX.

(Continued on page 28)

SHORTWAVE PROFILE



Mr. Sam M. Rowell
Minneapolis, Minnesota, U.S.A.

"Way back in 1930, I bought a PHILCO SW converter to connect to my PHILCO console . . . and from then on the SW 'bug' got me for keeps!"

So says veteran SWL Sam Rowell of 4400 Blaisdell Ave., Minneapolis, Minn., U.S.A. (*We are indebted to Sam for a "suggested" DXH SW report form which appeared in an earlier issue.*)

"My first 'catch' was a Colombian station on about 6.000—I believe the call was HJKB, Barranquilla; next was pre-Hitler DJB, Germany, on 15.200; then old GSD, Chelmsford, England, on 11.750. Then, later, I logged VK2ME, 9.590, Sydney, N.S.W., Australia; I got a QSL on this one and still have it.

"I have never kept an exact log on all stations received—but I know they would run into many hundreds. I think I have heard almost every country. Since I retired from my railroad job, I have been listing stations for future reference.

"I did get QSLs from Lourenco Marques, Mozambique, CR7BG, 15.285, in 1952; VK3ME, 9.590, in 1932; OAX4R, 9.562, Lima, Peru, 1955; Djeddah (Mecca), Saudi Arabia, 11.950, in 1960; Emissora Nacional, Lisbon, Portugal, in 1960; a letter from R. Moscow, and from R. Omdurman, 11.855." Sam also has QSLs from Cuba, Panama, Puerto Rico (medium wave), and others. He now has several reports "out" to stations.

Sam readily admits that he has always been "an eager beaver to try the latest and best" in



Sam Rowell, Minneapolis, Minn., says he has "enjoyed every minute" of his 30 years as a SWL! Since this photo was made, Sam has acquired a HAMMARLUND HQ-180 of which he is justly proud!

receivers. As a result, there has been a parade of receivers from the Lew Bonn Co. in Minneapolis to his home of these receivers in order—SX-28, SX-42, NC-183; NC-173; NC-183D; SX-62; SX-71; SX-100; SX-88; HQ160; HQ-145, and NC-125—not to mention a few others "tried out for a day or so."

And now Sam has a brand-new HQ-180 which he is already quite fond of! Present equipment also includes the NC-125 in his bedroom.

His main antenna is 45 feet of 16-gauge copper straightwire. The aerial is 30 feet high, oriented NW-SE. He says he gets very good results with it.

To do a good job of SWLing, Sam finds a 24-hour clock set on GMT and an up-to-date copy of *WORLD RADIO HANDBOOK* "worth their weight in gold!" "And I always look forward to the next copy of *DXing Horizons* for what's new and what's being heard, along with the rest of the articles in it. In fact, *I depend on it!*"

His favorite stations for musical programs include Lisbon, Cologne, the BBC, Lima (Peru), and Radio Roma.

After 30 years of SWLing, Sam comments: "*I have enjoyed every minute of it! If I live to be 90 and have my sight and hearing, will still do!*"

—KEN BOORD

SHORTWAVE STATION REPORT

DXing Horizons Salutes . . .

Radio Canada, Montreal, Canada

The International Service of the Canadian Broadcasting Corporation marked its 15th anniversary on February 25 of this year. The official inaugural broadcast was aimed at members of Canada's armed forces abroad.

Before World War II, recommendations had been made by the radio committees of the House of Commons that Canada establish an international SW service. On September 18, 1942, the CBC was authorized to go ahead with the construction of a powerful SW station and with plans for a suitable multi-lingual program organization.

The transmitting site at Sackville, New Brunswick, 600 miles from Montreal, was chosen after a careful study of a number of locations. In the summer of 1943, work was started to incorporate the existing station CBA, which had already been in operation since 1939, into a combined plant to broadcast ENGLISH language programs to the Maritime and SW programs to other countries. This involved the setting up of two 50-kw. SW transmitters and antenna array systems.

The first programs were transmitted in ENGLISH, French, German, and Czech. At present, the CBC radiates directly to SWLs in 16 languages - ENGLISH, French, German, Dutch, Italian, Danish, Norwegian, Swedish, Czech, Slovak, Russian, Ukrainian, Polish, Hungarian, and in Spanish and Portuguese to Latin America. Recorded programs are also provided on a regular basis to radio organizations in Austria, Finland, and Greece.

The CBC also furnishes programs free of charge to radio organizations all over the world. Music transcriptions are produced to convey to listeners in other lands something about the state of musical life in Canada.

The International Service is operated on behalf of the people of Canada and is financed by annual grants from Parliament.

Since the start of the service, more than 400,000 letters, cards, and reception reports have been received in Montreal. Mail arrives from all parts of the world at the rate of about 30,000 a year, and approximately 4,000 QSL



The Master Control Board in the Radio Canada Building in Montreal is the nerve center of the CBC's broadcasting installation. It can handle five transmitter feeds, eight outgoing networks, seven incoming networks, 23 studios, and was designed for one-man operation. The switching of all circuits is performed by remotely-controlled relays.

cards are forwarded to listeners each year on request. Some people are constant listeners and writers. QRA is P. O. Box 6000, Montreal, Quebec, Canada.

To many thousands who listen to the broadcasts, CBC programs are not just a medium of entertainment and information. They represent a bond with Canada—a country they feel warmly toward. These people not only comment on the programs, they ask innumerable questions on all aspects of life in Canada. The mail-answering service of the CBC replies to questions, and sends along printed information about labor, government, industry, entertainment, and other matters.

To keep its listeners posted, the CBC distributes a printed and illustrated SW program schedule to some 200,000 listeners seven times a year.

The Radio Canada Building in Montreal, housing the headquarters and studios of the International Service, is one of the most modern radio centers in North America. The 23 studios used by the National and International Services vary in size and design to accommodate different types of program operations. The Master Control Board, the nerve center of any large studio broadcasting installation, can handle five transmitter feeds, eight outgoing networks, seven incoming networks, 23 studios, and it was designed for one-man operation.

The Transmitter Station is housed in a modern white stucco 2½-story building alongside the Trans-Canada Highway between Sackville, N.B., and Amherst, N.S. The ground sur-

rounding the Station Building looks like a strange forest of white and orange masts ranging in height from 130 to 460 feet with its several miles of radio-frequency transmission lines feeding the network of aeri-als. The Sackville plant is shared by the International and National Services of the CBC.

Medium wave CBA, 1,070 kcs., serves some of the ENGLISH-speaking population of the Maritime Provinces. The two 50-kw. SW transmitters can operate on any one of the ISWBs between 6 and 21 mcs. and can be connected to any one of the 13 antennas by means of manually-operated switches of special design.

The SW antenna arrays at Sackville are all of the multi-element curtain type and consist of stacked horizontal dipole radiators with reflectors suspended from steel masts. The radiators and reflectors are identical in construction so the two may be interchanged by switching, thus reversing the direction of the beam. Reversing and slewing of each array is done by remote control from the main building, using motor-driven switches mounted in weather-proof enclosures at the base of the antennas. The whole antenna system, including towers

and bases, was designed to withstand wind pressures corresponding to an indicated wind velocity of 120 miles per hour and an ice coating 1/2-inch thick on all members.

DXing HORIZONS congratulates Radio Canada on its fine International Service... and joins in the 15th anniversary message to listeners from Prime Minister Diefenbaker:

"It is my sincere hope that listeners to the International Service will find Canada's voice one of continuing moderation and understanding, a means working towards that goal for which Canadians all pray — an international order based on freedom and justice."

—KEN BOORD

FREE MAGAZINES

Have a DXing friend who has not yet received a copy of DXH? Send his name(s), address(es) to Free Magazines, DXing Horizons, P. O. Box 3150, Modesto, California. We will see that every new name receives a sample copy.

SECOND TV NET FOR CANADA

An independent TV network is forming in Canada to compete with the CBC in prime Canadian cities. Several stations expect to be airing Independent Net programs by summer of '61.

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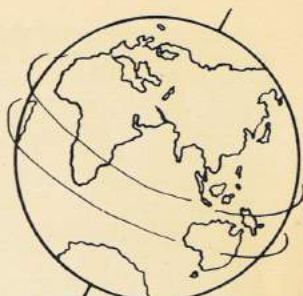
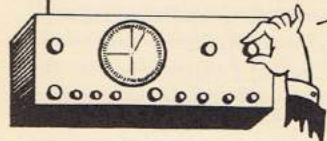
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THE WORLD



AT A TWIRL

Edited by DXing Horizons Shortwave Editor
Ken Boord
948 Stewartstown Road
Morgantown, West Virginia, U.S.A.

A unique service performed by the *Finlands DX-Club* (FDXC), Helsinki, is the production and presentation of the only foreign-language (ENGLISH) broadcasts radiated from *Oy Yleisradio AB* (the *Finnish Radio*). The staff for these broadcasts includes DX-Editor Tor-Henrik Eklblom and announcers Bob Hielm, Marcus Olander, Sven Kockberg, and Harri Torppa, all members of FDXC.

Each Monday there is a program called "*Finlandia Mixture*," which consists of information about Finland—tourist data, a trade review, Finnish music — both classical and modern. On the first and third Friday each month, there is a DX-program called "*Around the World*." And on other Fridays, "*Musical Mailbag*" features request numbers and answers are given to listeners' mail.

When this was compiled, schedule for these ENGLISH broadcasts was:

Each Monday 1600-1630 to Europe and 2030-2100 to North America, 15.190, 17.800. Each Friday 1600-1630 to Europe and 2030-2100 to North America, 15.190, 17.800, and 2100-2130 to Europe, 6.120.

The transmitters of the Finnish Broadcasting Corporation are located in Pori, a little town on the western coast of Finland. Stations are OIX7, 6.120, 15 kw.; OIX4, 15.190, 100 kw., and OIX5, 17.800, 15 kw.

"We do this job in our 'free time'," says DX-Editor Eklblom, "and it is quite a hobby! All reception reports are very welcome, as well as comments on these programs and musical requests. *It is not necessary to enclose an IRC.* All correct reception reports are verified by the colorful QSL-card of the FBC plus a special



Marcus Olander, Sven Kockberg, and DX-Editor Tor-Henrik Eklblom, Finlands DX-Club, are shown at the microphone of Radio Finland, Helsinki. The FDXC program Marcus Olander, Sven Kockberg, and DX-Editor Tor-Henrik Eklblom, Finlands DX-Club, are shown at the microphone of Radio Finland, Helsinki. The FDXC produces and presents all English broadcasts of Radio Finland.

QSL-card from the Finlands DX-Club." Reception reports should be sent *direct* to FDXC, Poste Restante, Helsinki (Helsingfors), Finland.

As to Tor-Henrik himself (whose photo appeared in an earlier issue of *DXing Horizons*), he is 23 years old, married, and the father of a son a few months old.

A traffic officer at the Helsinki Airport for *Finnair* (the Finnish Airlines), Tor-Henrik has been DXing since 1952, and has 170 verifications from some 100 different countries. He uses a *Eddystone 740* receiver and a "2 x 10" double-antenna.

Among his best QSLs are those from R. Diamang and R. Clube de Huambo, Angola; R. Bukavu, Republic of the Congo; R. Djibouti, Somaliland; R. Niger, Niamey, Niger; R. Garoua, Cameroon; Faro del Caribe, Costa Rica; Radiodif. de Teresina and R. Clube de Pernambuco, Brazil; R. France-Asie, Saigon, So. Vietnam; R. Rangoon, Burma; R. Kashmir, and ABC domestic stations at Perth, Brisbane, and Melbourne, Australia.

Best wishes go to the FDXC and Radio Finland from DXing Horizons! —KEN BOORD



New **BCB** Editor and a Director of the American Shortwave Listeners Club (AMSWLC), Drayton Cooper, Decatur, Georgia, uses a **SCOTT RCH** (Navy model) and a **SX-42**, as well as a **RME DB-20** preselector. His antenna system includes three longwires, plus two doublets. Drayton started in 1945 as a ham-SWL, but presently listens primarily to **SWBC** and **FM**. He is holder of the ham call **K4KSY**, and received a distinguished service citation from the State of South Carolina "for outstanding and courageous public service to our State" in the weather crisis of Sept. 29-Oct. 1, 1959 (disastrous hurricane). Now a Presbyterian minister, Drayton was in commercial broadcasting for about eight years prior to enrolling in a seminary. He hopes some day to resume his broadcasting career—this time from a church-related standpoint.

AT FADE-OUT

Roger Legge, 233 Springvale Ave., McLean, Va., says that "response from listeners has been very good, particularly from **DXH** readers," to his **N. Am. Monitoring Network** project, announced in a prior issue of **DXH**. Anyone interested in details should write direct to Rog.

CLUB NOTES —

SWEDEN—Vasterbottens **DX-Forbund**, Box 19, Skelleftea, Sweden, has started a contact service for **DXers** interested in the exchange of tape recordings; the service is free and is open also to **DXers** abroad. (**SCDXERS**)

U.S.A.—Carroll H. Weyrich, Baltimore, Md., has resigned as **BCB** Editor for the **NEWARK NEWS RADIO CLUB** due to personal and business commitments; he has been succeeded by John T. Tweedie, Box 103, Oakhurst, N.J. (**NNRC**)

Now this month's reports (**GMT**):

AFGHANISTAN—R. Kabul now b-c to Eu. on 15.312 in **ENG.** 1900-1930. (**SCDXERS**)

ANDORRA—CONTRARY to overseas rpts of a move, Andorradio is **STILL HRD** on 6.305; noted by Cox, Dela., 2230-2306 s-off.

ANGOLA — **CR6RZ**, 4.954, Luanda, hrd frm 2208 w-classical mx, vocals; ID by man in Pt. 2215, then usual Pt. nx; c-d w-"A Pt." 2230; no sign of Dakar arnd there then. (Cox, Dela.)

ARGENTINA — R. Splendid, 5.985, Buenos Aires, hrd in Finland 0130; **SINPO** 43433. (Eklblom)

AUSTRALIA — R. Australia **MAY REPLACE** 11.710 w-11.760 for **ECNA** xmsn dly 1214-1315 frm Sept. 4 (**KBLP**) **VLQ9**, 9.660, Brisbane, Queensland, noted 1000 w-**ABC N-E.** (Wilt, Ohio)

"IT TAKES TIME TO VERIFY SOME STATIONS—Have you ever said, 'Station ABC does not verify,' or perhaps you may have written off some stations that do not verify in a reasonable time. Yes, there are a number of such stations in our **DX** hobby, but the best I have heard in all my years of **DXing** concerns a verification received by Ray Amer of Palmerston North. Ray reported **H18Z** on Sept. 21, 1948, and the verification was delivered on April 3, 1960—nearly 12 years later! Moral of this story is **NEVER TO GIVE UP HOPE!**"
—A writer in "THE NEW ZEALAND **DX TIMES**"

AUSTRIA — Hrd w-**EXPERIMENTAL** xmsn 0602 w-calls and details of xmsn in Ger., **ENG.**, Fr. on 9.610; anncd on air 0600-0900 on 9.610, 0500-0600 on 9.615. (Pearce, England)

BELGIUM—Brussels is rptd by **WRHB** and other sources as now on the air **CONTINUOUSLY** w-nx and other items on the situation in the Congo. (**SCDXERS**)

BORNEO (**BRT. NO.**)—R. Sabah, Jesselton, noted on **NEW** 4.970 outlet 1300-1400 w-**ENG.** when s-off w-"**GSTQ.**" Fair sig in Calif. (Balbi)

BRAZIL—R. Marajoara, 15.245, Belem, Para, hrd w-strg sig 0930 w-songs, commercials in Pt.; still "solid" 1030. (Ferguson, N.C.) What seems to be a **NEW** outlet has been logged on 15.265 arnd 0100; **DEFINITELY** gives location as Sao Paulo; pop mx, ads, news, all in Pt.; do **NOT CONFUSE** w-**BBC** close by, also in Pt. same time. (Nblack, Ind.) 2.450, Aracatuba, logged fair to gud 0140 past 0200 w-Latin and pop dance tunes; Pt. ID by man 0200; some **QRM.** (Cox, Dela.)

BURMA—**BBS**, 4.795, Rangoon, hrd 1300-1310 w-N-E at dictation speed by woman; fair in Calif. (Balbi)

CAMBODIA—Phnom-penh, 6.090, noted 1130-1500 in Asiatic langs **ONLY**; strg **QRM** at all times by Latin and **VLI6** (Sydney, Australia); s-off 1500 when IDs, "Ici Phnom-Penh," then plays Nat. Anth. (Balbi, Calif.)

CAMEROUN—R. Yaounde, 4.972.5, readable frm 2140 w-fine dance mx, woman in Fr.; weak but best of any Afr. at time; s-off 2200. (Cox, Dela.)

CANADA—**CBC** by now or shortly should have **NEW SERVICE** to Canadian Arctic in operation; plans call for sked of 2200-0600; **TESTS** have been highly successful, accgd to a press dispatch frm Ottawa. (Epton, Quebec, Canada) **TEST HAS BEEN HRD** in Finland by Eklblom on 9.525 arnd 0255-0300; has special **QSL** and **QRA** for rpts is **CBC**, Box 806, Ottawa, Ont., Canada. Sept. 19 at 1930-1945, R. Canada will dedicate a **SPECIAL PRGM** to the Danish Shortwave Club in the Danish xmsn; will use Danish, **ENG.** (**DW**)

CANARY IS.—Eklundh, Finland, says "La Voz de las Islas de Las Palmas" seems to be a **NEW** stn on 7.385A; hrd well 2100-2300 w-Sp. mx and ID. **EJ8AB**, 7.295, R. Clube de Tenerife, fair 2303 after jamming ceases at 2300; Sp. drama; ID 2330; more mx; **QRM'd** after that; when in clear has gud sig for 250-watter, says Berg, Conn.

CHILE—CE610, Calama, hrd in Finland on 6.100 at 0200; SINPO 43443. (Eklblom)

CHINA—R. Peking, 17.720, good now in ENG. to ECNA 0100-0300. (Sisler, W. Va.)

CLANDESTINE — A NEW Ar-spkg CLANDESTINE outlet, "R. Tunisia," is being hrd on fqs VARYING 5.975-5.995; Noted fr arnd 2100; generally sticks to one fq, then "slips off" to another to avoid jamming; usually, however, jamming ceases arnd 2300 and stn is then IN CLEAR to 2315 s-off w-some Anth. Seems ID as "Huna iza'a al Tunisia." (Berg, Conn.)

COLOMBIA — "La Voz del Cauca," HJEQ, 6.145, 1 kw., varied by ltr, pennant; 1100-0500. (Newhart, N.J.)

CONGO REP.—R. Brazzaville has RETURNED to 11.725 frn 11.970 for N. Am. xmsn 2300-0230 due to QRM frn Moscow; excellent sig. (Balbi, Calif., others) For excellent coverage of the African situation, tune for N-E 0115, 0215. (KBLP) Hrd annce this as PERMANENT MOVE. (Niblack, Ind.)

CONGO (THE) — B-c frn the former BELGIAN CONGO seem to be rather irregular now, but OTM2, 9.385A, has been hrd w-messages from Europeans to relatives at home—in Fr., ENG., Flemish; recently-proclaimed decrees of the new gov't have been hrd frn arnd 1900. (Buettner, Germany via CDXERS)

COOK IS.—R. Rarotonga, 4.965, was hrd on a THURS. frn 0457 but not readable until 0515 when hrd POSITIVE ID by man; then had both pop, island-type mx w-intros by man anncr; 0522 featured prgm of native vocals; high QRN level in Dela. (Cox)

DENMARK—Frm SUN., Sept. 4, these changes will be effected by R. Denmark—the S. Am. xmsn will be aired at ADJUSTED TIME 2230-2330 on NEW 15.165; S. Asian xmsn will be ADJUSTED to 1430-1530, 15.165.

DOMINICAN REP.—R. Caribe, 9.505, hrd w-N-Sp. 1055, ID 1100, s-off 0400; at times has SOME ENG., Fr. (Ferguson, N.C.) In verifying for Berg, Conn., Jose Marti Otero, President of this NEW stn, listed SW outlets as HI2U, 6.090, HI3U, 9.505; said R. Caribe is a private enterprise and functions with private capital; its equipment is completely new, and it has had NO ties with any other station. QRA appears to be simply Radio Caribe, Ciudad Trujillo, Dominican Rep.

DUTCH NEW GUINEA — Accdg to ltr, R. Sorong terminated b-c July 1. (WRHB)

ENGLAND—The BBC's sked for the N. Am. Serv. is CURRENTLY 1100-1115, 15.310; 1415-1815, 15.300; 1600-1815, 17.810. GOS is carried to N. Am. 2115-2345, 17.715; 2115-0300, 15.310; 2300-0300, 11.780; 0200-0300, 9.825. (BBC)

SUNSPOT COUNT FOR JULY — As hrd HER4, 9.535, Berne Switzerland—1-167; 2-154; 3-161; 4-203; 5-168; 6-139; 7-119; 8-124; 9-120; 10-97; 11-93; 12-74; 13-83; 14-93; 15-105; 16-138; 17-131; 18-132; 19-133; 20-137; 21-139; 22-135; 23-127; 24-105; 25-111; 26-92; 27-90; 28-73; 29-94; 30-82; 31-83. JULY AVERAGE—119.4. PREDICTED—August 106; SEPT. 103; OCT. 100; NOV. 98; DEC. 96; JAN. 94.

—Grady C. Ferguson, North Carolina

ETHIOPIA—R. Addis Ababa is now hrd wdys 1900-2000 w-international mx prgm anncd in ENG. on 7.290A. (Eklundh, Finland)

FIJI—VRH5, 5.980, Suva, now noted by Balbi, Calif., arnd 0600-0800 w-much stronger sig; may have increased power (?); now carries commercial advertising; has BBC N-E 0700, shipping nx 0710; some days is 100 per cent readable despite strg static level.

FRANCE—RTF, 17.765M, Paris, hrd 1305 w-N-E; 1315 ID then mx prgm to s-off 1329. (Ferguson, N.C.)

GERMANY (EAST) — Deutschlandsender, 7.300, hrd 0400 in German; orchestral mx now and then; generally clear; soome QRM on low-fq side. (Berg, Conn.)

GERMANY (WEST) — RIAS, 6.005, Berlin, now sends QSL cd instead of ltr verie. (Pearce, England)

GHANA—Accdg to WRH, four 100-kw. SW xmtrs will be installed at Tema, near Accra; 22 curtain-type antennas will be erected to permit world-wide coverage.

GILBERT AND ELLICE IS.—The SW xmtr of R. Tarawa, VSZ10, 6.050, is now sked SUN. ONLY 0445-0530 in Gilbertese and Ellice. (WRHB)

GUATEMALA—TGQB, 11.700, Quetzaltenango, hrd opening w-N. Anth. 1200; hrd late as 0430; noted now ALSO SUN. (Ferguson, N.C.) QSL'd w-colored picture postcard showing mountain, buildings, trees, two men sitting on stone fence; verie message on reverse in Sp., along w-official rubber stamp; listed power of TGQB as 1 kw. (Stephenson, Okla.; Berg, Conn.) R. Nuevo Mundo, 5.990, hrd 0400-0430 w-ENG. and Sp. anncmts, mx. (Roth, Conn.)

GUINEA REP.—R. Conakry, 4.910, noted 0637 w-native chants w-drums; weak in Mo. (Buchanan)

HAITI—4VEC, Cap Haitien, noted 1035 MOVED to 6.000 frn 6.002. (Ferguson, N.C., others) The NEW 2.5-kw. xmtrs should be in operation now on 6.000, 9.773.

HUNGARY — R. Budapest, 9.833, hrd 0100-0400 w-prgms of mx and talks in Hungarian.

INDIA—AIR, 7-160, noted 1300-1600 strg dly in native, probably H. Serv.; hrd on 21.620 at 1815-1845 s-off in lang, parallel 15.245; ID 1830; fair to gud in Calif. (Balbi) The 15.165 outlet is gud level in ENG. 1000-1100 dly now in W.Va. (Sisler)

INDONESIA — YEX29, 11.943, Djakarta, R. Angkatan Udara, noted 0934 w-Indonesian vocals; ID by woman 1000, then U.S. pop mx in ENG.; frequent ID; pano mx 1030-1100; gud level but w-moderate QRM frn R. Peking BEFORE 1000, AFTER 1100. (Berg, Conn.)

ITALY—RAI, 9.515, Rome, fair to gud 0500 w-N-E to Eu. (Cushen, N.Z.)

IVORY COAST—R. Abidjan, 7.215, noted 2305 w-mx and anncmts in Fr.; gud sig but w-Ham QRM; 4.940 parallel was vy weak. (Buchanan, Mo.)

JAPAN—Accdg to latest sked direct frn Far East Network, the Tokyo AFRTS outlets appear to now be on a 24-hr sked, using 3.800, 6.160, 11.750, 15.257. (KBLP) Hrd on 15.257 in ENG. 0725-0800 w—"America's Most Popular Music" by Bill Mansfield on SAT.; N-E 0700, wx rpt 0705; SINPO 44444. (MacKenzie, Calif.)

JORDAN—The NEW 100-kw. xmtr at Amman is now TESTING on 9.530 dly; noted 2200 w-pop mx, anncmts in Ar. ONLY; nx in Ar. 2219, then s-off; mutual QRM w-VOA. (Berg, Conn.)

KENYA—The 4.885 outlet was noted by Buchanan, Mo., recently 0333 w-classical mx and anncmts in ENG.; N-E 0348; vy weak w-heavy QRN. Observed in Conn. 0312 w-bird IS; 0330 time check, wx rpt, then mx w-occasional chimes. (Berg)

KOREA (SO.)—Seoul, 17.890, hrd in ENG. 0540-0600 w—"Request Mailbag;" SINPO 45434. (MacKenzie, Calif.)

LAOS—In early July for one day ONLY, R. Lao was hrd in Japan at 1900-2200 TESTING a NEW 10-kw. xmtr and anncg as "Radio Vientiane" on 6.150, 7.230, and playing mx; ID in ENG. and Laotian every 30 min. But more recently noted arnd 1100 in Laotian and 1300-1400 in Fr. on 6.150 gud, on 7.145 poor. (Tabuchi, Japan)

LIBERIA—ELBC, 3.255, Liberian Broadcasting Corporation, Monrovia, tuned 2320 w-pop mx; occasional anncmts and ads; all-ENG.; appeared to be request session; final ID 2345, Liberian Nat. Anth. 2346, an s-off 2347½; weak but fairly clear; light QRN-QRM. (Berg, Conn.)

LIBYA—LBS, 9.897, Benghazi, fades in dly arnd 2138 w-Ar. chants; Ar. talk 2150; s-off 2200 after Anth. (Berg, Conn.)

MALI FEDERATION—R. Mali, 15.385, s-on 0630 on this NEW channel parallel 7.210, 11.895 in Ar., pop mx; nx 0755; s-off 0800V. (Berg, Conn.) Hrd on 15.385 at 2215 w-operative mx, S8; slight QRM frm WRUL; accgd to WRHB, power is 100 kw. (Buchanan, Mo.) Observed on 15.385 at 2030 w-N-E. (Wilt, Ohio)

MAURITIUS—Forest Sire, 3.325, is fair to gud level in N.Z. 1700. (Pollard via RADX)

MONACO—Trans-World Radio (formerly Voice of Tangier) has started TESTS, but not yet w-full strength on 7.132 w-prgms in Ger. 2000-2030. (Buettner, Germany, via WRHB)

MOROCCO—R. Rabat, 11.735, noted in ENG. 1800-1830, N-E 1815; QRM'd by Moscow. (Eklundh, Finland) Also hrd in Conn. then and on parallel 7.225; anncd next xmsn for 1215. (Roth) Noted on 9.699M at 2015 w-chants and Ar. mx; in the clear; Europeans on 31-m. were poor then due to ionospheric disturbances. (Cox, Dela.)

NEW ZEALAND—The MONTHLY DX prgm, "This Radio Age," on FIRST WED., has been RETIMED at 0640 on 9.540, 6.080 to allow a full 30-min. for the feature. (Costello, DX Ed., R.N.Z.) Is repeated same day arnd 1030.

NICARAGUA—YNZ, 6.018A, Managua, hrd 0425 strg w-Sp. anncmts. (Buchanan, Mo.)

PAKISTAN—R. Pakistan, 11.885, Karachi, noted 0030-0100 w-native mx, talk. (Roth, Conn.) No longer has ENG. 0100 but at least most days DOES ID IN ENG. just before c-d 0115. (KBLP)

PANAMA—HP5K, 6.005, noted in Finland 0310 w-prgm "La Hora de Melodia;" SINPO 33432. (Ekblom)

PERU—R. Panamerica, 5.980, Lima, hrd 0500-0530 s-off; all-Sp. (Roth, Conn.)

PHILIPPINES—DZF2, 11.920, Manila, FEBC, noted 1300-1705; Russian xmsn 1630-1700 is strg also on 17.805, 15.300, 9.730; ALL s-off now 1705 (1 hr EARLIER than formerly). (Balbi, Calif.)

PORTUGAL—CSA67, 21.495M, Lisbon, noted 1410 tune-in w-N-E to 1415; pop songs to 1426, short news and end of ENG. xmsn. (Ferguson, N.C.)

REUNION IS.—Latest sked is wklys 0230-0345, 0800-1030, 1400-1800 on 3.380, 4.820; weekends and holidays 0400-1400, 4.820, 1400-1800, 3.380. (TUNE IN, N.Z.)

RHODESIA—FBC, 3.396, Salisbury, hrd 0406-0437 w-Commercial Serv. in ENG.; variety mx, commercials, time checks; fair strength but w-severe QRN; faded 0430 and was "out" by 0437. (Buchanan, Mo.)

RUANDA-URUNDI—R. Usumbura operates on 6.195, 3 kw., 1500-1830, in Fr., Kirundi (Urundi lang), and Kinyarwanda (Ruanda lang); QRA is Boite Postale 1400, Usumbura, Ruanda-Urundi. (O. Lindberg, Sweden, via WRHB)

SINGAPORE—FBS, 5.010, hrd irreg 1130-1400 w-BBC relay, lang lesson or sports 1115-1130; in ling 1300-1400; IDs as "Forces Broadcasting Service, Singapore," 1130, 1400 when s-off w-"GSTQ;" strg sig; may have increased power (?). (Balbi, Calif.) BBCFES hrd TESTING on 17.755 Fr. 0100 to AFTER 0300 to Australasia; strg at tune-in but weaker AFTER 0230. (Cushen, N.Z.)

SOMALILAND (IT.)—R. Mogodiscio is using 4.970, 7.150 w-0.25 kw. and 5 kw., respectively, 0930-1100, 1300, 1530, 1630-1900; prgms are in Somali, It., Ar. AN ENG. b-c is projected for the near future. (DW)

SUDAN—Balbi, Calif., notes Omdurman opening 0415 on 11.855 in Ar., fair for abt 5 min, but w-terrible JAMMING QRM.

SWAN ISLAND—R. Swan, 6.000, 7.5 kw., is widely rptd. Accgd to a ltr-venirie from Horton R. Heath, Commehcial Manager, GIBALTAR STEAMSHIP CORPORATION, sked on SW is 1300-1500 WKDYS ONLY in Sp., 0300-0400 in ENG. and 0400-0530 in Sp. dly; however, was noted recently in New York City by Mast in ENG. 1500-1600 c-d. Located on the Island of Swan, abt 90 miles EAST of Honduras, this commercial stn has been b-c on MW since mid-June (1,160 kcs., 50 kw., now sked 1000-1200 wklys in Sp., 0000-0100 ENG. and 0100-0230 Sp. dly). QRA for rpts is Radio Swan, Box 1247, G.P.O., New York, New York, U.S.A. (KBLP) SW outlet has been hrd in Eu. (Sweden, Germany). (SCDXERS) Logged in N.Z. at 0345. (Cushen)

SYRIA (UAR)—R. Damascus, 15.165, tuned 2020 w-N-E ending 2029. (Ferguson, N.C.) Has RETIMED L. Am. beam to 2300-0100 (formerly 0000-0200). (Niblack, Ind.)

TAIWAN (FORMOSA)—BED58, 17.785, noted in ENG. to N. Am. 0130-0200 dly parallel BED57, 15.345, fair; also anncs 11.735 and another fq not hrd; N-E 0130. (Balbi, Calif.) The 17.785 channel is fair in W. Va. (KBLP)

TANGANYIKA—Dar-es-Salaam, 4.785, hrd closing 1930; SINPO 24432. (ISWL) NEW QRA is Box 9191, Dar-es-Salaam.

TUNIS—Ar.-spkr hrd on 11.970 to arnd 2100 is R. Tunis. (Niblack, Ind.; Rowell, Minn.; Balbi, Calif.; Berg, Conn., others) Operates 1800-1900, 1930-2100. (Legge, Va.)

UGANDA—Kampala, 5.026, hrd 1800-1915. (ISWL)

UNION OF S. AFR.—SABC has been hrd TESTING on 2.306 fm 1930 to c-d 2115 w-"normal" prgms in ENG. and Afrikaans ALTERNATING. Comes on air abruptly 1930 WITHOUT ANNCMTS. (SCDXERS)

URUGUAY—R. Sarandi, 15.385, Montevideo, noted 0000-0100 w-mx, Sp. ID; QSA5. (Rowell, Minn.)

U.S.A.—CURRENT sked of WRUL, New York City, reads to Eu.-Afr. 2045-2200 MON.-FRI., 2000-2215 SAT. (Listeners Corner 2200 now), SUN. 1945-2130, 17.750, 15.380; to L. Am. 2300-2355 (SUN. frn 2215), and dly 0000-0030 in Pt. to Brazil and 0030-0145 w-Sp., 17.845, 15.380, 11.830; Listeners Corner on SUN. is still 2345. Sked frn KGEI, San Francisco, lists 17.795 on air 2253-0300. (Huff, Calif.)

USSR—Erevan, 5.740, Armenia SSR, hrd opening 0230. (ISWL)

PRESS TIME FLASHES — ALBANIA — Berg, Conn., has logged R. Tirana on 7.152 w-Fr. nx 2200; mx 2210, final ID in Fr. 2239, then ENG. ID 2230, followed by N-E 2239, then commentary and, finally, talk 2247; rather abrupt s-off 2256. Hrd also on 7.152 at 0330 w-what seems NEW AR. session; ID w-"Huna Tirana" and had N-Ar.; mx 0357; bears further checks. **GERMANY (EAST)** — Balbi, Calif., notes R. International-Berlin on 9.730 OPENING 0400; hrd to 0425 when R. Brazzaville covers sig; Berlin is hrd parallel 11.765 to 0630. **GERMANY (WEST)** — Berg, Conn., has just logged R. Liberty, 17.865, Munich, 1045 gud level on TOP of JAMMING w-talk in Russian; Fr. vocals 1056; ID 1058, IS 1059, brief by woman, IS again, followed by further ID 1100, then mx. **HAITI** — Berg, Conn., flashes that his previously UNID stn on 6.099 is "La Voix de la Vie Marie," Cap Haitien; often hrd arnd 2300 w-church services; final ID in Fr. 2329, then Anth. **IRAQ** — Berg, Conn., has just ID the Ar.-sprk hrd on 7.180, fading in arnd 2100, as R. Baghdad; all-Ar. chants to 2142 when has N-Ar.; ID in Ar. 2154, and s-off w-Anth. **KOREA (NO.)** — Balbi, Calif., says R. Pyongyang, 6.250, is strg, clear 1330 w-N-E; IDs twice AFTER chimes. **LAOS** — Balbi, Calif., flashes that R. Vietiane has been hrd 1300-1500 on 7.145; strg; has marital-type mx 1300-1355, talk in native to 1410, native mx then to 1500 fade-out; IDs 1354; must be rptd new 10-kw. xmtr. **LIBERIA** — A ltr rcd by Balbi, Calif., from the Rev. G. de la Haye of ELWA, Monrovia, says stn has inaugurated MIDDLE EAST SERV. on SUN. to Sept. 4, WHEN WILL BE DLY, using 50 kw. on 15.085 frn 1815-2000; first 15 min. mx, then 1½ hr in Ar., then half-hr in ENG. 1930-2000; ELWA also has initiated a NEW 3-hr bloc of prgms in ENG., Hausa, Yoruba (latter two langs are used in Nigeria); this service is on 11.825 frn 1100-1400 dly.

DEADLINE—PLEASE SEND YOUR TOP-NOTCH DX ITEMS TO REACH ME BY THE FIRST DAY OF ANY MONTH FOR "WT" SECTION. Send ONLY "RARE CATCHES" TO REACH ME BY SEPT. 8 for "AT FADE-OUT" in OCT. DXH, OCT. 8 for "AT FADE-OUT" in NOV. DXH. Thanks for your FB cooperation! QRA is Ken Boord, 948 Stewartstown Road, Morgantown, West Virginia, U.S.A. See YOU next month?... 73... K. B.

BOOSTER NEWS

(Continued from page 11)

LATE BOOSTER FLASH!

DXing Horizons has learned, at press time, that a "Master Frequency (channel) Volunteer Allocation Board" may be established to insure Booster to Booster interference will be held to a minimum, thereby complying with the new FCC regulations (Section 4.703 A, B). "If interference develops between VHF Boosters, the problems shall be resolved by mutual agreement among the licensees involved." The FCC has stated it will not assign channels to VHF Boosters, indicating it is up to Booster operators themselves, to establish their own frequency allocation group, on a volunteer mutually acceptable basis. It now appears that such board will be established, in which DXing Horizons will play an active part. Full details next month in Jim Beamer's "VHF Booster World" Section. (R.B.C.)

TV REPORTING

(Continued from page 20)

An Atlantic Coast Troop opening on July 19 apparently caught most seacoast DXers unaware... but not John Dranchak of Bridgeport, Conn. DXer Dranchak nabbed calls down the coast as far as Norfolk, Va. (WTAR-3, 375 miles), WXEX-8 (390 miles) and many closer.

H. Korb, North Bay, Ontario, Canada, reports he has worked over his TV set for the "Gould Modified" Amperex IF strip. Adding 3 Amperex EF-184 stages for the 6CB6 stages resulted in real improved gain, but he now has the problem of too much gain... even the noise level overloads the AGC circuit! DXH Project Engineer Grimm however has the answer to this problem, which is being forwarded on to Korb.

Joseph M. Majdak, Jr., Brattleboro, Vermont runs a TV service shop, and DXes with "whatever receiver is handy." August 3 was also a big day in Brattleboro, with skip first noted at 0744 from WREC-3, Memphis, swinging through Mississippi, Arkansas, Ohio, Kentucky, Missouri, Illinois, Minnesota (KMMT-6, Austin, WITI-6, Milwaukee) at 12 noon.

FROM THE WEST

In Tucson, Arizona, July 30th was the big day of the report period for David Beal, one of the country's top E skip DX fans. Beal caught IDs from 22 stations in the 790-1300 mile range between 1330 and 2115 EST.

One of our Idaho DXers has also moved to Tucson... Ed Hepp. Hepp is now working for KCEE, an AM outlet on 790 kc. Hepp reports lots of E skip from all directions during July-August, in Tucson, including a "slew" of Mexican stations. Hepp reports the channel 6 mystery relay, apparently located near Mexico City, also carries programs from channel 4 XHTV, as well as previously reported XEW and XHGC. Hepp also reports July 30th a big day... 19 stations identified from 0930 to 1900. The new XEWO-2, Guadalajara runs a test pattern, says Hepp, around 0945 MST (1130 EST). The mystery channel 6 station from Mexico has been logged around 1745 MST (1945 EST) with an RTMA type test pattern, and audio apparently from XHGC-5, Mexico City.



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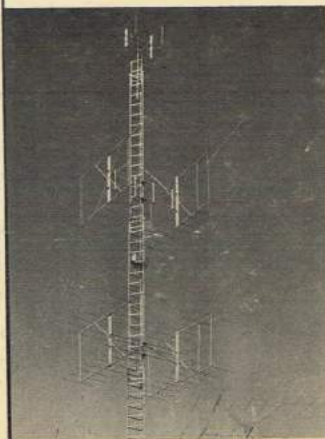
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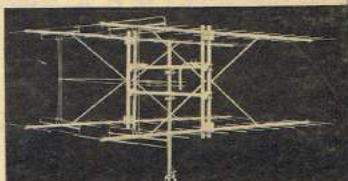
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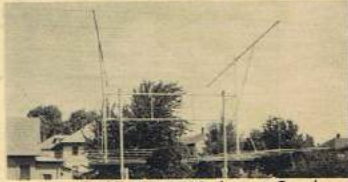
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HEAR THE DXing HORIZONS SHORTWAVE NEWSCAST

A schedule change has been effected over WRUL, International Broadcast Station, for the monthly DXing Horizons Shortwave Newscast. *Current and correct sked:* Third Saturday of each month (Sept. 17), beamed to Europe-Africa (frequencies of 17.750, 15.380) at 2015 GMT. On the third Sunday of each month (Sept. 18), the same newscast is beamed to South America (over frequencies of 17.845, 15.380 and 11.830) at 2345 GMT.

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