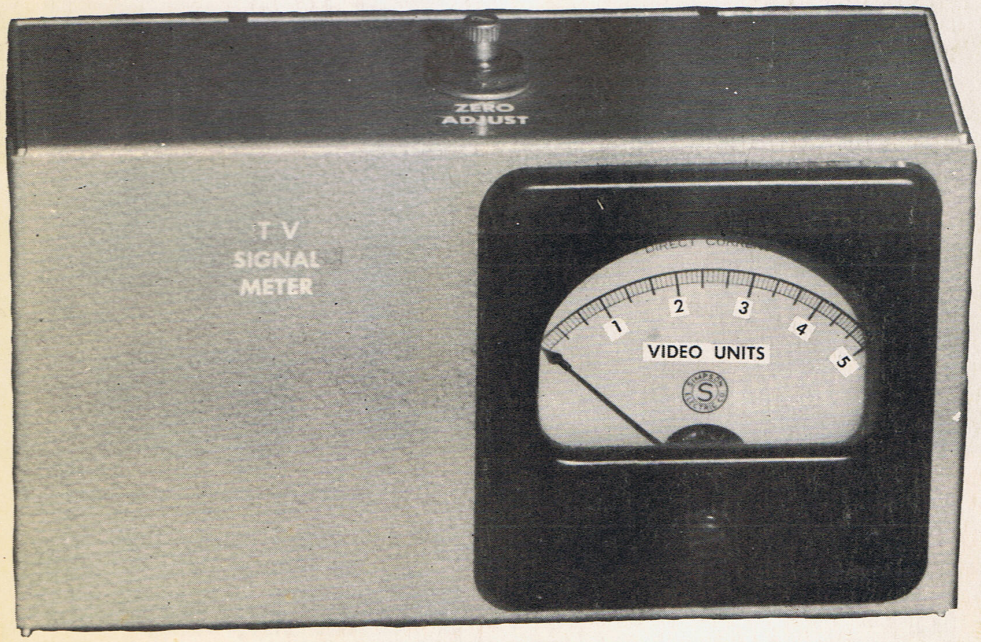
NOVEMBER 1960
40 CENTS

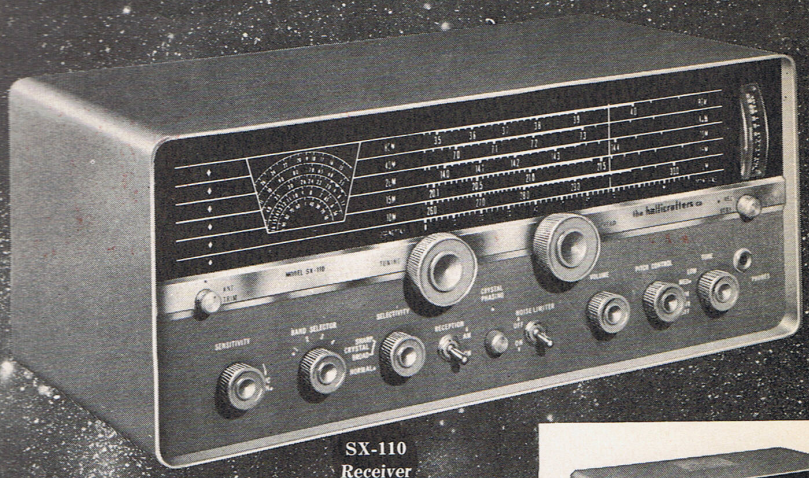
DXing HORIZONS



"Relative Signal Level Meter for TV"

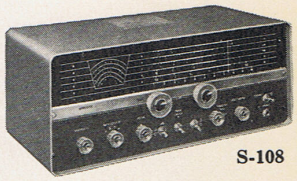
Page 3

DEVOTED ENTIRELY TO RADIO AND TELEVISION DX RECEPTION

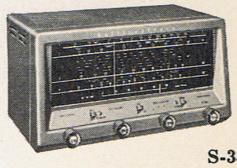


SX-110
Receiver

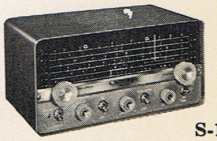
The new ideas in communications are born at Hallicrafters



S-108



S-38E



S-107

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.

NEW: **R-48 Speaker.** (not shown) Perfect match for SX-110. Latest design; uses new 5½" x 7½" speaker. Exceptional damping qualities, distortion-free response. Switch for selection of voice or music response.

NEW: **S-107 Receiver.** Outstanding new styling and impressive features. Standard broadcast plus four short wave bands—unusually wide coverage (540 kc-34 mc and 48-54.5 mc). Separate bandspread and logging scale; slide rule dial; phono jack and headset tips. Seven tubes plus rectifier.

Export sales: International Div., Raytheon Mfg. Co., Waltham, Mass.

NEW: **S-108 Receiver.** Exceptional value and performance. Same as SX-110 in frequency coverages but without "S" Meter, antenna trimmer and crystal filter. Built-in speaker. Calibrated slide rule dial; temp. compensated oscillator. Seven tubes plus rectifier. Ideal general coverage receiver.

NEW: **S-38E Receiver.** Latest version of the world's most popular short wave receiver. Modern new styling, improved circuitry for utmost in performance and dependability. Standard broadcast plus three short wave bands (540 kc-32 mc). Electrical bandspread; slide-rule overseas dial; headset output; built-in speaker.

hallicrafters
Company

Chicago 24, Illinois

At Sign Off

STATE OF THE ART

DXing Horizons Editor Bob Cooper returned to California October 15 following a 13-day 6,000 mile tour of the United States. Among the highlights of the trip, a three hour Cessna 180 flight October 4 (the fourth airplane of the day) over remote areas of northeaster Wyoming, southeastern Montana and western South Dakota, during which pilot Keith Anderson of the Mid America Relay Systems company set down on the ranch of Charlie Starr, 80 miles from nowhere. More about Starr and his ingenious method of receiving TV in an area with no daytime radio reception, in December.

Of prime importance, perhaps, was the universal feeling expressed over the future of television. Whether in Rapid City, South Dakota or Newark, N.J., the industry discussion ran to a single direction . . . UHF. A series of special reports to readers of DXing Horizons will begin in December. The purpose of this series . . . to bring up to date and coagulate isolated thinking in the weak signal TV field.

STRATO-VISION STILL ON THE GROUND

Word has leaked down from Westinghouse, general contractor on the "flying educational television program," Strato-Vision, that first airborne tests may not begin before February 1. The equipment must still be installed aboard the planes, and many other check-outs made before test transmissions on channels 72 and 76 begin. DC6AB (a pair) will circle at 23,000 feet above Montpelier, Indiana broadcasting programs to a six state area. When the first definite test plans are known, announcements will appear in DXH.

THIS ONE IMPORTANT!

First **on-channel** UHF Booster has been granted by the FCC. Under the new regulations approved last spring, UHF stations may re-broadcast "on the origination channel" of the parent station, with booster-slave operation. WINR (channel 40) Binghampton has been granted first permit, which will fill in holes of present coverage. Remember this grant in the months and years ahead. **It will become historic in the annals of television.**

NCTA PRESIDENTIAL SELECTION NEAR?

In Miami in June, members of the National Community TV Association voted to re-fabricate the association structure and add a super Cable TV promoter at the top. Currently Ed Whitney is Executive Director, and he runs the Washington, D.C. office. NCTA Board of Directors met in Denver October 20, and it is understood one man was recommended to the Board for the Presidential post. Identity still a secret, although it is understood he is in private industry now. Also in the mill at the NCTA . . . new office space befitting its new budget, and plans for curtailing '61 legislation in the CATV field.

STATION STARTS

These educational TV outlets revealed they plan operational starts prior to December 31 this year, during NAEB Convention in San Francisco October 18-20. KTSP (62) Tacoma, Washington, KCSD (19) Kansas City — December 15, WIPM (3) Mayaguez, Puerto Rico.

KCND (12) Pembina, N.D. began equipment tests on 2 kw. rig October 10. Ready to go up its 1,350 foot tower is a new traveling wave antenna.

WTVI (19) Fort Pierce, Florida planned a mid-October test pattern start, and should begin programming November 1. Tower is 390 feet.

KEZI (9) Eugene, Oregon plans commercial start November 25, with program tests prior to that date.

CJAY-TV (7) Winnipeg expects to be on November 1 with 325 kw. from a 1,000 footer.

CHAN-TV (8) Vancouver, B.C. also plans a November start from Burnaby Mountain.

LONG TIME CATV FOE RETIRES

Pioneer "small town broadcaster" advocate Ed Craney has disposed of KXLF (Butte) and KXLJ (Helena) operations to Joe Sample of KOOK, Billings. In turn, Sample will sell KXLJ to Helena TV, Inc., a CATV operation Craney has had bitter battle with for years. Helena TV is owned by William Piehl and managed by Bruce Hamilton. KXLF, under new owner Sample, has already given green light to "VHF Translator Assessment Fee" (see Translator Topics, page 9). It is unlikely new KXLJ owner Piehl, with CATV holdings, will agree to finance booster operations.

FCC RELENTS!
VHF BOOSTER FILING TIME EXTENDED

(October 20)—By joint order the FCC has extended for 60 days from October 31 the period in which existing TV Repeaters (Boosters) can apply for temporary authorization (Form 347-A).

The FCC cited "delays caused by origination stations in granting re-broadcast approval" for the extended period. Details in December. **New filing deadline, December 31, 1960.**

INTERNATIONAL BROADCASTER
KFRN WILL MOVE

In approval announced October 25 by the FCC, Internatonal Broadcasting Station (to be) KFRN, Dallas, Texas was granted permission to move its studios and transmitter to Glenpool, Oklahoma, some 14 miles south of Tulsa. KFRN was due to take to the airwaves on 15.180 with 50 kw. beamed to South America, "early in the fall." Al Crain, station owner has not announced a new air target date. Details in December.

PRESS TIME DX FORECAST

Here are the last minute propagation forecasts. Disturbed shortwave-medium wave conditions are expected Nov. 2-4, and 28-30. Conditions will be unsettled Nov. 1, 5-7 and 24-28. All other days will be near seasonal levels. Auroral conditions are possible Nov. 2-4 and 28-30.

Stan Leinwoll, Propagation Editor—DXH

REPRINTS AVAILABLE

Following an appraisal of demand, reprints of the article **"Basic Technical Concepts of The CATV System"** will be made available through DXing Horizons. Indicate your needs now, in lots of 50 or more.

MOVE ALL TELEVISION TO UHF?
SEE PAGE 30

DXing HORIZONS

NOVEMBER 1960
Volume 1, Number 11

"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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FEATURES

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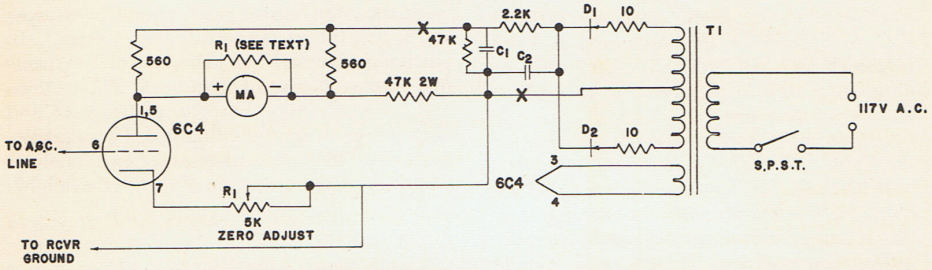
WORLD WIDE DX-LEAGUE
The Shortwave—Medium Wave—TV and FM Departments of DXing Horizons sponsor this international organization of listeners watchers for the sole purpose of enhancing the pursuit of DX Radio-TV signals.
The World Wide DX-League provides listening awards-certificates in recognition of 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."

For All TV Experimenters An "S" Meter For Video

Robert D. Grimm
Technical Editor
DXing Horizons

The need has long existed in weak signal TV work for a relative signal strength meter, or "S" meter. Such a device can provide the user with a ready reference for day to day signal variations in ground wave, noting DX signal levels and provide a means of checking antenna orientation for pin-point accuracy. The standard use of such a meter by DXers will also establish a pattern of consistency and equality among DXers for reporting to TV stations, and to DXing Horizons.



T.V. SIGNAL STRENGTH METER

METER CALIBRATION

The VL (VIDEO LEVEL) Meter is calibrated in units of from one to five. Five gradients were all deemed necessary, as additional levels of video signal seemed to be splitting hairs. Feeding our laboratory receiver with a known level signal source, we came up with the following signal interpretation levels.

1 – VERY WEAK (Under 25 uv)
2 – WEAK (25-50 uv)
3 – FAIR (50-150 uv)
4 – GOOD (150-500 uv)
5 – EXCELLENT (500 uv up)

This microvolt reading will vary from receiver to receiver, and from low to high band. But generally speaking, these are consistent with the changing video signal levels.

The VL Meter, constructed in the DXH lab, uses but a single tube. Our design unit has a self contained power supply which allows its use readily with series string type sets.

THE CIRCUIT

The circuit is simply a 6C4 triode (although any triode will perform in this function) connected in a bridge circuit. The grid of the triode is pushed into action by the signal on the A.G.C. line from the receiver. The meter is *"forward reading,"* which means it will show increased readings with increased signal strength. Two *Texas Instrument Company* type 1N2071 silicon rectifier diodes provide power to the unit.

(If your receiver has a power transformer and parallel heaters, you can rob the power for the unit from the set supply, if you do not want to include a self contained supply as shown.)

If you use the power supply shown with the VL Meter circuit, the only actual connection necessary to the receiver is the A.G.C. connection and the ground (between the two).

The most convenient point to hook into the A.G.C. line (in the receiver) with the probe from the VL Meter is at the point where the A.G.C. goes into the tuner. This is usually at a tie point, feed through insulator, or something similar on the tuner chassis itself. You can spot this in your set with the aid of a receiver schematic.

CONSTRUCTION

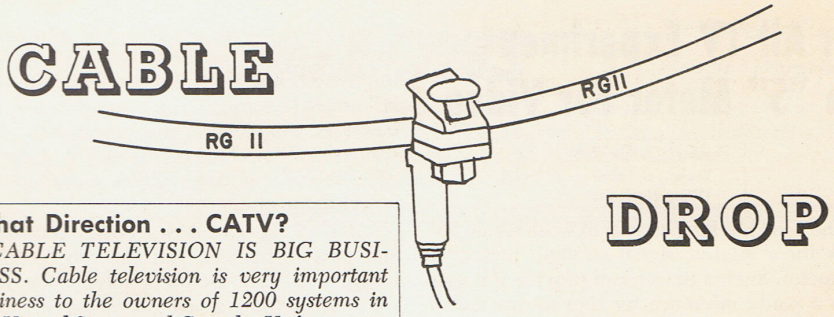
The meter used in this unit is a 0-1 D.C. milliameter. Any meter in the 0-1 ma. through the 0-5 ma. range may be used however.

The unit is constructed in a 5¼ inch by 3 inch by 2⅛ inch minibox (Bud CU-2106). Using this size box we found ample room for all components. No chassis layout is given here as the builder can easily arrange the few parts to suit his own design needs. In many cases, the builder will want to custom build the unit into existing equipment. There is nothing critical in the layout.

AFTER CONSTRUCTION

To adjust the VL Meter after it has been connected to the A.G.C. point, remove the 6C4 tube from the socket, and adjust the value of R2 (by substitution and trial-error) until

(Continued on page 22)



What Direction . . . CATV?

CABLE TELEVISION IS BIG BUSINESS. Cable television is very important business to the owners of 1200 systems in the United States and Canada. Unfortunately, to pressure groups in and out of the electronics world, Cable television is TOO BIG BUSINESS. Cable television is TOO IMPORTANT BUSINESS. With this in mind they seek to regulate and control . . . and even stamp out.

If there were ever an hour of decision for the Cable TV world . . . it is now.

With these basic premises in mind, DXing Horizons this month embarks into the Master Antenna television world with one purpose; to cover this field with news, special reports and technical papers worthy of the attention and support of every Community Antenna Television system operator in the United States and Canada.

Your support . . . as a CATV advocate . . . is hereby solicited in the form of subscription, technical papers and news reporting.

This is your section . . . its success will depend on your interest and support.

R. B. Cooper, Jr., Editor, DXing Horizons

BASIC TECHNICAL CONCEPTS OF CATV SYSTEMS

"An introduction to CABLE DROP"

With this article *DXing Horizons* starts a new and important series of reports-in-depth on technical topics relating to the community antenna television industry.

It is important to note that this first report is introductory in scope and content. As a general review of the basic technical components common to CATV systems it differs from future reports that will examine specific problems in detail.*

In fulfilling its introductory function, this report provides basic information that will permit all DXH readers, some of whom may not be familiar with CATV, to proceed apace in their examination of community antenna television (CATV). The primary function of "CABLE DROP" remains, however, as a medium of expression by and for CATV operators.

The technical assistance of the staff of Entron, Inc., Bladensburg, Maryland, was especially helpful in preparing this material. In particular, Heinz Blum, Director of Engineering; James Carter, Director of Publications and Irv Kuzminsky, Director of Research and Development, are to be thanked. These gentlemen, wth their extensive experience, helped sort through the mountain of material available to indicate the important principles.

CATV OBJECTIVE

The technical objective of a CATV system is to receive RF signals at the system's antenna and to transmit and distribute those signals via coaxial cable without noticeable deterioration in signal quality.

SIGNAL DETERIORATION FACTORS

Signal deterioration in a system is caused by, (1) electronic equipment, (2) passive equipment, and, (3) poor layout and installation techniques. From the beginning to the end of a system, the signal passes through many components. Just as with a weak link in a chain, the component with the poorest performance characteristics will determine overall system quality. The components of a system also have a cumulative, or additive, effect on signal degradation.

The electronic components of a system can cause signal degradation by:

(1) Adding *random noise* signals; a phenomenon particularly apparent at low signal levels;

(2) Combining signals of different frequencies, thereby creating new, undesirable signals *(known as intermodulation distortion),* noticeable as a windshield wiper effect on receiver screens and apparent when electronic equipment is not properly operated;

(3) Generating signals of higher frequencies (harmonic distortion); apparent when electronic equipment operates improperly over a frequency range exceeding one octave (i.e. 50 to 100 megs.—plus).

DXing Horizons Reader Service

PRESS TIME NEWS FLASHES

TRANSLATOR-BOOSTERS

(Community Antenna TV operators, see page 28A)

(WASHINGTON, D.C., OCT. 18) — The FCC has issued more "special temporary authority" permits to VHF TV repeater stations. The first permit of the latest group went to Hinsdale County Chamber of Commerce, Inc., Lake City, Colorado, where KREX-5 Grand Junction is "boosted on channel" (5) to the Hinsdale county area. This filing was numbered BTR-118.

THIRD VHF TRANSLATOR (Form 346) FILED

An eastern state is represented in TV Translator filing number 3, accepted by the FCC. Coming in a congested allocations region, it may be contested. Lynchburg Broadcasting Corporation of Roanoke, Virginia has filed for a translator to rebroadcast WLVA-13, Lynchburg, on channel 5, with an ERP of 19.4 watts. The filing was assigned FCC number BPTTV-3.

VHF IN WENATCHEE

Mid State Radio Supply, Wenatchee, Washington has been granted a modification of license to utilize a channel 7 VHF translator in addition to the present license it holds to test UHF units on channel 70. This is an experimental license for testing purposes only. DXH assumes this means Mid State Radio Supply will be active in the VHF translator field. **There is some question as to whether this experimental license constitutes the first valid VHF translator license granted by the FCC.**

UHF IN PORTLAND

Corbett Electronics Company, Portland, Oregon has been granted permission (KO2XGO) to operate an experimental TV translator station. FCC data does not state whether it is VHF-UHF (like mid State).

506th UHF TRANSLATOR APPLICATION FILED

Esmeralda County TV, in the Fish Lake Valley of Nevada has filed for a CP to build a channel 71 UHF translator station, repeating KOLO-8, Reno. Station will operate with an ERP of 455 watts. Assigned number BPTT-506.

FIRST CANADIAN VHF TRANSLATORS GRANTED

The Benco Company, Rexdale, Ontario is supplying residents of Lumby, B.C. with the first on the air VHF translator station granted in Canada, following a September 26th decision of the BBG. The Benco T-5 unit will deliver, on channel 5, the signal of CHBC-TV, Kelowna, B.C. (2) to the Lumby area through a directional (yagi) antenna. The unit should be installed by November 8th.

In other translator grants. The BBG OK'ed a channel 7 translator output for the Fox River, P. Q. area, 5 watts, directional antenna. The translator will pick up channel 5, CHAU, from Carleton.

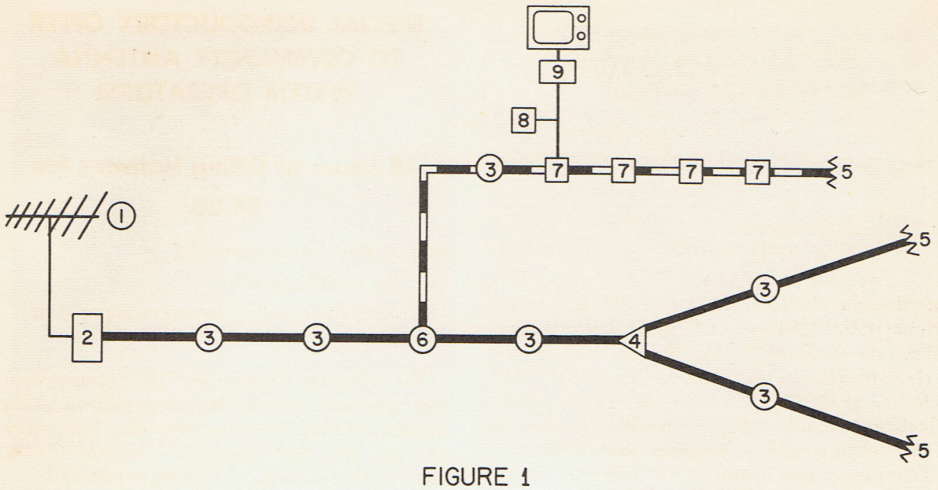


FIGURE 1

KEY:

1. ANTENNA
2. HEAD END EQUIPMENT
3. REPEATER AMPLIFIERS
4. LINE DIVIDERS OR SPLITTING TRANSFORMERS
5. LINE TERMINATORS
6. BRIDGING OR DISTRIBUTION AMPLIFIERS
7. TAP-OFF UNITS
8. GROUNDING BLOCK
9. TRANSFORMER

TRUNK LINE
DISTRIBUTION LINE
FEEDER LINE

This diagram is a schematic representation of the basic components of a community antenna system.

(4) Generation of standing waves by reflected signals, *noticeable as "ghosts"* on sets and caused by a mismatch between the system and the equipment input or output.

In addition to the disturbing factors of these electronic components, certain passive elements harbor a potential for signal deterioration by causing excessive loss or by reflecting signals.

Systems engineering and expert installation bear the burden of reducing the risks of abnormal signal deterioration.

FIVE ADJACENT CHANNELS OPERATING IN THE LOW BAND

The majority of community antenna systems carry the television signals on channels 2 through 6, in the frequency band from 54 mc. to 88 mc. Long experience with available equipment, layout and installation techniques proves that this frequency range lends itself best to systems. A basic system probably should operate within these frequencies and add other (high band) facilities as the state of the art permits and when necessary to accommodate growth requirements (i.e. additional channels).

Frequency Allocation

Standard television receivers are capable of receiving five ADJACENT VHF CHANNELS without any difficulty. The frequencies at which these five channels operate have to be located exactly as allocated by the FCC for channels 2 through 6. However, to assure trouble free adjacent channel cable system reception, equipment frequency drift must be kept to a minimum; and the signal levels must be constant at all time.

Correct allocation and stability of frequencies is required to keep the carriers of adjacent channels sufficiently balanced to eliminate interference between video carriers.

A CATV system separately amplifies the audio and visual carrier for each television channel. Improperly adjusted ,the picture carrier of one channel might interfere with the sound carrier of the next lower channel. In turn, the sound carrier of one channel might interfere with the next higher channel picture carrier. Interference forms a buzzing noise in

SPECIAL INTRODUCTORY OFFER TO COMMUNITY ANTENNA *SYSTEM OPERATORS!*

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We welcome Community TV Antenna System operators with *the largest regular monthly section* in DXH. Every month, from November on, you will find complete – current CATV news in this section . . . "CABLE DROP."

Plus . . .

Special feature material never before in print! Scheduled for early release . . .

Mickey Mouse Micro Wave Mix Up
FM on the System—Additional Revenue
Rebuilding an Antiquated System
Public Relations—A Must!

and

starting in December . . . a new regular feature, *"State of the Art."* The inside word on the future of all television, first looks at new laboratory developments . . . all of the important developments first . . . detailed here in the bible of the weak signal industry . . .

DXing HORIZONS

YES . . . sign us up for 18 months of DXing Horizons magazine, starting with December.

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This offer expires midnight November 25, 1960, and will not be repeated until November 1961!

a lower channel sound signal or a distorted picture signal in the higher channel picture.

Signal Level

To insure the best possible picture quality, correct signal levels and stability are required. If the levels are too low, television screens will display objectionable white spots, known as "snow" or "noise."

If a portion of the channels on the system are distributed at too low a level, the automatic level control for the trunk line repeater amplifiers (see diagram one) will not perform properly. Through intermodulation, signals distributed at proper levels could be affected and distorted (windshield wiper affects).

Conversely, a signal level which is too high will also cause intermodulation distortion. Equipment specifications for input and ouput levels must be diligently followed to escape these problems.

Power Transfer and Matching

To offer the best power transfer between different parts of the system, and to avoid signal reflections, it is essential that the terminal impedance of all equipment in the system be equal. *The equipment must be "matched."* The CATV industry has standardized 75 ohms as the impedance value for system operation.

SYSTEM COMPONENTS

Five elements are usually involved in a community antenna television system: *the antenna,, antenna site, trunk line, distribution lines* and *feeder lines.*

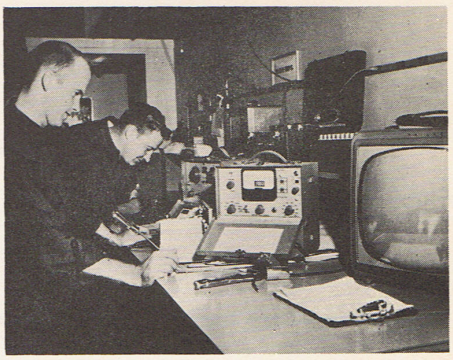
Antenna and Head End

Because CATV systems are generally located in areas where the strength of the signals received is low, the design, layout and installation of the antenna, antenna tower and associated components is considered critical.

Ideally, the received signals should have a minimum strength of 50 microvolts and should be free from noise and interference. The signals received are fed into amplification equipment located at the antenna site, known as the "head end." This head end equipment is specifically designed to:

1) Reject undesired and interfering signals by means of narrow width or broadband rejection filters;

(2) Convert signals that are received at frequencies for which the system is not designed. UHF, high band VHF or baseband audio/video signals may be converted to low band VHF frequencies;



The "ulcer department" of Ed Allen's Winona (Minn.) TV Cable Company, completely equipped with test gear.

(3) Bring all signals to a level suitable for feeding into the system;

(4) Maintain all signals at proper levels, even when the input signal strength at the antenna site varies *(seasonal weather characteristics frequently cause great variations);*

(5) Mix the various signals and make their combinations available at a single output terminal serving as a trunk line feeder.

The output of the average head end has a maximum general limit of approximately 60 db. (one volt). The combined signals from the head end output(s) are fed into the trunk line.

Trunk Line

The trunk line is the system's basic coaxial cable line. Distribution lines receive the signal at various points along the trunk line, and from these distribution lines tapoffs carry the signal to the individual sets.

The trunk line does not serve as a distribution line, and therefore, is never tapped to feed individual sets. In this manner the trunk line is kept free from disturbing influences and is able to deliver good quality signals over long distances.

The trunk line consists of a coaxial cable, repeater amplifiers, and supporting equipment. The coaxial cable carries the signals. The supporting equipment includes the poles, messenger wire, lashing wire and other hardware necessary to carry the coaxial cable.

Repeater Amplifiers

Repeater amplifiers are used at intervals along the trunk line to compensate for signal level loss caused by cable attenuation.

As mentioned earlier, electronic components can cause greater signal deterioration than so-called passive (or non-electronic) components.

Nevertheless, the passive components used in a system should be of high quality to reduce the number needed. *In the case of trunk line, this means the cable should present the minimum amount of attenuation* (i.e. lowest loss per 100 feet of cable).

Low cable attenuation permits the system to operate with fewer repeater amplifiers. Thus proper selection of cable types plays an important role in the determination of trunk line attenuation, and system expenditures.

The signal strength loss caused by trunk line cable attenuation is offset by repeater amplifiers. These amplifiers are inserted in the trunk line at points where the level reaches the minimum considered safe for maintaining quality service throughout the system.

Two factors govern the establishment of the minimum level:

(1) the level required to maintain an adequate signal to noise ratio, and,

(2) the level required to maintain sufficient amplitude to operate the automatic level control circuits properly.

Cable Attenuation vs Frequency

A complicating factor in the considerations of trunk line attenuation is the fact that cable attenuation over the VHF television frequency spectrum is not constant. Losses at higher frequencies are greater than those at lower frequencies.

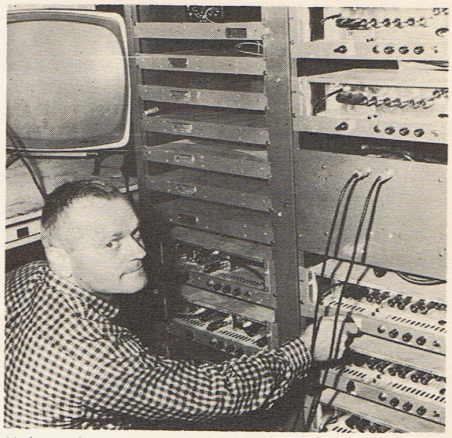
This characteristic is known as the TILT of the response curve formed when cable attenuation is graphically charted. To compensate for the higher attenuation the higher frequency signals must be amplified more than those of a lower frequency. This process is known as "equalizing."

The (measured) signal strength over the entire frequency spectrum is constant at the INPUT to each repeater amplifier. At the OUTPUT of each repeater amplifier, the signals at higher frequencies are at higher signal levels than those of lower frequencies.

The distance between repeataer amplifiers on a trunk line varies, and, therefore, the amount of equalization between amplifiers also varies. Each repeater amplifier must be individually adjusted to compensate for this TILT.

Splitting and Termination

Trunk lines can be divided by the use of passive line dividing or splitting transformers. These devices are properly matched to add the smallest possible disturbance to the trunk line signal.



Making the many adjustments necessary at the "head end" of a multi-channel CATV installation.

The end, or ends, of the trunk line must be properly terminated in the characteristic impedance (75 ohms) of the system to reduce reflections and "ghosts."

Distribution Lines

The distribution lines carry the signal from the trunk line to the customer connections. The signals are transferred from the trunk line to the distribution line through bridging or distribution amplifiers. These devices take a very small amount of power from the trunk line and insure that the trunk line signal quality is not deteriorated.

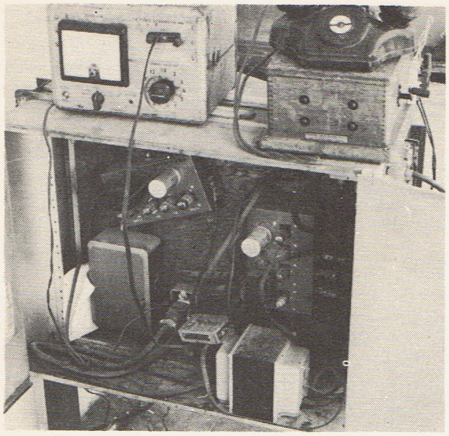
The distribution line cable, connected to the output of the bridging amplifiers, carries the signals to the customer "tapoff" units. Approximately 30 to 40 tapoff units are usually permitted in one distribution line cable.

Every tapoff unit adds a slight disturbance to the distribution line because of the tapoff unit's additional capacitance, resistance and inductance. These disturbing characteristics of the tapoff unit become particularly troublesome if the distribution line is long or if a great number of connections are attempted.

Distribution line *extender amplifiers* are installed when the signal level on a distribution line cable decreases to a point where additional tapoffs would result in an inferior picture.

Feeder Lines and Tapoffs

A feeder line carries the signal from the distribution line to the customer's television set.



NOT TOO NEAT! In an early issue of DXH, "Let's Buy and Rebuild an Ont dated System," the story of a second hand start in CATV.

The tapoff unit is the connection between the distribution line and the feeder line.

The tapoff units are attached to the distribution line cable and are selected to obtain the proper amount of signal power for a single set's operation.

A grounding block is installed where the feeder cable enters the customer's dwelling. This insures a good electrical connection between the outer braid shield of the feeder line cable and a reliable ground potential. Grounding thus protects the cable and the customer's property from static voltage build-up.

The final link between the system and the customer's television set is a transformer which matches the 300 ohms input impedance of a television receiver with the 75 ohms impedance of the antenna system. This not only keeps the entire community antenna system matched but also results in a dividend, a two-to-one signal voltage boost.

So the signal arrives at the last and most important stop in its trip through the CATV system . . . the viewer's television receiver. In many respects, the viewer's set is the most important component of the entire CATV system. It is here that the system has both its beginning and ending.

The viewer's eager desire for adequate television in areas where this is difficult through other means establishes the basic need for a CATV system. In fulfilling these viewer interests, *the community antenna system becomes an extension of the set, permitting the viewer a broader television horizon than ever before.*

U.S. CATV Op's Not Alone!

When four days of bitter debate in the U.S. Senate subsided in May the vote stood 39 to 38 against bringing CATV operation under federal regulation . . . at that time.

American cable operators breathed a collective sigh of relief, and Canadian operators thanked their lucky stars they were north of the border.

Over the summer ,however, it appears events in the Canadian House of Commons **Special Committee on Broadcasting** may have changed the atmosphere in Canada.

Apparently unknown to the Canadian Cable TV association (NCATA) ,the Canadian Association of Broadcasters appeared before House of Commons Special Committee on Broadcasting and urged the committee study possible ways of bringing Cable TV, "Pay as You See TV," and various forms of passive and electronic repeating devices under BBG (Board of Broadcast Governors) control.

In its brief submitted to the Committee, the CAB made these statements (taken from text): "Essentially, **all (devices, including Cable TV, Pay as You See TV, re-broadcast devices)** are devices which are in fact in the end result broadcasting, although not so defined in the Broadcasting Act as it now stands . . . "Whatever the mechanical means employed (to bring the television signal to the viewer), each of these systems provides a service that is in fact broadcasting, notwithstanding that in some cases (i.e. CATV, Pay as You See TV) Hertzian waves are not employed for transmission to the subscriber.

"In those cases where a pick up tower is used, a receiver license from the **Department of Transport,** is required. We (the Canadian Association of Broadcasters) are informed that a condition of the (receiver) license requires the (CATV) operator to make available (at least) one Canadian program channel. However in most cases of which we have knowledge, the (CATV) operator also provides one or more United States channels. It is the provision of these latter that makes economic operation of the devices possible. It will be readily seen that all of these devices are effective and growing competition with stations licensed as broadcasting stations under the Broadcasting Act."

The brief filed by the CAB goes on to point out that under BBG and DOT regulations which control their (licensed) station operation, they are directly limited as to the extent of U.S. (or other) programs they bring to their viewers, the type of advertising they may engage in ,etc.

But, the brief continues, "none of these limitations are imposed on (CATV) systems which do not (presently) fall under the regulation of any government agency save the loose antenna license imposed by the D.O.T."

The CAB predicts that it is possible at some point in the future CATV operations may grow to the point where they link city with city by microwave relay, in effect distributing foreign (i.e. U.S.) programs to Canadians. The CAB also points out the possible success of the **Famous Players Corporatin** "Pay as You See" experiment in Etobicoke, a suburb of Toronto. The CAB brief expresses a fear that should the Pay TV experiment succeed, its operators might wish to extend its services across

(Continued on page 30)

TRANSLATOR TOPICS

Prepared monthly by
James Beamer*
P. O. Box 833
Livingston, Montana

NOVEMBER 13-19 SET FOR FUND DRIVE

The "visible impact" of VHF Booster-Translators will be very evident during mid-November if activity at press time is any indication of results. Booster Clubs throughout Wyoming, Montana, Idaho, Colorado and Washington have appealed to their respective governors to proclaim November 13-19 as "**Booster Week.**" With the added impetus of an official proclamation, Booster operators hope a week-long fund raising campaign will pay off in sufficient monies to keep the units going through 1961. Prime target for the expected contributions are the conversion and installation costs for the 1840 VHF Boosters soon to become VHF Translators.

In Montana, Wyoming and Idaho a window sticker displayed at the viewers front door is proof sure the tv watcher has contributed to his town's VHF Booster.

The money going into the individual "home town club" kitties will be used to finance the sometimes expensive conversion of the existing equipment to equipment falling within the specifications of the Federal Communications Law "part 2, subpart F, paragraph (C)," which legalized VHF Boosters.

DXing Horizons urges all VHF Booster operators to make the most of the state organization's freely offered aid in preparing a fund drive for your Booster. UHF clubs as well are urged to make the most of "Booster Week" (so named because many Booster operators have not fully accepted the FCC "Translator" term for their units).

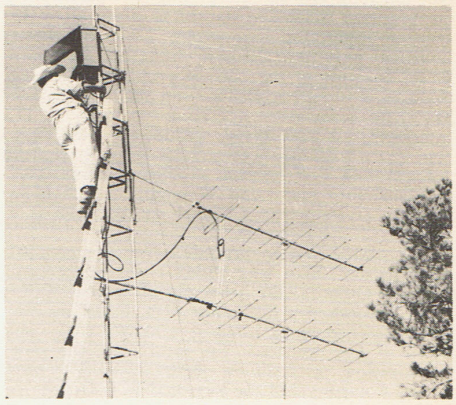
CHANNEL COORDINATION PLANS PROPOSED

At least three separate **channel coordination** plans have been presented, or are about to be in operation in the western states.

It has been generally agreed, and even emphasized by the FCC, that some form of coordination of the use of VHF channels for Translator use is necessary. To date there have been no vocal opponents to **channel coordination.** But just how the selection of operating channels will be made still remains undecided as this is written.

Following the licensing provision introduced into FCC law in late July, DXing Horizons inquired into the FCC interpretation of "**channel coordination** by Booster operators." It must be remembered the FCC has stated it will not participate in the granting of channels to VHF Translators. However, as this quote will show, the FCC will, with its limited knowledge of the terrain and propagation factors in western reception areas, decline grants where obvious interference will result.

Our letter of inquiry, for an official statement of record, was addressed to Edward W. Allen, Chief of the Engineering Bureau at the FCC. Our answer came from Ben F. Waple, Acting Secretary (since the resignation of Mary Jane Morris) of the FCC.



This is Charlie Star, 80 miles by road from anyone—or any town—between Bear Lodge, Montana and Sundance, Wyoming. The amazing story of Charlie Star's fight to bring television to his 5,000 acre Montana Ranch will be detailed in December. DXH flew in to see Charlie Oct. 4. Here he adjusts his channel 6 Booster.

Quoting out of text, "**Our rules leave the choice of frequency to the individual applicant with the understanding that complete protection must be afforded to direct reception of the signals of broadcast stations, and that interference between TV translators must be resolved without commission intervention. The commission will not, of course, grant requests for frequency assignments which would obviously result in mutual interference between TV Translators. The obvious cases are those involving proposals for co-channel or adjacent channel assignments to serve all or a substantial part of the same area.**"

One more sentence from the pen of Ben Waple deserves display here. DXing Horizons inquired if the FCC might be prone to "approve" the operation of a frequency allocation board, if one were set up by various state groups on a joint basis. The answer, "**We do not consider it desirable at this time to delegate the responsibility for the selection of an operating frequency for a TV Translator to a voluntary board, or require the endorsement of such a board before a frequency assignment is made (final).**" End of quote.

PLAN "A"

The Washington State TV Reflector Association has appointed Robert Farquhar as "**channel coordinator**" for that area. The channel coordination problem in Washington is not expected to be too difficult as most VHF Booster-Repeaters are located in one section of the state (around Wenat-

chee). Farquhar, of Wenatchee, says all of the operating VHF units in his area have filed their form 347A's with his coordination center, and the Washington area is "clean."

PLAN "B"

Unlike the relatively uncluttered regions in Washington, the TV Booster allocations picture in Montana, Idaho and Wyoming is not so "clean." Not too long ago an enterprising sort partitioned the Montana State Legislature to place all VHF Booster outputs on channel 11. While his intentions may have been the best, the results were not. As an example of the current problems plaguing this area, a 40 mile stretch around Shelby, Montana has three translators operating on channel 11. Interference is widespread, with none of the three apparently willing to change operating channels.

Expanding this type of problem across all of Montana, into Idaho and Wyoming, the problem becomes crystal clear. **Channel coordination** is a must!

One of the first to propose a **"master channel coordination"** plan was **Video Utility Company,** with Pat Quinn at the helm, out of Seattle. Video Utility proposed a five point plan, based on VU acting as channel coordinator. The VU plan consisted of five divisions: the local club, the state organization, a technical field advisor, Video Utility Company and the Regional FCC Office.

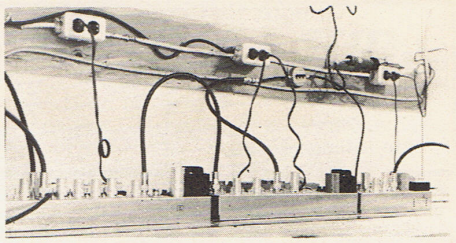
The local club would deal with the field technician in matters pertaining to its Booster operation, and deal with the state organization in matters pertaining to arbitration of channel conflicts. The field technician, aside from dealing with Booster clubs in his region, would report to Video Utility Company with local field gathered facts supporting or disproving the various factions involved in any arbitration which might arise. Video Utility Company, aside from dealing with the local field technician (who would also serve as an agent for Video Utility Company), would present vertical plots, coverage maps, and measured interference data to the State Booster Committee arbitration board. The state Booster group, having reached a decision, would issue an **"allocation change"** order, to one or more affected Boosters, with 60-90 days in which the change of channel could be effected. If the local Booster refused to change channel, the next step for the state board would be a letter to the FCC Regional and Washington Offices notifying them that the offending unit(s) were not cooperating in a voluntary allocation program.

This, in brief form, is the context of the **channel coordination plan** presented by Video Utility to the Tri-State TV Repeater Association Board meetting Sunday, October 16. The plan was voted down, with the feeling expressed that had the Tri-State Executive Committee approved the plan, Video Utility competitors might have screamed **"foul ball."**

As an alternate, the Executive Committee attempted to retain the good points of the Video Utility plan, with

PLAN "C"

Plan "C" is now in the process of being ratified by the various state and local groups affected. At press time, it appears that this ratification will be successful, and in December we will be in a position to report the final form this proposed solution takes.



Planned installations such as this one using Benco equipment at Hamilton, Montana may need only code and tracking unit to meet FCC specs.

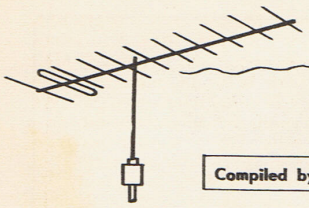
As it now stands, here is how the Booster groups own coordination plan will work. To supervise a **master plan** for allocations, the Tri-State group will hire an **"area director."** The **area director** (already discussed for this position is a prominent Shelby, Montana VHF Booster-Translator advocate) will headquarter in Montana, with high level assistants in Wyoming, Idaho and Montana. Three assistants are planned for Montana, two for Wyoming, one for Idaho. All will be paid employees of the Tri-State TV Repeater Association. The assistants will actually be field technicians. The Director of the **channel coordination program** will serve in the capacity of an engineer. The assistants, traveling about the countryside with their test and alignment equipment, will work with local club technicians, where they exist, in surveying the individual needs of the boosters. Once the type of modifications and changes necessary have been determined, this information will be sent to the director's office where a master chart will speed channel selection. From here a form 346 will be filled out and filed, directly from the directors office. At this point the individual clubs will be able to proceed on with their fund raising and eventually, before the winter-spring of '61 is over, purchase the equipment they will need to bring their Boosters into line with FCC regulations. **The clubs themselves will be in a position to purchase equipment from any firm they so desire. The field technicians will aid in the installing of any equipment purchased, but will not participate in the purchase of that equipment.**

When the equipment has been purchased and made ready for installation by the local technician, or the traveling field technician, the entire unit will be forwarded to the Director's lab where he will make the proper measurements to insure the equipment meets specifications.

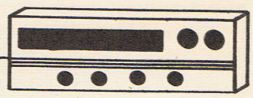
"It is the general feeling that many of the presently operating Boosters will endeavor to make use of a good portion of their already existing equipment in their new Translator installations. As a consequence, it is felt few head end amplifiers and few crystal controlled converters will be sold in areas where Benco and M.A.R.S. equipment is in use. In other areas, wholesale junking of existing equipment is expected."

What will plan "C" cost the individual clubs? At the present time, it is planned that a $25.00 fee be forwarded for handling the Form 346 application, and an annual charge of $.20 per receiver served by each Booster be used for maintaining the engineering of the **channel coordination committee.** The first year operating budget has climbed to $22,500. Obviously not all of the money can come from the

(Continued on page 28)



FM HORIZONS



Compiled by BRUCE ELVING, 1131 Vattier Street, Manhattan, Kansas

An all-FM system of stereophonic broadcasting may be in operation early in 1961. The system is expected to utilize one of six FM multiplexing systems recently tested, employing the facilities of KDKA-FM 92.9 Pittsburgh, Pa.

Multiplex FM is not new. It was developed and publicly tested in October, 1953 by Maj. Edwin H. Armstrong, a few months before the death of FM's illustrious inventor. An estimated 200-plus FM stations are currently multiplexing. The multiplexed material ranges from the innocuous background music heard in stores and offices, to baseball games for rebroadcast to other stations, and to a doctor-paging service, known as "doctorcasting."

In any multiplexing system, the ordinary receiver picks up only the main FM channel, requiring a converter to respond to the specialized programming multiplexed on the sideband. An occasional DXer or two with such conversion equipment has reported MX DX to this department.

Aside from the KDKA-FM experiment and other stereo FM tests conducted at such stations as WFUV 90.7 New York, however, a standardized system of FM multiplex stero awaits the recommendation of a special committee of the *Electronic Industries Association* (which, incidentally, is now mulling over the various systems).

Results of these tests have not been made public, but the FCC will be asked to decide on which of the methods of subcarrier modulation—FM, AM, single-side-band, etc.—should be adopted. Differing methods have been proposed by Crosby-Teletronics Corp., Zenith Radio Co., General Electric Co., Calbest Electronics Co., Multiplex Development Corp., and Electronics Music Industries Ltd., a British firm.

Until the Commission rules in favor of one of the proposed systems, it is impossible to mass produce multiplex converters and receivers. No MX receiver has been designed that will reproduce all types of subcarrier modulation. Judging from the present rate of progress, it seems unlikely the FCC will make any decision before the end of the year; by early 1961 you may be able to buy or build a converter that can be plugged into the multiplex output jack found at the rear of most recent FM tuners.

With the advent of multiplexed FM stereo on the horizon for literally hundreds of stations, complete tuners incorporating the necessary multiplex adaptor on one chassis will become common. FM multiplex thus promises to eclipse all the token broadcast stero attempts thus far, including combination AM-FM, FM-FM, TV-AM, TV-FM, AM-AM—yes, even the proposed AM sideband stereo—with the sheer technical excellence of the system. Just as virtually any FM transmission enjoys a wider frequency response and has a better ability to reject interference than any AM system, so a pure FM stereophonic system will provide the hi-fi listener with a directional program source comparable to the best tape and disc recordings.

FM NETWORK EXPANSION

The nation's largest FM network, the QXR Network, has announced that WDAS-FM 105.3 Philadelphia, Pa. will replace WFIL-FM 102.1. WCCC-FM 106.9 Hartford will be substituted for WNHC-FM 99.1 New Haven, Conn. WKOP-FM 99.1 Binghampton and WKIP-FM 104.7 Poughkeepsie, N.Y. have been added, raising the number of affiliates to 20.

Another network-type operation is the Heritage FM Stations group, which offers quality programming for 16 hours a day to subscribing stations. High fidelity tape is employed. KGMI 92.9 Bellingham, Wash., is the key station, and is associated with Seattle's KGMJ 95.7. Other stations in the Heritage line-up are: WLOL-FM 99.5 Minneapolis, Minn.; KFMX 96.5 San Diego, KFMU 97.1 Glendale, KFMW 99.9 San Bernardino, and KBAY-FM 104.5 San Francisco, all Calif.; KGMG 95.5 Portland, Ore.; WWOL-FM 104.1 Buffalo, N.Y.; WSAI-FM 102.7 Cincinnati, Ohio, and WIBC-FM 93.1 Indianapolis, Ind. Other stations will be added in the near future.

DX REPORTS

Late summer DXing activity has largely been confined to extended groundwave conditions, with

some really top-notch reception being reported by several DXH readers along the East Coast and around the Great Lakes. And auroral FM activity seems to have been at an all-time high in middle and late summer.

Your editor witnessed an excellent auroral opening in Manhattan October 6 — rivalling any Northern Lights' reception heard in Duluth, Minn. KRLD-FM 92.5 and KIXL-FM 104.5 Dallas and KFJZ-FM 97.1 Ft. Worth, all Texas, and WTJS-FM 104.1 Jackson, Tenn. were positively identified. The preceding day and evening brought reception from WHKW 89.3 Chilton, WHHI 91.3 Highland and WIBA-FM 101.5 Madison, all Wisconsin. A six-element Winegard yagi FM antenna is used in Manhattan ,although the Wisconsin stations were received in the car, atop one of the area's high hills.

REPORTER' ROUNDUP

From Toronto, Ontario, Bill McConnell has added several new stations since installing an FM yagi antenna, including: WIBG-FM 94.1 Philadelphia, Pa., Aug. 17; WJEF-FM 93.7 Grand Rapids, Mich. and WNEW-FM 102.7 New York Aug. 24; WRC-FM 93.9 Washington, D.C., WCOD 98.1 Richmond, Va., and WRUN-FM 105.7 Utica, N.Y., Aug. 26. On Sept. 6, WFMP 99.7 Pittsburgh, Pa. was logged. Fifty-four stations from seven states, the District of Columbia and the province of Ontario are in the McConnell FM log.

A Michigan DXer experiencing good results with conventional tropospheric DX is Ed McMullin, Hemlock, who has added such stations as: WHBC-FM 94.1 Canton, and WAKR-FM 97.5 Akron, Ohio; WWVA-FM 98.7 Wheeling, W. Va.; KDKA-FM 92.9, WWSW-FM 94.5 and WPIT-FM 101.5 Pittsburgh, WLOA-FM 96.9 Braddock, WRRN 92.3 Warren and WBVP-FM 106.7 Beaver Falls, all Pa. Other recent DX includes WJTN-FM 93.3 Jamestown and WHDL-FM Olean, both N.Y.; WHYY 90.9 Philadeplhia, Pa.; WHWC 88.3 Colfax, Wis.

James Hughes, Michigan's roving FM DXer, has verified such stations as WHSA 89.9 Brule, Wis., heard near St. Cloud, Minn., WJTN-FM 93.3 Jamestown, N.Y., and KTIS-FM 98.5 Minneapolis, Minn. The latter mentioned that Hughes' report was the first received from a mobile listener.

Equipped with a Silvertone receiver connected to a yagi antenna, Roger Hansen, Kalamazoo, Mich., received 11 new stations July 11 and 12, including WCKR-FM 97.3 Miami, Fla. by means of skip. WLVL 97.5 Louisville, Ky., WLBH-FM 96.9 Mattoon, Ill., WPFB-FM 105.9 Middletown, Ohio and WHLA 90.3 West Salem, Wis. are among his non-skip catches.

September DX for Dave Novick, Milwaukee, Wis. includes WMIT 106.9 Clingman's Peak, N.C.; WCPO-FM 105.1 Cincinnati, WPFB-FM, WIFE 104.7 Dayton, all Ohio; WOI-FM 90.1 Ames, Iowa and WCOW-FM 97.1 Sparta, Wis. WCOW-FM was also added to the Milwaukee log of Tom Mann.

An enterprising Duluth, Minn. DXer is Robert A. Dufault, who now has a Taco six-element FM yagi connected to his H. H. Scott tuner. New stations added since mid-September include WOI-FM; WILL-FM 90.9 Urbana, WTAD-FM 99.5 Quincy, WBEZ 91.5 Chicago and WNWC 92.7 Arlingon Heights, all Ill.; WPTH 95.1 Ft. Wayne and WMRI-FM 106.9 Marion, Ind.; WHIO-FM 99.1 Dayton and WKRC-FM 101.9 Cincinnati, Ohio; WLFM 91.1 Appleton and the new WMKE 102.1 Milwaukee, both Wis. An interesting sidelight is the fact that Dufault telephoned WNWC collect and talked with the announcer during a program inviting calls. On a similar program, however, WMAQ-FM 101.1 Chicago refused to accept the charges, with WMAQ personality Mr. Lee Vogel publicly assailing the practice of phoning radio stations collect. Capitalizing on this incident, an "interesting" verification is expected from WMAQ-FM, by Dufault. Dufault's log stands at 102 stations heard, with the most distant being WBOS-FM 92.9 Brookline, Mass., received by means of meteor skip.

EAST COAST REPORTERS

Bradley R. Graham, Fayerweather Island, Conn., received west to WUOM 91.7 Ann Arbor, Mich.; south to WJBR 99.5 Wilmington, Dela., and WKOP-FM 99.1 Binghampton, N.Y. by means of trops Sept. 7. A home-built four-element yagi is utilized.

Aug. 26 proved to be an excellent day for DX in Maryland. Walter G. Jung, Forest Hill, received WCED-FM 102.1 Dubois, Pa. and WMTW-FM 94.9 Mt. Washington, N.H. WCMC-FM 100.7 Wildwood, N.J. was heard through the signal of WTTR-FM Westminster, Md. Hank Holbrook, Bethesda, Md., grasped WBUF 92.9 Buffalo, N.Y. and WPPA-FM 101.9 Pottsville, Pa. on that date. Th best tropospheric opening of the season was Sept. 7, when WOMC 104.3, WWJ-FM 97.1, WLDM 95.5 and WJBK-FM 93.1 Detroit, WJEF-FM, and WKAR-FM 90.5 East Lansing, all Mich., and WPTH were received. WCRB-FM 102.5 Waltham and WRKO 98.5 Boston, Mass. were Sept. 8 visitors. WOMP-FM 100.5 Bellaire, Ohio, WCSC-FM 96.9 Charleston, S.C., WHCN 105.9 Hatrford, Conn., and WKCR 89.9 New York, N.Y. were among the Sept. 27-28 catches.

FM STATION DATA (Operating Changes)

On the air:
WFUR-FM 102.9 Grand Rapids, Mich. 40,700 watts
WMKE 102.1 Milwaukee, Wis. 35,000 watts

Power:
WMUZ 103.5 Detroit, Mich. now 1115,000 w
WKOP-FM 99.1 Binghampton, N.Y. now 33,000 w.

TV Reporting

Deadline for reports to appear in December DXH, November 19, in Modesto, California.

TROPS TYPICAL OF SEASON BREAKS LOOSE

Extended ground wave, reminiscent of the fall months of the early 50's, moved into the midwest, and then slowly drifted east into the Appalachians, and finally out to sea, moving north up the coast to Nova Scotia. The period covered as the high pressure area formed and moved across one-half of the country . . . September 24-28. For many DXers, it was the best session of ground wave DX reception in more than a year. Others (in the midwest) accustomed to a summer of 600-900 mile hauls on the high band, were not so impressed.

THREE GOOD PERIODS IN THE MIDWEST

DX-perts Draeb (Wisconsin), Eckberg (Illinois) and Gould (Indiana) agree . . . September 20-21, 26-28 and October 4-6 were the best during this period for ground wave in the 250-500 mile range. Bill Eckberg of Walnut, Illinois found KELO-11, Sioux Falls, 388 miles, and WDSM-6, between 2330 on the 20th of September and the 21st.

Billy Draeb, on the shore of Lake Michigan at Kewaunee, Wisconsin, caught rare KNOX-10, Grand Forks, N.D. at 530 miles on the 20th. On the 28th, Draeb watched ground wave extend south into Kansas, Oklahoma and Missouri. Seen were KTVH-12 (700 miles), KAKE-10 (700 miles), KMBC-9 (540 miles), session topper KWTV-9 (815 miles), KOED-11 (720 miles) and KTUL-8 (720 miles). All of this between 0820 and 1130 EST.

Over the 5th of October, a repeat session, south into Kansas, Nebraska and Missouri. KAKE, KTVH were the best around 1100 EST on the 5th.

KFVS-TV GOES TO 1,676 FEET!

In the midst of a small trops opening October 12th, Jim Gould, DXH Eastern Lab Engineer in Kokomo, Indiana found the KFVS-12 Cape Giradeau, Missouri signal (316 miles) announcing "tallest tower in the world." Jim called the Chief Engineer who confirmed KFVS has been on the monster tower since October 11th. They do want reports! "It sure works towards Indiana," comments Gould.

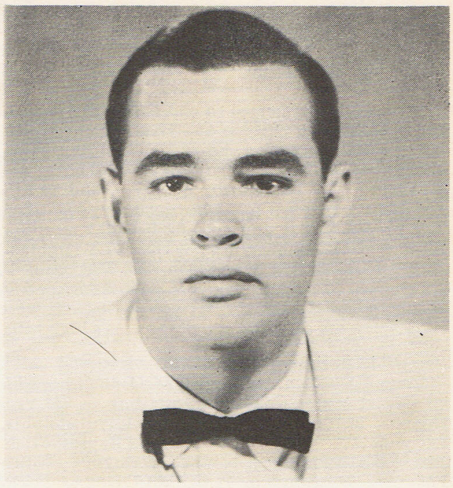
SEPTEMBER 20-21

Comments David Swanson, Chicago, "This was the best ground wave session I have seen in 15 months of DXing!" Best haul for Swanson, through rock crushing Chicago locals, WTCN-11, Minneapolis, 360 miles.

MOVING EAST

The opening of the 28th did move east. Alfred O. Heap, York, Pa. notes Sept. 24-26 brought his best UHF reception to date. DX logged over the hills of Pa. included WQEX-16, Pittsburgh, 200 miles, WFMJ-21 and WKST-33, 215 miles, and WCDC-19 275 miles. Unidentified stations on channels 17 and 18 still have Heap guessing. On VHF he saw as far west as WTOL-11, 375 miles and WLWI-13, Indianapolis.

Karl Kleintop, Telford, Pa. stretched to Wheeling, W. Va. (WTRF-7, 375 miles) early on the 25th, south to Roanoke, Va. (WDBJ-7, 400 miles) around noon on the 25th. Also seen, WSJS-12, 400 miles.



Many the time we have referred to DXer Dave Beal of Tucson as an OLD PRO. Obviously age has little to do with DXing skill! Dave is an enthusiastic 17 years young, and as skilled in DXing the video bands as most any reader of this section.

Along the Great Lakes, Mike Navarre of Detroit bids a farewell to DXing while he joins the Navy blue for a four-year hitch. Navarre went out in a big way, adding WNDU-16 and WSBT-22 on the 28th to bring his total to 112 stations logged.

Frank Wheeler also found the 25th of September "hot." Wheeler, DXing from Erie, Pa. added calls from the south (WJPB-5) and east (WFIL-6) to his log bringing the total to 140 received.

ALONG THE SEABOARD

John Dranchak, in Bridgeport, Conn. went to work with his 1961 **Mattison Receiver** (another DXer who thinks for himself!), and his record topping hauls will last awhile. Dranchak notes "at times there were three stations sliding across channels 10-13." Starting at 0100 on the 25th, Dranchak logged WRAL-5 (510 miles), WSLS-10 (475 miles), WIS-10 (685 miles), WTVD-11 (500 miles), and others in the 200-400 mile range. Dranchak has been experimenting with the **Wright 417A Circuit,** as it appeared in the April DXH.

Way up the coast, Ronald Boyd of Truro, Nova Scotia sends along a welcome report. Boyd writes "When I turned on the TV set at 1720 EST Sept. 26 many stations from New England were coming in. This continued until 0700 September 28. Calls seen to the south included Boston, Providence, Hartford, New York and Philadelphia (WRCV-3). The last one was the greatest distance, 690 miles. WRCV was logged for 23 solid hours, over nearly a 700 mile path!

IN THE WEST

Photo subject this month Dave Beal of Tucson reports E skip September 11, with stations throughout Mexico (YES . . . including the channel 6 relay on Quertaro Ridge) from 1855 to 2055, when eastern Texas low band channels (last in KPRC-2, 940 miles) were seen.

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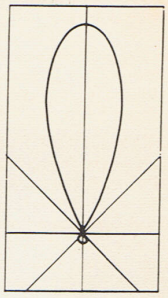

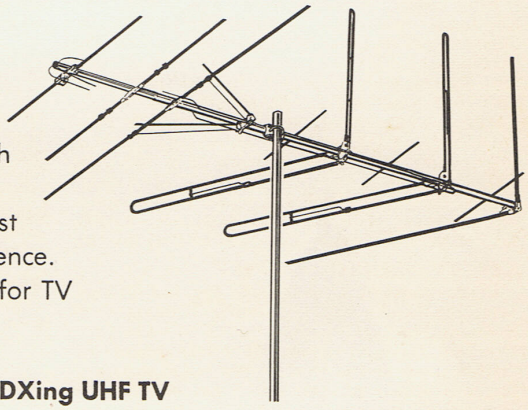

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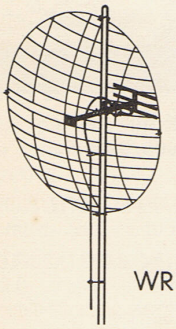

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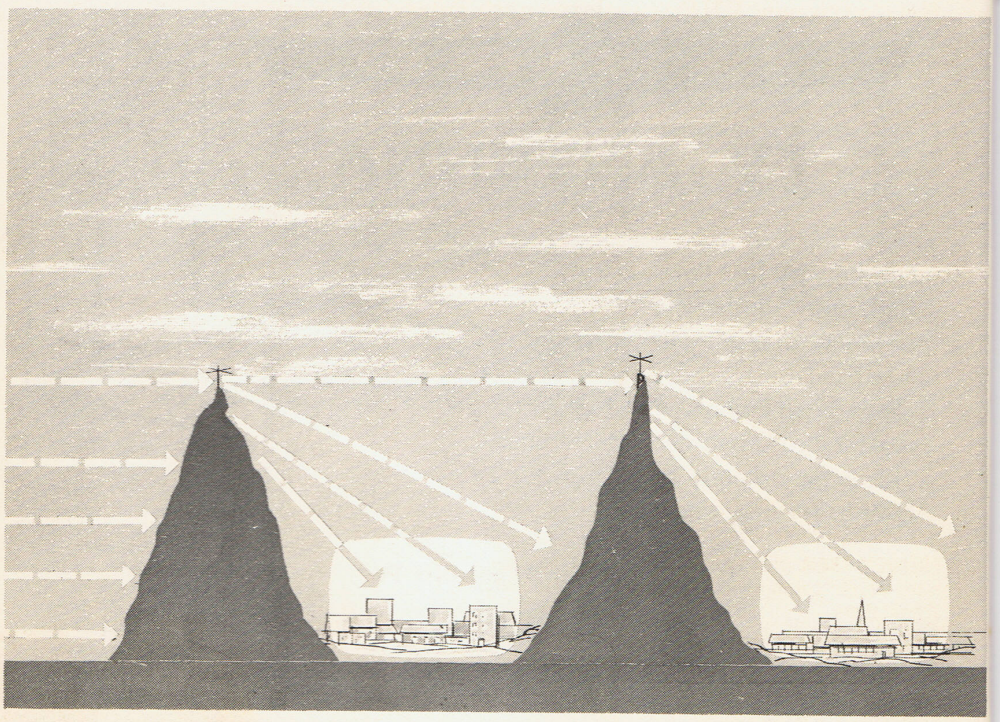

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Output: 1 watt with no measurable sync compression; 75 or 300 ohm
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- **SELF-CONTAINED METERING**... output power... A.G.C., supply voltages and complete selection of trouble-shooting points.
- **PERFORMANCE CONSERVATIVELY RATED**...complete lack of sync compression... ideal for tandem installations.

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MEDIUM WAVE DXing HORIZONS

Edited by DXing Horizons Medium Wave Editor
Glen Kippel
302 N. 2nd Street
Sterling, Colorado, U.S.A.

National Radio Club Meets In New York State

Twenty-one medum wave states and provinces represented by 43 medium wave DXers made the Labor Day weekend for 1960 a memorable one. The group, all members of the National Radio Club, assembled in White Plains, New York, under the guise of the "**1960 National Radio Club Convention,**" and an informative-spirited time was had by all.

Convention host Peter Hansen had activity rolling Friday night, September 2, and by Saturday morning the events were in full swing. Among the highlights of the meeting, a tour of the WFAS

THE ASSEMBLED THRONG These 8 medium wavers stopped talking long enough for Bob Foxworth to catch this shot in downtown White Plains. Left to right: Marv Robbins (Nebraska), Leonard Lockwood (Washington state), Bill Hutchinson (Md.), Jim Ernst (Nova Scotia), Frank Johnson (Maine), Convention Host, Peter Hansen, Bob Gorsuch (Iowa) and Len Kruse (Iowa).

(AM and FM) transmitter and studio sites Saturday; a second tour, this time at WVIP-Mt Kisco, on Sunday; a telephone call to New Zealand DXer Ken Mackey, in Dunedin; and the Saturday evening banquet get together at the Roger Smith Hotel. The banquet meeting doubled as a yearly membership business forum, where (among other things) the site of the 1961 convention was fixed for Amarillo, Texas.

As is the case at any DX convention worthy of the name, DX was the prime conversation topic. One enterprising sort brought his highly prized Hammarlund HQ-180, which it is understood did a great deal towards attracting wayward DXers into room 627 . . . where the static crackled and the spirits ran (high).

READING THE GOOD BOOK Jim Ernst (second from left) obliged for the Foxworth camera by scanning the September Medium Wave column. Left to right: Dan Barone (Florida), Ernst, Len Kruse, Ernest "Lefty" Cooper (New York), and Stan Morss (Mass.).

With this issue the reports of stations heard are listed a little differently. As you see, no matter where the station is, it is listed in the division that the DXer is located in. It could also be noted that we could use more foreign reporters, as the bulk of foreign reports is currently being carried by our DX Consultants from various parts of the world.

Speaking of DX Consultants — welcome to E. Tavares Filho of Niteroi, RJ, Brazil as our Consultant from South Amerca. As you can see by his report for this issue, he is really a top-notch DXer.

CONDITIONS . . .

DX was generally fair to good during October, with a good TP opening October 3rd. A solar flare outburst occurred on the 11th. Lowest CRPL Geomagnetic Activity Index was 03 on Sept. 25, high was 150 on the 6th. **Watch the weekend of Nov. 27-28 for TP DX, and perhaps some TA as well.**

Medium Wave Log Book

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

AMERICA

610 AUSTRALIA—2FC, Sydney, hrd around 0800, Sun. morns only. (Millar, Wash.)

610 Panama — HOHM, Circuito RPC, hrd daily around 2230-2400, good reception. Frequent ID, "Su reportero musical RPC dandola la hora . . ." (Tavares, Brazil)

680 Colombia — HJAQ, R. Miramar, Cartagena, hrd daily 2230 w-ID "Habla caneron — por la frequencia de oro de Radio Miramar — en Cartagena — 107.1 mgs FM — HJAQ, onda larga — diez kilos de potencia — filial — Radio Cadena del Norte." S-off 2400. (Tavares, Brazil)

750 Japan — JOIB, Sapporo, hrd 0445. (Wilkinson, Calif.)

750 AUSTRALIA—4QS, Toowoomba, hrd around 0800. (Millar, Washington)

750 Colombia — HJAJ, Barranquilla, s-off 2358, atop channel. (Millar, Wash.)

765 El Salvador—YSKL, R. Universal, hrd evenings, strong. (NRC)

785 North Korea—R. Pyongyang hrd off and on 0450-0645. (Wilkinson, Calif.)

800 New Zealand—1YZ, Rotorua, time pips and ID 0400, 40 over S9 but much QRN on 10-3. (Ed.)

825 Nicaragua — YNOL, Managua, ENGLISH 2200-2300, s-off shortly after. (Millar, Wash.) Hrd nightly after 2100. (McCurdy, Illinois)

830 Japan—JOBB, Osaka, good 0435, and even better 0450. (Wilkinson, Calif.)

830 Cuba—CMBZ hrd 9-10 2059. (McCurdy)

830 Hawaii—KIKI, Honolulu, hrd 0235 w-music, good sig. (Ed.)

840 Australia — 4RK, Rockhampton, hrd around 0800. (Millar, Washington)

850 AUSTRALIA—2CY, Canberra, hrd 0800 Sun. AM's only. (Millar, Wash.)

860 Dominacan Republic — HILR, R. Deportiva Handicap, hrd irregularly around 0000 w-frequent ID, fair sig, is 1 kw. Verie letter rcvd by mail. (Tavares, Brazil)

935 Nicaragua—YNW, R. Mundial hrd nitely in Illinois. (McCurdy) Hrd w-fair sig around 2230. (Ed.)

940 Japan—JOTR, R. Tohoku, Akita, good 0515. (Wilkinson, Calif.)

950 Japan—JOKR, Tokyo, hrd under KIMN 0430. (Wilkinson, Calif.)

975 Costa Rica—UnID hrd 0317-0640, 10-3. (Wilkinson, Calif.) Is TIRH. (NRC)

1000 CHINA?—Oriental music 0527-0603, had 4 or 5 tone pips 0600. (Wilkinson, Calif.) Maybe BED62 Taiwan? (Ed.)

1040 PANAMA — HOJ2, Las Tablas, hrd w-fair reception, many ID's "Ondas del Canajagua, el Reloj de la Republica." 400 watts. (Tavares, Brazil)

1075 Costa Rca—TIFC in often at 2230, ENGLISH at 2300. (McCurdy, Ill.)

1080 El Salvador—YSEB has moved here from 1075. (NRC)

1080 Colombia — HJAT, Barranquilla, in every Mon. AM after 0200. (MCurdy; Ed.)

1100 Venezuela—YVKE, Caracas, hrd eve of 9-21. (NRC)

1160 Swan Is.—R. Swan in at 2015 and later. (McCurdy, Ill.)

1180 Chile — CB118, R. Cristobal Colon, Valparaiso, hrd 9-2 at 2350, s-off 2400 w-four groups of notes. (Tavares, Brazil)

1290 Dominican Republic—HIU, R. Caribe, hrd irregularly 2320-2400 w-frequent ID, verie letter rcvd by air. (Tavares)

1390 BOLIVIA—CP30, R. Libertad, hrd w-many commercials, sked 0700-2400 EST, is 100 watts, address Box 262, Santa Cruz de la Sierra, Bolivia. (Tavares, Brazil)

ATLANTIC

611 Asiatic USSR—A station in USSR hrd at 1230 several days, QRM from European SSR on same freq. (Ericson, Sweden)

650 Liberia—ELBC hrd at s-off 1845. (Brownless, Eng.)

810 INDIA — It is VUD, Delhi, here and not VUC, Calcutta, hrd 1100. Seems to s-off 1200 or 1230. QSA 2-4 (Ericson)

1160 Swan Is.—R. Swan hrd in Sweden 9-20 at 2100, QSA 1-3, QRM. (Ericson)

1196 Poland—Warsaw, ex-1205, now here. QSA 5-plus all night in Sweden. (Ericson)

1205 Israel—Haifa hrd 10-5 at 1200, now that Warsaw has moved. (Ericson)

1210 Greenland—KBIC, Thule Air Base hrd 9-20 s-off 2221, 250 watts. (Hederstrom, Sweden)

1309 Spain — EFE23, San Sebastian now on this frequency after running around for a long time. S-off 1830. (Ericson)

1320 Nigeria—Enugu noted 9-30 at 1800, festival of Independence Day. (Ericson)

1458 Nigeria—Lagos noted in parallel w-1320 at 1830, QSA4. (Ericson)

1500 Azores—AFRTS Terceira in 10-1 at 2200, QSA 3-4, DJ show. Verie letter rvd with a fortnight. (Ericson)

1594 Morocco — AFRTS Nousseaur noted at 2200, QRM from Europeans. DJ program, of course! (Ericson)

PACIFIC

593 BULGARIA—Sofia logged good strength 8-30 w-pops to 1330. (Robinson, N.Z.)

660 Mexico—XERPM, Mexico City, fair strength 9-6 at 0631. (Robinson, N.Z.)

1160 Swan Is.—R. Swan weak thru 4MB 9-6 at 0624. (Robinson, N.Z.)

SPLATTER

BRAZIL—R. Pajeu, 1520, Afogados da Inglazeira, PE, new station with perhaps 100 or 250 watts hrd by Lars Ryden of Sweden. Sked 1000-2100 EST. ZYP20, 680, R. Copacabana, Rio de Janeiro, sked 0400-2200 EST. Address: Av. Rio Branco 277, 16° andar, Rio de Janeiro. PRA3, 860, Rio de Janeiro, sked 0400-2200. ZYF3, 1370, Caxias do Sul, RS, sked 0400-2225, is 5 kw. (Brazilian DX Club)

MIDWAY IS.—KMTH, 900, manager is George H. Tyler, J01, USN; address Navy 3080 c/o Fleet Post Office, San Francisco. (Tod via Mackey, N.Z.)

ST. LUCIA IS. (BWI)—A new station is to be constructed on St. Lucia, for 840 kcs. with 20 kw. **(Broadcasting)**

TONGA IS.—Nuka'alofa, 1020, is to be testing soon with 10 kw. (DX Times)

WESTERN SAMOA—2AP, 1420, Apia. to increase to 10 kw. (DX Times)

HAL WILLIAMS LIKES DXH!

Seymour, Conn. MW DX enthusiast Harold S. (Hal) Williams writes, "I want to compliment DXing Horizons on its publication which, I believe, is the best thing that has hit the market for the information and edification of DXers in many years."

Thank you Hal for the kind words . . . **we agree 100 percent!**

Propagation Horizons

Prepared monthly by
Stanley Leinwoll
Radio Frequency and Propagation Manager
RADIO FREE EUROPE

A noticeable improvement in DX reception will take place in the northern hemisphere due to the rapid approach of winter propagation conditions.

During the daylight hours the 11 and 13 meter bands will be optimum to many parts of the world. A significant decrease in atmospheric noise levels and ionospheric absorption during the evening and night hours will result in the 41 and 49 meter bands showing a noticeable improvement from local sunset to sunrise.

These tables show the band **most likely** to be heard between locations indicated, for the time periods as shown. For example, for a listener in the Western U.S.A. the 13 meter band is expected to be optimum over circuits to northern LA (Latin America) at 00 GMT. At 12 GMT, the 31 meter band will probably be best for receiving West European stations.

Since the modes of propagation on which this information is based are via the normal F layers of the ionosphere, the laws of reciprocity will generally hold, and a listener in Australia, for example, would probably receive signals in the 11 meter band at 0000 GMT better than any others.

Reception of distant short wave radio signals depends on several parameters which are subject to considerable variation. Among these are transmitter power, antenna gain, noise levels at the receiving site, and propagation conditions over the path. The data given here are therefore designed to serve only as a guide. During certain hours propagation over some of the circuits shown (for example, East Coast U.S.A. to Australia and New Zealand) is extremely difficult, regardless of transmitter power used, with reception, except under unusual propagation conditions, extremely unlikely.

In general, the bands immediately above and below those shown will be next best, although during periods of unusual propagation, such as storms, sporadic-E, etc., there may be little agreement between actual conditions and the data in the tables.

Since propagation over a path does not usually change radically over a short period, data is given only for even hours.

In addition to shortwave propagation data, the hours during which medium wave DX is most likely are shown with an asterisk.

Since this is a new column, our readers are invited to participate in it by submitting suggestions for its improvement as well as items of interest. We will answer all questions, with the more interesting ones appearing in the column.

SUNSPOT COUNT FOR SEPTEMBER—As heard from HER4, 9.535, Berne, Switzerland: SEPTEMBER AVERAGE — 125.3. PREDICTED — OCT. 107; NOV. 105; DEC. 103; JAN. 101; FEB. 99; MARCH 97.
—Grady C. Ferguson, North Carolina

Between Western USA and Time GMT	West Eur	East Eur	No LA	So LA	Nr East	No Afr	So Afr	Far East	Aust & NZ
00	41*	25	13	11	25	13	11	11	11
02	41	25	13*	13	31	16	11	11	11
04	41	25	19*	16*	31	25	16	16	11
06	41	31	25*	19*	41	25	25	25	13
08	31*	25	25*	25	31	25	31	31	16*
10	31	31	31	25	31	25	41*	41	25*
12	31	31	31	31	41	31	41*	41	31
14	31	31	31	13	41	13	41	41	41
16	11	19	11	11	11	11	41	41*	16
18	13	31	11	11	11	11	31	11	13
20	25	31	11	11	19	11	31	13	11
22	31	25	13	11	25	11	13	25	11

Between Eastern USA and Time GMT	West Eur	East Eur	No LA	So LA	Nr East	No Afr	So Afr	Far East	Aust & NZ
00	31*	31*	13*	13*	25	25	16	13	11
02	31	31	16*	13*	31	25	25	19	13
04	41	31	19*	16	31	25	25	25	19
06	41	41	25	19	31	31	25	25	25
08	31	31	25	25	31	31	25	25	25*
10	41	31	31	31	31	31	25	25	31*
12	19	25	13	16	25	19	11	25	31
14	11	11	11	11	11	11	11	25	19
16	11	13	11	11	13	11	11	25	19
18	11	19	11	11	19	11	11	25	13
20	16	25	11	11	25	16	11	25	11
22	25*	31*	11*	11	25	25	11	25	11

Between Central USA and Time GMT	West Eur	East Eur	No LA	So LA	Nr East	No Afr	So Afr	Far East	Aust & NZ
00	25*	25*	13*	11	31	25	13	11	11
02	25*	25*	16*	13*	31	31	16	16	11
04	25	25	19*	16*	41	31	25	25	11
06	31	31	25*	19	31	41	25	31	19
08	31	31	25	25	31	31	25	41	25
10	31	31	31	31	31	31	31	41*	25*
12	31	31	25	31	31	31	31	41*	31*
14	16	19	11	11	19	16	11	41	25
16	11	16	11	11	13	11	11	31	16
18	11	25	11	11	25	13	11	31	13
20	19	31	11	11	31	16	11	31	11
22	25	31	13	11	25	25	11	19	11

Abbreviations: No—North, So—South, Nr—Near, Eur—Europe, Afr—Africa, SE—Southeast, LA—Latin America, Aust&NZ—Australia and New Zealand.

SHORTWAVE STATION REPORT

DXing Horizons Salutes . . .

KENYA BROADCASTING SERVICE

Broadcasting began in Kenya with the formation of the British East African Broadcasting Company, some 30 years ago, and shortly afterwards was taken over by Messrs. Cable & Wireless on an agreement with the Kenya Government.

To that time there were about 800 licenseholders at shs 50/- per license, and this revenue, coupled with a certain amount of advertising (spot announcements), was the total available then to run a broadcast station.

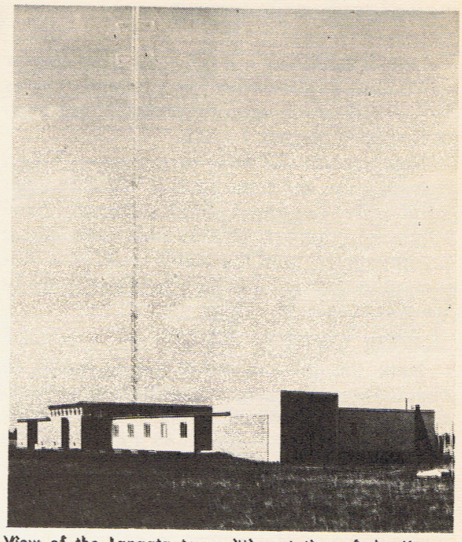
As license revenue increased, the broadcasting facilities were likewise increased. Naturally, the greatest expansion took place immediately after World War II. In 1952, a Broadcasting Commission was appointed by the Kenya Government to inquire into a full broadcasting service for the Colony, and the recommendations were generally implemented in 1958 when the Kenya Broadcasting Service was formed.

Before this, however, during the Mau Mau Emergency, the African Broadcasting Service was formed to provide the dissemination of news and entertainment to the African tribes of Kenya, and this was absorbed by KBS when it took over the English and ASIAN programs from Messrs. Cable & Wireless in October 1959.

"High on the priority list at the commencement of our operations was a new Transmitting Station located 12 miles from Nairobi, where a full MW and SW coverage is provided for two African, Asian, and European Networks," says D.J.L. Garbutt, Head of Receiving Station for Chief Broadcasting Engineer, Kenya.

"There are also subsidiary Regional Stations with one based at Kisumu which serves the Nyanza Province; one at Nyeri, which serves the Kikuyu-speaking people around Mount Kenya, and one at Mombasa which serves the Coast Province for the Swahili- and Arabic-speaking listeners. This latter station is in the process of being rebuilt with a powerful 20-kw. MW transmitter to cover the whole of the coast area of Kenya.

"Our new Broadcasting House in Nairobi is nearing completion. This contains the African, Asian, and English National Studios, together with auxiliary departments, record library, a canteen, and so on." (This building should be in operation by this time.—Ed.)



View of the Langata transmitting station of the Kenya Broadcasting Service.

A new Receiving and Monitoring Station is under construction and should be finished by the beginning of next year. The facilities offered by this station will include the provision of direct relays from the BBC over its various networks of English and special language programs directed to East Africa. Relays from other broadcast stations on their international SW networks are also envisaged in the future.

According to a recent issue of RADIO TIMES OF KENYA, edited by Pamela Knight, the ENGLISH NATIONAL SERVICE is radiated on frequencies of 4.885 and 7.240; the ASIAN NATIONAL SERVICE is on 4.855 and 7.150, and the AFRICAN NATIONAL SERVICE is on 4.934 and 7.210, from Nairobi. Kisumu channels are 4.804 and 7.288, and Mombasa transmits on 4.965.

All transmissions are regularly identified by the words, "*Kenya Broadcasting Service,*" preceded by the appropriate national or regional service identity. Interval signal contains the sounds of African birds.

Verification is by letter. QRA in Nairobi is P. O. Box 621; n Mombasa, P. O. Box 584, and in Kisumu, P. O. Box 844.

Our best wishes go to the Kenya Broadcasting Service as it continues to expand its services to the people of Kenya! —KEN BOORD

"S" METER FOR VIDEO

(Continued from page 3)

the meter is reading just full scale. This resistor value must be determined by trial and error as its value depends upon the internal resistance of the meter chosen.

Now replace the tube in its socket. When it warms up, short the grid of the 6C4 (pin number six) to ground (not the chassis). Now adjust R1, the 5 k (5000) ohm *zero adjust* potentiometer, until the meter reads zero. Remove the short, and your VL Meter is ready for operation!

WATCH OUT!

Note the ground return (from meter to chassis) is made to a common buss, rather than the chassis of the minibox. This is done to safeguard against a possible shock hazard, in the case of series string or transformerless receivers. If this precaution is not taken, a possible shock hazard might exist between the minibox meter and a nearby waterpipe, or radiator.

VERSATILITY SPELLED VL

In addition to the obvious uses (i.e. "dead" accuracy indicator of proper antenna direction, trops level indicator, DX level indicator, etc.) the VL Meter can serve any number of useful purposes. Because it operates in the A.G.C. line after I.F. amplifiication, it will provide a ready check against relative receiver sensitivity over a period of time (i.e. record the average reading of a nearby station, check against this reading at regular intervals. When the meter reading begins to fall, suspect a weakening R.F. tuner tube, or even mixer-I.F. series tube.)

The meter will also help you spot "hot tuner tubes." The tube producing the best meter reading (highest A.G.C. signal) will be the best for weak signal DX reception.

R.D.G.

NEWARK NEWS RADIO CLUB OUTING

Over the weekend of September 17, the Newark News Radio Club held its yearly get-together in Walt Township, New Jersey. Highlight of the affair was the presentation of the "member of the year" plaque to Vice President Albert J. Sauerbier. The presentation was made by NNRC Awards Chairman Harold S. "Hal" Williams.

After a long series of fall conventions ,the NNRC announces a change in retinue for '61. Next year's meet is planned for June, and a final date will be set at the November 12 (1960) Board Meeting. The Annual NNRC Dinner is planned for October, 1961.

Discussing the virtues of a homebrew loop antenna, operating for demonstration purposes into a National NC-54, are (left to right) Special Features Editor Carleton Lord, Jim Tilling, Broadcast Band Editor Matt Zahner and (holding the loop) NNRC Director Bill Bauer.

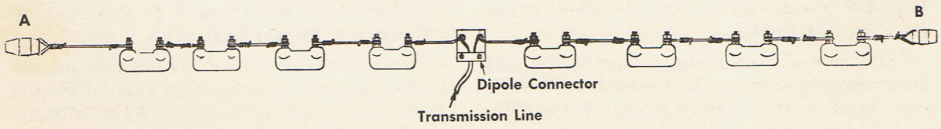
SW Product Report . . .

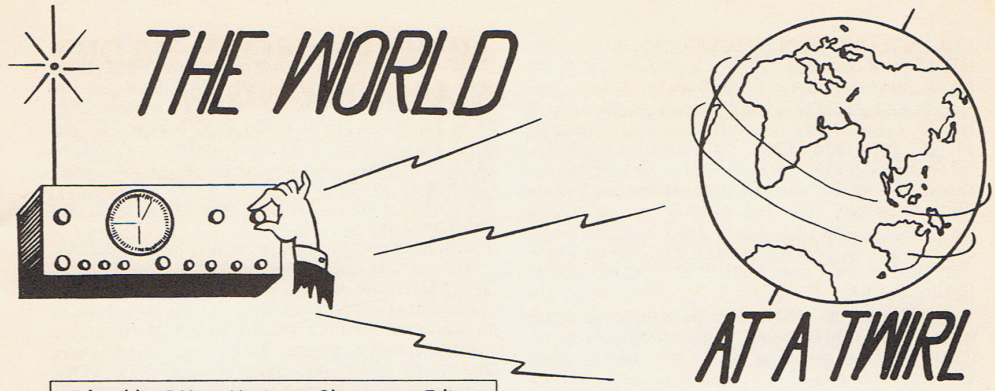
Mosley SWL-7 Receiving Antenna

39 feet 9.5 inches in length, the Mosley SWL-7 "trap dipole" antenna arrives with eight specially prepared weather-proof coated "trap assemblies," 45 feet of antenna wire and 100 feet of 75 ohm twin lead. Also included in the assembly kit, complete color coded instructions, a pair of end insulators and a dipole connection center insulation block.

The SWL-7 is designed to resonate (operate) with peak efficiency in the 11, 13, 16, 19, 25, 31 and 49 meter international shortwave bands.

The Mosley Electronics Company is the first large manufacturer to introduce a multi-band shortwave broadcast receiving antenna for the shortwave enthusiast. Priced at $14.95, it appears to have definite potentials. Unit number one from the production line is now in operation at the DXing Horizons laboratory. A full report in December.





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

DIRECTORY OF CERTIFICATES – The Directory of Certificates now lists more than 200 awards *(including those of the World Wide DX League)* available to SWLs. For full details, write DIRECT to the publisher–Clif Evans, K6BX, Box 385, Bonita, Calif., U.S.A.

Now for this month's reports (GMT) . . .

AFGHANISTAN—R. Kabul, 15.385, hrd in Fr. 1830; 1900 has ENG. for Eu., including nx, commentary, mx to close 1930; mx includes "national" numbers as well as Western type. (Pearce, England)

ANDORRA — R. Andora, NEAR 5.992, noted 2215 w-Sp. mx, songs, anncmts; ID in Sp. by YL. (Pearce, England) Andorradio, 6.305, hrd 2200-2245 w-Sp. mx, frequent ID. (Newhart, N.J.)

ANGOLA—CR6RZ, 17.795, Luanda, noted 2200-2232; dance mx to 2217, then N-Pt., commentary, wx rpt; gud sig in Mo. (Buchanan)

AUSTRALIA—With the end of British Summer Time, R. Australia is now sked to British Isles-Eu. 0745-0900, 11.710, w-DX prgm SUN. 0845.

AUSTRIA—"Austrian Radio SW Service," Vienna, logged on 6.155 at 0500 s-on w-multilingual anncmts including ENG.; gave sked for TESTS as 9.670, 11-1300; 7.245, 0400-0500, 1300-1900; 7.200, 0900-1100; 6.155, 0500-0900, 1900-2100; asked for rpts to P. O. Box 700, Vienna, Austria; sig seems much strgr than LISTED 200 w. (Niblack, Ind.)

AZORES — CSA97, 4.865, Ponta Delgada, hrd 2209-2250 w-instru mx, occasional Pt. anncmts. (Newhart, N.J.)

BELGIUM—ORU, 11.850, Brussels, noted 1800-2100, QSA5 in Minn. (Rowell)

BRAZIL—R. Dragao do Mar, 4.775, Fortaleza, hrd w-ENG. and Pt. nx 0225-0230 s-off. (Newhart, N.J.) R. Globe, 11.805, logged 2355 and hrd w-DEFINITE ID TWICE at 2400; strg. R. Jornal do Commercio has DEFINITELY RETURNED to 9.565, hrd on checks w-ID arnd 0200 in Pt. R. Gaucha, 11.915, may be hrd in Pt. arnd 2305; later, HCJB may blanket this one completely. (Niblack, Ind.) Luthero Toledo of R. Nacional de Brasilia, 11.720, says his prgm "Cine Variedades" (about the movies) is sked SUN. 1300 Brazilian Time (1600 GMT?). PSF, 14.690, "Angencia Nacional," Rio de Janeiro, QSL'd w-ltr in Pt. (Stephenson, Okla.)

BULGARIA—R. Sofia noted w-ENG. for Britain 1930-2000, 9.700, 2130-2200, 9.700, 7.670, 11.850; annces ENG. for N. Am. at 0100-0130, 0400-0430, 9.700. (Pearce, England)

CANADA—The CBC has begun a dly 7-hr SW service for listeners in Northern Canada on 9.585, 11.720, 2200-2245 to N. Quebec, Labrador, Baffin Is. (bilingual prgm) including 30 min of Fr. nx, commentaries, sports, then 10-min ENG. nxcast; and 0100-0700 in ENG., directed to whole of North, frm Eastern Arctic to the Yukon, w-N-E on the hour; 50-kw. xmtrs at Sackville, N.B., are used and rpts wll be greatly appreciated to CBC Northern Service, P. O. Box 806, Ottawa, Ont., Canada, accdg to word direct from the CBC. Aim is to provide listeners across the whole of Northern Canada w-a prgm 'for most of their evening hours." Most prgms are bing relayed frm the CBC Trans-Canada Network, including features, drama, mx; in winter, the sked will also include the NHL Hockey b-c and the Northern Messenger; a dly sports roundup and a northern wx summary are featured.

CAPE VERDE IS. — R. Barlavento, CR4AC, 3.950A, gud 2245 w-Pt. talks; still fair at s-off 0000 w-"A. Pt." (Schwartz, Conn.)

CANARY IS.—"La Voz de la Isla de la Palma," 7.390, is DEFINITELY located at Santa Cruz de La Palma, Isla de La Palma; hrd to 2300 (Berg, Conn.)

CEYLON — R. Ceylon has DROPPED 7.240; now TESTS on 10.100A parallel 5.020 at 0130-0430, 1230-1630. (SCDXERS)

CHILE—CE960, R. Presidente Balmaceda, 9.600, Santiago, hrd w-pop U.S. rcdgs 0000-0045; gud despite QRM; anncmts in Sp. (Buchanan, Mo.)

CHINA—R. Peking noted 1900-2000 for Eu. in ENG. on 9.457, 15.060, 11.650; 2030-2130 on 9.457, 15.060, 11.650, 11.740. (Pearce, England) Excellent lately on 15.430 arnd 0140 in ENG.; annces 11.945, 15.430, 17.720 to ECNA for 0200 opening. (Niblack, Ind.)

COLOMBIA—R. El Sol, 6.115, Cali, hrd s-off in Sp. and w-Nat. Anth. 0453; strg in N.J. (West) R. Sutatenza, Bogota, hrd on NEW 10-kw. outlet of 6.075 at 0210 w-talk in Sp., excellent sig. (Buchanan, Mo.) Noted s-off arnd 0300 on 6.075, parallel 5.075, strg level in Ind. (Niblack) Rptd TESTING a NEW 50-kw. xmtr on 5.095. A previously UNID stn on 6.104 is R. Vision, Medellin, accdg to New-

hart, N.J.; hrd w-N-Sp. 2345-0000 thru severe QRM; Newhart says "correct" sked for ENG-Sp. frm R. Bucaramanga is 0300-0330.

CONGO (THE)—UN Forces Prgm is radiated frm R. Leopoldville 0530-0600, 9.765; 1230-1245, 11.795; 1800-1830, 9.765. (WRHB) Leopoldville, 9.210, noted 2135 w-mx, ID; also hrd 0410-0500 check; IDs in Fr. now as "Radiodiffusion Republique du Congo." (Rowell, Minn.)

COOK IS.—ZK1ZA, 5.050, Raratonga, fair 0545-0630 s-off w-"GSTQ," MOVED frm 4.965; CWQRM; 1 kw.; sked THUR. ONLY 0430-0630. (Balbi, Calif.)

COSTA RICA—TIFC, San Jose, sent sked for 9.645, 6.037 of MON.-SAT. 1200-0500, SUN. 1230-0500; said is awaiting QSL cds frm printer. (Pearce, England)

CZECHOSLOVAKIA — R. Prague noted on NEW 7.340 outlet 0345-0400 answering listeners' ltrs; QSA5 in Minn. (Rowell) Sked direct frm R. Prague lists 0030, 9.550, 9.670, 11.830, 11.990, 15.280; 0300, 0500, 7.340, 9.550, 9.670, 11.830, 11.990; especially wants rpts on 7.340, 9.670 outlets. (Huff, Calif.)

EGYPT (UAR)—R. Cairo beams to L. Am. on 9.790, 15.390 in Pt. 0000-0045, Sp. 0045-0130, Ar. 0145-0245; also noted w-"unscheduled" xmsn in Ar. which starts 0300. (Newhart, N.J.) Cairo noted on 9.805 at 2135 w-Ar. mx. (Rowell, Minn.) Hrd on 17.915 at 1655 in Ar. (Kelly) Has MOVED to 11.940 in beam for Eu. w-ENG. 2130-2230; bad QRM. (SCDXERS)

ENGLAND—Latest sked of BBC's N. Am. Serv. is 1100-1115, 15.310; 1415-1815, 21.675; 1600-1815, 25.840. The GOS is radiated to Canada, U.S.A., Mexico 2115-2215, 15.375; 2115-0015, 11.860; 2215-0300, 9.510; 0015-0300, 6.110. (BBC) The BBC has added a WEEKLY SW Listeners' Corner feature to its GOS in various xmsns. (Balbi, Calif.)

FINLAND—OIX4, 15.190, Helsinki, noted 2058 ending ENG. sessions; IS, ID 2104, then dance selections to 2122 ID, followed by talks in Finnish. (Boice, Conn.)

FRANCE—RTF, 9.585, Paris, strg 2200 in Ar.; NEW 11.885 channel noted closing 0100 in Fr. (Niblack, Ind.) ENG. is now 2000-2100, 6.145. (SCDXERS)

GERMANY (WEST) — DW, 5.980 hrd s-off 0445 in Ger. (Howald, Calif.) Noted on 11.905 at 1830 in ENG., then in Fr. (Niblack, Ind.) Norddeutscher Rundfunk hrd 2245-2310 s-off w-orchestral mx on 6.075; Bayerischer Rundfunk, 6.085, noted 2325-0015 s-off w-orchestrals. (Newhart, N.J.)

GHANA—Accra, 3.366, noted 2210 w-orchestrals, and closing 2215A. (Pearce, England)

GOA (PT. INDIA)—A short time ago, R. Goa was being hrd on 17.835 w-N-E arnd 1900; closed 1930 w-"A. Pt."; more recently, however, seems "missing." (Roth, Conn., others) Noted by Berg, Conn., early as 1725 in Pt. Also hrd in Calif. by Balbi, w-some QRM frm WDSI, 17.830. May be the long-projected 50-kw. xmtr?

GUATEMALA—TGQB, 11.700, noted 0330 w-Sp. pop mx. (Rowell, Minn.) R. Clube de Guatemala, 6.160A, hrd w-Sp. pop mx 0920, mentioning Cadena Azul y Blanco (Blue and White Network). (Hathaway, Texas)

HAITI—4VEH, Cap Haitien, has TESTED TWO NEW 2.5-kw. xmtrs at full power on TEST channels of 1,015 kc. and 6.039; REGULAR fqs are 1,040 kc. MW, 6.120, 9.770; 6.120 recently REPLACED 6.000 due to QRM frm R. Swan. (West, N.J.) Hrd on the NEW 6.120 outlet on a SAT. at 1030 w-mailbag session; strg level in Conn. (Schwartz) Noted by Niblack, Ind., on 6.000 at 0330 when said NEW xmtr was NOT ready for full-time duty, only partial.

ICELAND—TFJ, Reykjavik, was hrd ONE DAY ONLY in late September on 11.785 frm 1956 w-ID in Icelandic and IS of 8 gongs at 2000, then talk; believe has MOVED to 11.780 but, if so, is blocked there by the BBC. (Berg, Conn.)

INDIA—AIR, 11.830, Delhi, s-on 1145 w-strg sig; ID in ENG., then lang to s-off 1315. VUD, 21.555, fair w-N-E 1400-1410. Hrd on 17.830 s-on 1545 w-N-E; strg; Swahili 1557 to s-off 1645; "annces" 17.840, 15.225. (Balbi, Calif.) AIR, 11.810, opens 1220A w-prgm preview in ENG.; N-E 1230. (KBLP) ENG. for Eu. 1945-2045 noted on 11.710, 9.720, and for W. Afr. on 15.150, 17.705; hrd in ENG. 1000-1100 on 21.615, 17.730, 21.690 for Australia-N.Z. (said also on 17.830, 15.270 for NE Asia). (Pearce, England) AIR, 9.530, Calcutta, noted 2324-2345 in native; AIR, Bombay, 9.550, noted 1400-1500, QSA4 in native prgmg. (Rowell, Minn.) Madras has MOVED frm 7.260 to 9.590 for xmsn 0400-1115. (SCDXERS)

INDONESIA — Djakarta has RETURNED to LISTED and ANNCD 9.585 frm 9.593A; now often BEST on parallel 11.795 in ENG. xmsns 1100-1200, 1430-1530; N-E 1115, 1445; Ar. 1530-1600 s-off. Noted MOVED to 11.825 frm 11.785 s-on 1615 in Ar., parallel 9.585; Fr. 1700 to Eu. (Balbi, Calif.)

IRAQ—R. Baghdad, 6.030, noted w-ENG. at NEW TIME of 2030-2100; has severe QRM frm Suddeutscher Rundfunk, Stuttgart; hrd on 3.297 at 2030 w-talk in Ar. (Pearce, England)

ISRAEL — 4XB31, 9.009, Tel Aviv, noted in ENG. 2125-2200, QSA3 in Minn. (Rowell) Hrd ending Fr. 2000, then in Hebrew. (Boice, Conn.)

ITALY—RAI, 9.515, Caltanissetta, noted 0455 w-"National Prgm" in It.; fine mx. (Rowell, Minn.) Rome, 21.560, noted 1505 after IS, ID s-on, hrd in Far-Eastern lang, mostly talks, some light mx. (Boice, Conn.)

IVORY COAST—R. Abidjan, 4.940, hrd 2205-2245 w-Fr. mx, nx; gud level in N.J. (Newhart)

JORDAN—Amman, 9.530, hrd w-ID at 0330 s-on w-series of Ar.-sounding instruments; N-Ar. 0400, 0500; some QRM; hrd to arnd 0530 fade-out; all-Ar. xmsn w-some Wn. mx; believed 100 kw. xmtr. (Balbi, Calif.)

KATANGA—R. Katanga, 11.865, Elisabethville, noted arnd 0500-0600 or later; mostly native except N-Fr. 0507-0522; strg; suggest rpts be sent via FBS, Lusaka, Rhodesia. (Berg, Conn.)

KOREA (SO.)—Latest sked frm "Voice of Free Korea," Seoul, lists N. Am. Serv. 0530-0630, HLK41, 15.125, HLK6, 11.925; Hawaiian Serv. 0730-0830, HLK41, 15.125; SE Asian Serv. 1400-1500, HLK43, 17.800. (Howard, Mo.) Hrd on 11.925 w-talk in ENG. 1435; ID 1445 and asked for rpts; said all CORRECT rpts would be DEFINITELY QSL'd. (Niblack, Ind.) HLK5, 9.640, now hrd in lang to s-off 1430 instead of 1330; strg in Calif. (Balbi)

KUMWAIT—R. Kumwait is now sked 0230-0700, 0900-2100, 4.967.5, 10 kw. (WRHB)

LAOS—GDX-aren, Sweden, says a NEW stn, probably belonging to the King of Laos and some Army leaders, has been hrd anncg in Laotian: "This is the Evacueers Radio Station. We are transmitting on 2.175, 6.050, and 1,460 kc." Hrs of xmsn were given as 2300, 0500, and 1100. (SCDXERS)

LEBANON—R. Beirut, 8.006A, noted 2226 w-Ar. chants on a SAT., may run later than day; normal s-off is 2200A. (Buchanan, Mo.) Powerful stn hrd on 7.280 noted in Ar. to closing arnd 2200, seems to annce as "Huna Beyrouth." Beirut? (Boice, Conn.)

LIBERIA—ELWA, 11.825A, Monrovia, is now excellent in wkly xmsn (WED.) to N. Am. 0100-0345A. (Sisler, W. Va., others) Hrd on 4.770 in native 0645-0700 w-ENG. ID 0645, 0700. (Newhart, N.J.) Observed on 15.085A w-ENG. ID 1845, then religious subjects in lang. (Niblack, Ind.)

LIBYA—Benghazi, 3.305, hrd 2100 w-talk in Ar., then vocal Ar. mx; off w-Anth. 2200. (Pearce, England)

MARTINIQUE — R. Martinique, 5.995, noted 0055 in Fr., QRM'd by HRP11. (Rowell, Minn.)

MEXICO — XEBR, 11.820, Hermosillo, "El Heraldo del Sonora," hrd 0300-0430 w-all-Sp. prgmg. (Stephenson, Okla.)

MOROCCO—R. Marocaine, Rabat, noted w-N-E 1815, MOVED to 11.755 frm 11.735. (Roth, Conn.) Hrd 2235-2300 w-Ar. mx; QRM'd 2250 by Moscow w-"warm-up" chimes. (Rowell, Minn.)

MOZAMBIQUE — Lourenco Marques, 9.620A, strg 1400-1500 s-off in ENG. and lang; at s-off, said to tune to 25-, 42-, or 60-m. outlets. (Balbi, Calif.)

NEW CALEDONIA — R. Noumea, 6.030, MOVED frm 6.035, hrd in clear 0700-1030; all-Fr. (Balbi, Calif.)

NEW GUINEA (AUSTRALIAN)—VLT6, 6.130, Port Moresby, noted at gud level 1030; ABC N-E 1100; no sign of CHNX, Canada, on channel. (Schwartz, Conn.)

NICARAGUA—Estacion Equis is now ID'g as Radio Equis and operates 1200-0600 on 6.027 w-3.5 kw. R. Norte, 6.200, Somoto, 1 kw. is a NEW stn, YNJM, hrd arnd 0400. (Jones, England, via SCDXERS)

NIGER — R. Niger, 5.020, hrd 0545-0600 w-native singing accompanied by native-type instruments; also some Fr. songs; YL anncr in Fr. (Howald, Calif.)

NIGERIA—Lagos, 4.990, hrd w-U.S. pop mx 2130-2200 s-off. (Newhart, N.J.(Observed 0500 w-devotions in ENG. and prgm preview. (Rowell, Minn.)

NORWAY — LLN, 17.825, Oslo, hrd 0000 in Norwegian, folk mx; s-off 0020 w-Anth. (Boice, Conn.)

PAKISTAN—R. Pakistan, 15.160, noted 1400 w-commercial N-E, then native mx to 1445 when had usual N-E; hrd w-ENG. for Britain 1915-2000 on 7.010, 9.605. (Pearce, England)

PERU—R. Nacional del Peru, 9.562, Lima, hrd 0345-0500 in all-Sp. prgmg. (Stephenson, Okla.) R. America, 9.452, noted 0430 w-Sp. mx; QRM'd by phone carrier. (Rowell, Minn.)

PORTUGAL—EN, Lisbon, noted opening 0959 w-"A. Pt." on 21.495, 21.700. (Pearce, England) Observed on MEASURED 9.750 arnd 0300, probably MOVED frm LISTED 9.746 to escape QRM. (Niblack, Ind., others)

ROUMANIA—R. Bucharest noted opening in ENG. 2230 on 9.570, 11.937. (Pearce, England) Hrd on 15.250 at 0230-0300, QSA5 in Minn. (Rowell)

SARAWAK — R. Sarawak, Kuching, noted MOVED back to 4.950 frm 6.060; strg 1300 w-BBC N-E. (Balbi, Calif.)

SAUDI ARABIA—Djeddah, 11.950, nted 0440 w-Ar. mx; relatively weak yet. (Rowell, Minn.)

SENEGAL—R. Senegal, 11.897A, noted w-N-E 2200, gud level in Minn. (Rowell) Observed closing 2330A w-native drum beats, fanfare (no Anth.) (Boice, Conn.)

SINGAPORE—BBCFES is now hrd on 11.955 w-ENG. zmsn formerly carried on 11.930 frm s-on 0910; N-E 0915, 1300, 1600; Japanese 1100; strg in Calif. (Balbi)

SP. GUINEA—R. Santa Isabel, Fernando Poo, hrd on 6.240A frm arnd 2100 to 2200 s-off (SAT. 2251); mostly classical mx; all-Sp.; IS either single gong or music-box; gud level; anncd, "Transmite Radio Santa Isabel." (Berg, Conn.)

SUDAN — R. Omdurman, 11.855, noted 2030-2100 w-Ar. mx; xmsn seems to be 1845-2100; QSA5 in Minn.; also hrd 0415-0500. (Rowell) Noted in Japan by Tabuchi on 5.039 to 2100 c-d. (JSWC)

SWAN IS.—R. Swan, 6.000, noted recently 0000-0045 ENG., 0045-0345 Sp., dual w-MW 1,160 kc.; earlier was noted on 1,160 kc MW 0200-0330 w-prgm for Cuba, while 6.000 carried prgm for Dominican Republic 0300-0430; sked seems still vy unsettled. (West, N.J.) Hrd w-N-E 0030-0040 on 6.000 at gud level, man anncr; anncd ENG. for every day at that time; carries commercials. (Niblack, Ind.) Hrd on 19.980A s-on 2230 w-N-E, and ID of "The Voice of the Caribbean"; 2240 N-Sp. to 2250 s-off; some CWQRM; hrd dly EXCEPT SUN.; "annces" ONLY 6.000 and 1,160 kc. (Balbi, Calif.)

SWEDEN — Stockholm noted MOVED frm 11.810 to 11.805 at 0145-0215 to ECNA. (Roth, Conn.)

SWITZERLAND — SBC, Berne, noted 0130-0315 now on 9.535, 11.865, 15.315. (Howard, Mo.) WINTER skeds will be effected Nov. 6; ENG. will include 0130-0315, 0415-0500, 6.165, 9.535, 11.865; 0715-0945, 11.865, 17.785, 21.520; 1245-1430, 17.785, 21.520; 1445-1630, 17.785, 21.605; 1645-1830, 15.315, 21.605; 1845-1930, 7.210, 9.545. Afr. Serv. will include NEW ENG. session 0515-0600, 15.315, 17.785; 1445-1630, 17.785. (WRHB)

SYRIA (UAR)—R. Damascus, 15.165, noted w-Ar. nx 2320-2332; nice sig in Conn. (Boice)

TAIWAN (FORMOSA) — "Voice of Free China," 17.785, Taipei, noted to ECNA 0130-0200 in ENG. nx, commentaries, mx; man and woman anncrs; QSA2 in Minn. (Rowell) Observed on NEW 9.720 channel 1115 in Chinese, also at 1330; is used 1230-1330 w-"The Little Dragon Show" in ENG., parallel 7.130, 15.225, 15.345, 17.785. (Balbi, Calif.)

TUNISIA—R. Tunis, 11.970, hrd 1900-1925 w-Ar. nx. (Newhart, N.J.) Hrd in Minn. 1830-1900 w-Ar. nx, talks, Ar. mx. (Rowell)

TURKEY — TAP, 9.745, noted w-ENG. 2100-2145 when anncd 7.285 as in parallel. (Pearce, England)

UNION OF S. AFR.—SABC noted on NEW 21.525 outlet 1700-2000 s-off parallel NEW 15.265 channel, hrd 1500-1730 then is QRM'd; in ENG. TUE., THUR., SAT.; N-E 1900. SABC has NEW sked on 25.800 of 1100-1400; 1400-2000 is on 21.525, 15.265 in Afrikaans other days. (Balbi, Calif.) Springbok Radio, SABC Commercial Serv., hrd on 4.945 at 0500-0530 w-mx, time checks, commercials. (Rowell, Minn.)

U.S.A.—NEW sked of WRUL, New York City, is Eu.-Afr. 2100-2200 (SAT. frm 2000, SUN. frm 1945), 17.750, 15.380; to L. Am. 2300-2400 (SUN. frm 2215), 17.750, 15.380, 11.830. LISTENERS CORNER (including DXH DX newscast on THIRD WEEK-END OF MONTH) is SAT. 2015 to Eu.-Afr. and SUN. 2345 to L. Am. Also carries Pt. to Brazil dly 0000-0030, Sp. to L. Am. dly 0030-0230.

VATICAN—HVJ observed MOVED frm 11.685 to 11.740 w-N-E 1815-1830. (Roth, Conn.) Hrd on 11.740 now parallel 15.120 to L. Am. 0030-0045, QSA5 in Minn. (Rowell) Noted opening 1645 on 11.740 w-QRM frm VLC11. Hrd opening 1600 in ENG. on 17.840. (Balbi, Calif.)

VENEZUELA—YVLK, 4.970, Caracas, R. Rumbos, hrd on a SAT. 2355-0002 w-talk in ENG., then went into Sp. (Buchanan, Mo.)

VIETNAM (SO.)—Saigon, 11.950. noted 1400-1500 in native; closed 1500. (Rowell, Minn.)

WINDWARD IS. — A short time ago, WIBS was hrd on 15.374A at 2245-2305 check, but more recently has not been found on that channel. (Howald, Calif.) Noted on 3.365 at 0000-0015 w-uninterrupted piano mx and talk abt condx of family life in the W. Indies. (Boice, Conn.)

YUGOSLAVIA — R. Beograd hrd w-strg sig in ENG. 1445-1500, 1545-1600 on 15.240; noted w-ENG. 1830-1900 on 9.505, 6.100; hrd more recently 1530-1600 in ENG. on 9.505, 11.735, 15.240; said also has ENG. 1645-1700 on these channels now. (Pearce, England) Observed on 9.505 at 2130 in lang. (Rowell, Minn.) Belgrade noted on NEW 11.885 outlet opening 0100 in Sp., powerful level; N-Sp., mx; off 0130. (Niblack, Ind.)

AT FADE-OUT

CLUB NOTES—ENGLAND—Congratulations to the INTERNATIONAL SHORT WAVE CLUB, London, which just observed its 31st birthday. Was founded in the U.S.A., Oct. 4, 1929; present QRA is 100, Adams Gardens Estate, London, S.E. 16, England; Hon. Secy. is Arthur E. Bear. NEW ZEALAND—Accdg. to TUNE IN, official monthly magazine of the N.Z. DX RADIO ASSOCIATION, that club has started a "Commonwealth DX Contest," covering all bands, for its members, running from October 1960 through September 1961.

AFGHANISTAN—R. Kabul, 15.385, fair 1900 w-N-E by man, commentary followed; slight QRM on fq. (Cox, Dela.)

ANDORRA—R. Andorra noted on 5.991, frm 5.980, excellent 2215 w-variety mx, man and woman anncrs in Sp. w-frequent ID. (Cox, Dela.)

AUSTRALIA—VLR9, 9.680, Melbourne, hrd w-mx followed by ID 1200; cont'd with drama. (Ferguson, N.C.)

BELGIUM—INR has now become BRT (Belgian Radio and Television). (SCDXERS) Now uses 6.140 w-ENG. 2000-2100. (WRHB)

CONGO REP.—Brazzaville, 21.500, hrd w-N-E 1400-1430 w-17.720 parallel. QSL rcd w-prgm sked; now uses 21.500, 17.720, 15.445, 15.420, 15.190, 11.970, 9.770, 7.105, 5.970 during each 24 hrs of b-c. (Ferguson, N.C.) Noted on 9.605 at 2155 w-ID, brief prgm preview, Anth. and s-off; NEW channel; ID; "Ici Radio Congo, Emision de Brazzaville." (Berg, Conn.)

CUBA—COBZ, 9.030, Havana, hrd 0030-0230 abrupt c-d w-all-Sp. talks, mx. (Stephenson, Okla.)

CYPRUS—BBC Relay, Near East, 9.649M, hrd 2055 in Ar. to 2100 s-off; weak sig. (Cox, Dela.)

EGYPT (UAR)—Accdg to WRHB, Eur. Serv. is lately on 11.915 at 1900-2230; a NEW service to W. Afr. on 17.690 ends 2145 w-prgm in ENG.

ENGLAND—BBC's NEW "Shortwave Listeners' Corner" feature is sked wkly 1215 WED., 0115 and 1730 THUR. Producer is Bill Hayes (G3CJQ); program is to cover all aspects of SWL'g. (Young, England)

GHANA—Accra, 4.915, tun d 2243 w-mx and hrd to close 2259 w-full ID, Nat. Anth. (Ferguson, N.C.)

GILBERT AND ELLICE ISLANDS—Is installing a 2.5-kw. xmtr for 6.050 w-vertical-incidence array, hopes to have this in operation by year's end. (NZDXRA)

GUATEMALA—Rowell, Minn., FLASHES that TGQR has MOVED to 11.730 frm 11.700; hrd on a SUN. 2300 and still going 0045, gud level.

HAITI—4VCB, Cayes, "La Voix du Sud," 5.740, hrd 0103 featuring L. Am. and Fr. mx w-anncmts in Fr. by man; has commercials. (Berg, Conn.)

ICELAND—TFJ, Reykjavik, DEFINITELY has MOVED to 11.780; hrd s-on 1955 w-ID many times and anncmt for "Utvarp Reykjavik" repeated twice, several times; gongs 2000, then talk in Icelandic, bad QRN. (Berg, Conn.)

INDONESIA—Accdg to info direct frm RRI, Djakarta, the 1430-1530 ENG. xmsn is directed to WCNA on 11.795 w-1-kw.; good level in Calif.: also LISTS 0100-0200 in Indonesian to U.S.A. on 11.785, 100 kw., NOT AUDIBLE in Calif. (Riggs)

IRAN—WINTER fq of R. Iran, Teheran, for Eur. is 15.105. (WRHB)

IRAQ—R. Badhdad, 6.030, gud sig 2045 w-N-E by woman; considerable carrier hum. (Cox, Dela.)

IVORY COAST—R. Abidjan, excellent in the Dom. Rep. 2200 in Fr. on 7.215. (Jaar)

JAPAN—R. Japan recently REPLACED 11.780 w-JOA, 11.705, in S. Am. xmsn 0900-1030, parallel JOB, 9.605; both strg level in Calif. (Balbi) JOZ3, 9.595, fades in arnd 0600 and becomes excellent by 0700, continues to PAST 1515; JOZ2, 6.055, audible frm abt 0700 onwards. JKI, 7.285, gud 0700, as is JKH, 7.257; stn weak level 0530 on 9.655, believed JHK2. (Riggs, Calif.)

JORDAN—Amman, 9.530, NOT HRD LATELY 0330; may have just been TESTING? (Balbi, Calif.)

TRANSLATOR TOPICS

(Continued from page 10)

clubs and viewers. To increase revenue, plans have been advanced to supplement the Booster taxation plans. Letters have already gone out to the TV broadcasters in the Tri-State area, asking that payment be made to the Tri-State kitty, to the tune of $25.00 for each Booster using the station's signal. To date KXLF in Butte has agreed to the assessment. Others are expected before this is read.

A separate levy is also planned against distributors of VHF Booster equipment, as an "override" against the large funds they will be taking in during '61, with new and modification equipment sales. This fee will be in the neighborhood of $200.

With all of the money counted up, it is hoped the revenue will equal the operating overhead for the first year of operation.

PROBLEMS

The success of this plan obviously depends on the aid and support given to it from all quarters. There will be those clubs which may not want to deal with the field technicians or the Tri-State Director. Their reasons may involve time (during periods when a backlog of units to be tested for specs are on hand), or any number of others. In such cases, they will be free to consult outside engineering services for their equipment modifications, and pay what is sure to be a higher fee. The best point in the Tri-State plan is perhaps the fact that small clubs will be able to afford the intricate filing process involved in Form 346.

INTERNATIONAL BOUNDARY AGREEMENT

At the present time an international agreement between the Canadian Department of Transport and the United States FCC limits broadcasting within 250 miles of the U.S.-Canadian border, except where special authorization has been made after agreement by both governments. However, with the great number of low power VHF Booster-Translators installed, or soon to be installed, discussions have begun between the D.O.T. and the FCC, which will relax this agreement. A formalized agreement is expected at any time which will narrow the 250 mile strip to ten miles. This agreement will affect many VHF Translators by making their licensing procedures vastly less complicated than that required by both countries, jointly.

Canadian regulations require the low power rebroadcaster to use only Canadian signals. Only in cases where no Canadian signal is available does the D.O.T. permit the use of an U.S. signal. The U.S. has no such regulation.

Particularly happy are representatives of CJLH-TV in Lethbridge, Alberta. Their signal is used extensively in northern Montana.

UHF FOR VHF IN PRESCOTT?

Serious consideration is being given a proposal in Prescott, Arizona, which would convert all existing VHF Boosters in northern Arizona to UHF Translators. This region has long been known as the home of "high power VHF Boosters" with some units reportedly using up to 40 watts output. With the strict enforcement expected with the new one watt output restriction, Prescott UHF advocates are saying "Let's switch to UHF now while we are changing equipment anyhow."

This window sticker (in red and white) tells the story in western VHF Booster towns.

VHF FOR UHF IN LA GRANDE!

From the opposite side of the fence, UHF shadow areas around La Grande, Oregon may soon be no more. The La Grande Translator Association is planning two VHF units to fill in "holes" in the coverage of their UHF pattern. Integration of the services, an example of progressive thinking, can only lead to better reception service for everyone.

WHAT'S HAPPENING IN EQUIPMENT?

DXing Horizons Editor Bob Cooper made a 6,000 mile jaunt during October which began on Monday, October 4, in Rapid City, South Dakota, and ended Saturday, October 15 in Washington, D.C. We visited with present and future manufacturers of VHF Translator equipment, drank a lot of good coffee, and heard a lot of good talk.

M.A.R.S.—The boy's in Rapid City may be the proverbial sleeping giant. Silence breeds rumors, and Gene Bartlett, and engineer Keith Anderson have been silent a long time. Sworn to secrecy on details, we can state Mid America Relay Systems will have two units available. A **codi-fier** (code-identifier-tracking shut down unit), and a complete VHF translator package. But don't expect a release on the VHF Translator too soon.

Eitel Electronics — George Eitel ushered FCC personnel Parker and Pincock through his Prescott, Arizona shop late in August, and is now ready to head into the field . . . in any direction, for $100 per day plus travel charges. Eitel Electronics will also have a VHF Translator, and separate code and tracking unit available.

Industrial Television — Early in October Bob Myers of Industrial Television was "almost ready" to submit his measurements to the FCC for type approval. No further word has been heard from this Los Angeles concern.

Entron, Inc.—While M.A.R.S. may be the sleeping giant, Entron is the sleeper! Unbeknownst to anyone not directly connected with the concern, Entron of Bladensburg, Maryland unveiled its VHF Translator entry to Western Distributors, in Los Angeles late in September.

Adler Electronics—Queried in San Francisco on October 19, Stanley Lapin, Assistant to President Ben Adler, told DXing Horizons the Adler unit for VHF is "progressing nicely." DXH toured the Adler plant in New Rochelle, N.Y. October 11, but we were "shooed away" from a second floor laboratory where the unit was under development.

Benco-Blonder Tongue — Visiting with Issaic Blonder on Thursday, October 13, DXH was told "our unit has already completed its laboratory

(Continued on page 32)

DXing Horizons Reader Service

PRESS TIME NEWS FLASHES

COMMUNITY ANTENNA TV OPERATORS

(Translator-Booster operators, see page 4A)

RHINELANDER TRANSLATOR-CABLE FIGHT GOES TO HEARING STAGE

The small (less than 150 subscribers) but game Rhinelander (Wisc.) Television Cable Co., has possibly set a precedent in calling for FCC hearing on two pending UHF translator applications in its area. The hearing, scheduled for October 25, may decide whether a cable company can claim economic injury when the town fathers decide to bring UHF television into town via translators. J. R. Karban, Rhinelander translator permittee, has two UHF units currently operating. He proposes to add two more (which have already been granted CP's), bringing signals from WBAY, WFRV, WLUK(all Green Bay) and WSAU (Wausau) into Rhinelander. Rhinelander TV Cable Company carries four stations . . . the same four. Factbook lists the Rhinelander cable potential at about 2,500 subscribers. The system, six years old, has fewer than 150. The cable company will oppose the additional UHF outlets claiming severe economic injury. Rhinelander TV is owned by C. W. Gilley.

MORE MICROWAVE ACTION FOR CATV

As reported on page 30 this issue, CATV microwave activity is on the upswing.

OCTOBER 25, WASHINGTON—Hearing held before Walther W. Guenther, between East Texas Transmission Company, Tyler, Texas and KLTV (7) Tyler. Also sitting in, Chief of the Common Carrier Bureau. East Texas Transmission seeks three CP's for .1 watt 6KMC video relay units to bring Dallas-Fort Worth stations to the system via a single hop from a pick-up point closer to Dallas-Ft. Worth. Television Cable Service of Tyler has 8,300 subscribers, a potential of 12,000.

OCTOBER 27, WASHINGTON — Scheduled a prehearing conference before proceeding on the application of Carter Mountain Transmission Corp. to install an additional video link in the 6KMC band on Cooper Mt., 40 miles south of Worland, Wyoming. Opponent is KWRB-TV, Worland.

OCTOBER 31, WASHINGTON — Scheduled a prehearing conference before proceeding with the hearing of New England Microwave Corp. for new fixed video stations in Richmond and North Adams, Mass. North Adams is served by Tele-Cable, Inc., with 750 subscribers currently. Potential 4,500.

SCHEDULED FOR HEARING

October 28th has been set for a hearing under examiner Guenther for three proposed 6KMC video links in Florida, to feed CATV system in Fort Pierce. Southern Transmission Corporation of Palm Beach Gardens proposes a hop near Stuart and Fort Pierce, Florida. The opponent is WTVI, a new UHF channel 19 station in Fort Myers which was due to take to the air with CBS and ABC programming November 1. Also due to appear, the Chief of the Common Carrier Bureau and the Chief of the Broadcast Bureau.

U.S. CATV Op's Not Alone!

(Continued from page 8)

the countryside by microwave. Again, the CAB points out, such a system would be able to operate without regulation, while licensed Canadian broadcasters would be faced wth stiff regulations . . . and equally stiff un-regulated competition.

While the House of Commons Special Committee on Broadcasting was absorbing data from the CAB, the BBG was preparing its annual report of operations. The BBG, recognizing the growing concern of licensed broadcasters, wrote into its annual report this paragraph:

"There is some dispute whether Pay as You See television (and presumably regular CATV operations) distributed via cable entirely within a province can, or should be, brought under the jurisdiction of the federal authority as it (they) does (do) not use Hertizian waves as set out in the Radio and Broadcasting Acts. This is a matter that could be referred to the law officers of the Department of Justice for an opinion."

What is being done in Canada, by CATV operators, to combat this sudden interest by federal regulation?

The NCATA is taking steps to meet with both the broadcasters, the BBG and the Special House of Commons Committee on Broadcasting. There is every indication that the BBG wishes to be fair about this possible dispute between CATV operators and broadcasters, and will undoubtedly listen with interest to what both sides have to say.

As in the United States battle against most forms of regulation, the CAB also seeks to pass legislation which will require that CATV operators obtain permission from Canadian broadcasters before distributing their signals.

COMMISSIONER FORD SPEAKS UP

FCC chairman Frederick Ford told newsmen in New York City (Sept. 21) "The FCC will ask Congress for legislation which would place CATV under the jurisdiction of the commission." Among the regulatory steps proposed:

(A) Require CATV operators to obtain the permission of originating station for signal use.

(B) Require the CATV system to carry the local station(s) signal(s).

(C) Require the CATV operator to avoid **all** program (network) duplication of the local station, with signals "from the outside.

BING DINGED IN LOMPOC

Crooner-businessman Bing Crosby, set with a 20 year city council franchise in Lompoc, California to establish a CATV system there (to distribute signals into the valley town from Los Angeles) was turned away at the polls. Violent opponents to CATV in Lompoc (perhaps sparked by two coastal television stations) called a special election, and turned the vote into a question of "Do you want pay TV in our town?" Crosby is part owner of the Rancho Mirage, Calif. CATV system with partner Phil Harris.

MIXING THE MICROWAVES

Action of one sort or another can be expected "at an early date" following a session of prehearing conferences held by the FCC. Interested parties to microwave protest cases in the following towns took part in the meets: Athol, Mass., Tallahassee and Fort Myers, Fla., Riverton, Lander and Thermopolis, Wyoming, Laredo and Tyler, Texas and Twin Falls, Idaho. Formal hearings are expected soon. Some of these disputed cases have been tied up in the FCC for more than a year.

Meanwhile the common carrier bureau has taken this action on pt. to pt. microwave service applications, affecting CATV operations.

GRANTED:

Four additional video channels in the 6040-6240 mc range to Southeast Texas Transmission Company, Del Rio, Texas. SW transmission proposes to bring KCOR (San Antonio) to Uvalde, Texas on one circuit, and WOAI, KENS and KONO (San Antonio) to El Dorado and Sonora, Texas CATV systems, on separate links.

CATV SALES (A Monthly Report)

Williamsport, Pa. — Sale of West Branch TV Cable Service (4,200 subs) here to Ray V. Schneider, Mgr. of Williamsport TV Cable System (8,700 subs) for undisclosed amount brings new Williamsport TV cable company to front as largest CATV system in the U.S. previous honor went to Potomoc Valley TV Company, Cumberland, Maryland with 12,700 subs.

Eugene, Oregon — TelePrompTer Corporation added ABAR TV Cable Company here to its growing string in a recent buy negotiated by Blackburn and Company, media brokers, of Washington, D.C. Five TV channels are carried on the ABAR system, including KVAL (Eugene), KOIN, KGW and KPTV (Portland), KOAC (Corvallis). According to the sellers (Ray F. Siegenthaler and William D. Elkins) ABAR has 4,600 subscribers, with a potential of 10,000, Jerrold equipment is used throughout. Connection charges are on an option; $29.50 and $5.00. Monthly charges $4.00 and $5.00 respectively.

FCC Commissioner Robert E. Lee Panics the Troops in San Francisco

Commissioner Robert E. Lee spoke before the 36th Annual Convention of the **National Association of Education Broadcasters** October 19 in Baghdad by the Bay (San Francisco), and the entire TV world listened. Occurring too late for a complete review this month (see **"State of the Art,"** December DXing Horizons), the **"Lee Plan,"** proposing to move all television to UHF in the next five to seven years, came as no surprise to most of the industry. Drawing attention to the pending UHF FCC sanctioned high power TV test, scheduled for New York City, Comm. Lee noted the test "could" make or break UHF.

He assumed, however, the test will prove that UHF will work, and he went on with this assumption stating the following criteria for the move **to all UHF television:**

(1) The FCC will press for and see passed legislation making VHF-UHF tuners mandatory in all receivers sold in inter-state commerce.

(2) The FCC "should" now impose an immediate freeze on all new VHF grants.

(3) Currently operating UHF stations will have the pick of the channels available in the new spectrum.

(4) "We should give the VHF range to non-broadcast mobile service, point to point two way."

In December, DXing Horizons will reveal what we believe will be the **FCC Masterplan** for switching all television to UHF.

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Number one of a series. Shown, the Dubuque, Iowa CATV sentry on the plains, rising high into the mid-western atmosphere to bring television to 2,500 system subscribers.

TRANSLATOR TOPICS

(Continued from page 28)

measurements here in Newark, and is now undergoing further testing by an independent laboratory." The Benco-Blonder Tongue unit measurements and specifications were in Washington, undergoing checking, when we visited with McIvor Parker in the Broadcast Bureau October 14.

Electronics, Missiles, Communications, Inc.—If letterheads mean anything, EMC, Inc. has a good head start! This relatively new firm, staffed with four of Adler's former top engineers, has gone into electronics manufacturing with one product in mind, at the present, **VHF Translators.** Dr. Byron W. St. Clair, president, told DXH the EMC unit will be available for delivery "about as soon as any of the rest." Laboratory measurements were nearing completion when DXH visited Mt. Vernon, N.Y. on October 11.

SUMMING UP THE EQUIPMENT

Prices we heard quoted ranged from "perhaps as low as $1,100," to "probably as high as $2,250." The separate code identifiers are priced in the region around $300, with one exception. One servicing firm, not currently planning a VHF Translator, says it will unveil a code identifier unit in December, priced "in about the same range."

TALKING WITH THE FCC

Our first stop in Washington was a chat with McIvor Parker. Parker, in the Broadcast Bureau, answered many questions relative to the present problems, and a few we will hold for early spring when other problems may arise.

DXH asked, "What is your criteria (in the FCC) going to be for passing type approval on the various pieces of equipment submitted?" Parker's answer, "If the specifications look good (on paper) and if the design is good, we will accept the manufacturer's statement of measurements."

"How long will type approval take," DXH asked? "Never more than 30 days," indicated Parker, "because it is automatic after 30 days, unless we specifically reject the unit."

"Will the same 30 day period apply to custom modified equipment done in the field by technicians," we inquired? Parker's answer, "Yes."

"Is it true that a 'suitably qualified' individual using 'suitable test equipment' may perform measurements on modified VHF Translators, and file the necessary forms indicating 'custom type approval' should be granted?"

"Yes," indicated Parker, "the FCC regulations do not specify that the person making the measurements be a registered professional engineer, or even hold a first class phone ticket. But he (or she) must be competent enough to make the proper measurements and use the recognized procedures in making these measurements."

Lastly, we inquired "What will be done with any VHF Booster operators who do not file their Form 347A, or the subsequent Form 346?" FCC man Parker responded, "If they neglect to file their 347A because of an honest oversight, the commission will probably tend to be lenient with the offender. If the neglect is willful, we will be forced to issue a **cease and desist order.** If this does not close down their operation, we will press the penalty for operating an unlicensed broadcasting device to the extent allowed in the law."

347A FILINGS IN WASHINGTON

The sudden influx of Form 347A's (60 per day in mid-October, nearly 80 per day at press time) has caught the FCC girls assigning "BTR" numbers with their typewriters down! The last accurate count of filings on hand was 580 on October 14. Averaging 70 per day since that time, there could be as many as 1,400 on hand at press time, unless a slack off occurred. As reported last month, the Saddle Butte TV Association of Trail City, South Dakota was assigned BTR-1. BTR numbers (assigned for filing purposes) are running at least one week behind the receipt of filings in the FCC. As an example, for October 14, the latest BTR number was BTR-200, while the number of applications was 580.

FIRST 346 FILINGS!

Jumping the February 1 filing deadline, the Mexican Hat TV Association of Mexican Hat, Utah has proposed two ten watt VHF Translators to serve Mexican Hat, Utah. One will convert channel 13, KGGM, another would convert channel 4, KOB, both Albuquerque. These units have been assigned file numbers BPTTV-1 and BPTTV-2. The commission explained, "We term present operating units Repeaters. When they conform to the new rules, they will become Translators."

EQUIPMENT CHANGE CHARGES SURVEYED

No single manufacturer, or conversion servicing company will be quoted, but it appears that conversion costs of now operating equipment to FCC approved equipment will run from $250-$500, including parts. Some, of course, could run much higher.

STATION PERMISSION—NETWORK TIE UP

The reluctance on the part of representatives of NBC, CBS and ABC to even discuss the pending charges they wish to levy against Translators, Cable Systems, etc. for the "use of their programs" has their respective outlets dismayed. This in turn is causing dismay in the Translator ranks, as station permission to rebroadcast through a Translator must be granted before a Form 346 can be filed. While we plan more detailed coverage on this topic in December, for the present the limited form of permission granted by the broadcasting stations is sufficient, says the FCC.

TRANSLATOR CALENDAR

(Each month DXing Horizons lists important dates for filings, changes, hearings and meetings, for quick and ready reference.)

October 31—Deadline to file Form 347-A for temporary authorization to continue operation of a VHF Booster.

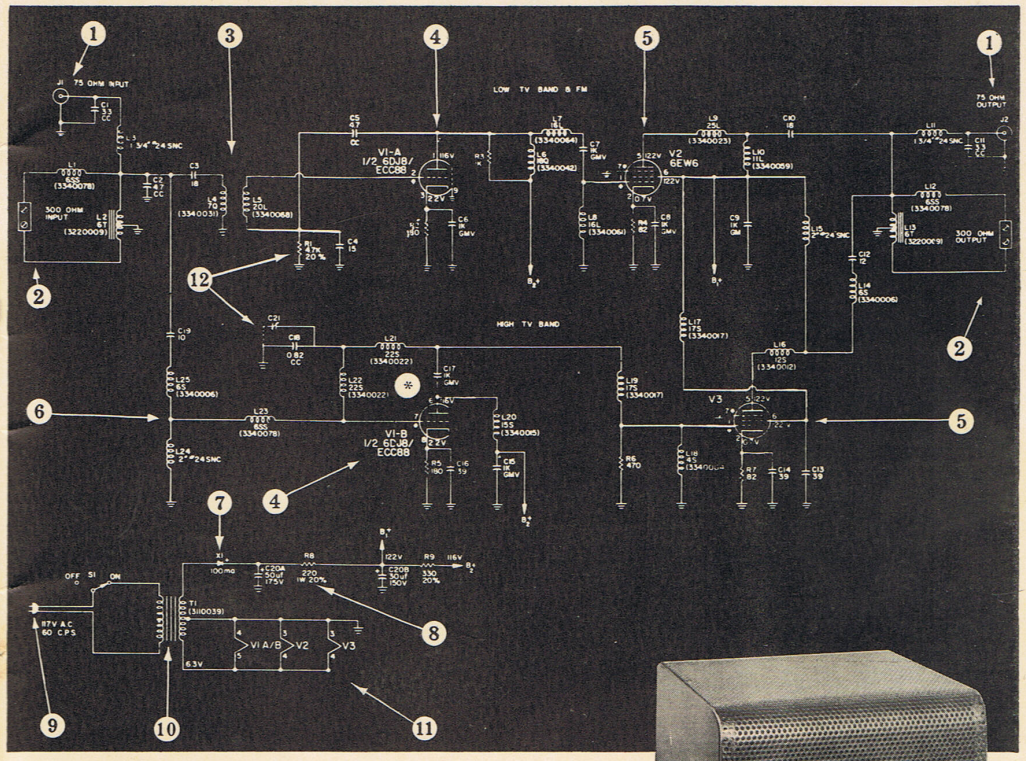
November 13-19—United Fund Drive week for all Translators (VHF and UHF). Contact your state association for details.

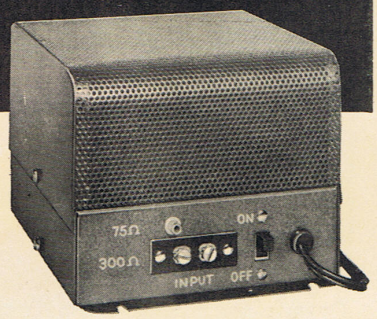
November 25 — Last day to mail special DXing Horizons subscription form taking advantage of special 18 months for the price of 12 offer.

February 1, 1961—Deadline to file Form 346 indicating construction and modification plans for presently operating Boosters.

October 31, 1961 — Deadline to complete equipment modifications to existing VHF Boosters, to bring them under new VHF Translator regulations.

the secret's in the circuit!





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