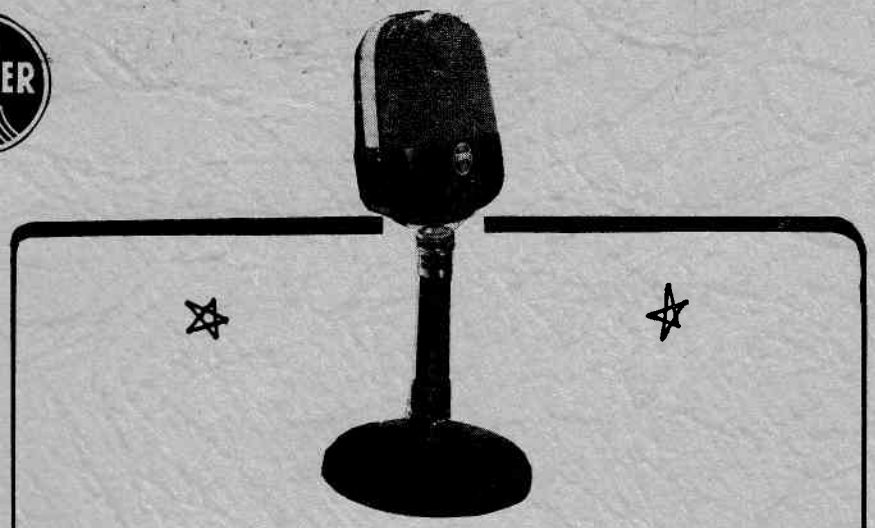
SKYWIRE

THE CANADIAN RADIO AMATEURS' JOURNAL

NOVEMBER 1949

Montreal, Quebec, Canada

TURNER

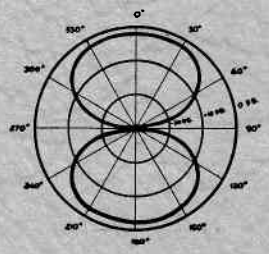


The TURNER 87

One look at the Turner Model 87 and you sense immediately here's a microphone masterpiece. Every detail of its attractive gunmetal case and polished chrome screen reflects the precision and care behind its manufacture. The Turner Model 87 is a single ribbon velocity type microphone with the Figure 8 Polar Pickup pattern so desirable in highest quality recording, public address and studio broadcast work.

POLAR PICKUP PATTERN

The figure 8 pattern illustrated by the diagram shows the attenuation of sound arriving from sources at 90° from front or rear of microphone.



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TURNER

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SKYWIRE EDITORIAL AND BUSINESS ADDRESS.

VE2TH, 284 Guilbault Ave., Longueuil, Quebec!

Skywire Magazine is operated and printed by VE2TH,and is authorized as second class mail, Post Office. Department at Ottawa. All contributions of a technical nature will be acknowledged and payment made for them on publication in Skywire. Club contributions of news and activities are invited for inclusion in Skywire,without charge!

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GUELPH — ONTARIO — CANADA

SIDEBANDS

Not long ago, a Canadian amateur was working on a power supply located under the desk supporting the transmitter. Connecting wire was tastefully and colorfully draped around the supply and the back of the table. The owner, in trying to determine the trouble, had crawled under the table and in so doing, gotten a poke worth 500 volts. That shook him badly enough to cause that involuntary and instantaneous reaction which makes you jerk back in an attempt to get loose. Our friend bonged his noggin on the underside of said desk with a hearty echoing heard throughout the house, and collapsed in a slightly smaller clatter, under the table, next to the offending junkpile - very happily not ON it. His wife, on hearing the uproar, rushed to the scene and seeing the dormant body of her spouse, feared the worst. She broke into loud cries of anguish, a touching demonstration of love and affection totally lost on our hero who was at that moment unconscious from the blow on his head. A short time later the couple were reunited with no harm done, other than to the XYL (frazzled nerves) and to said ham who had a king size goose egg on the back of his head for a day.

Quite hilarious ? Perhaps, but there's more to this type of story yet!

Not long ago also, you may have read about the unfortunate death by electrocution of a Winnipeg ham who got across an exposed hi-voltage lead to a bread-board type of transmitter. He had no intention of getting his hand on this, but the road to many family plots has been paved with such uninentional accidents.

Take for instance, what happened up in Guelph recently..... A Dr. Gammon, professor of Botany at a famous Agricultural College, and VE3ZM is now a silent key. Why ? Because he was using a widely known type of modulation indicator which requires a pick-up loop in the transmitter final. He had put the pick-up link too close and while wearing the earphones one night, monitoring his own signal, had taken a lethal voltage from ear to ear. Had Bill taken the little extra time to enclose that pick-up loop in some insulating material such as a Polystyrene, or even bakelite block, so the pick-up loop couldn't swing onto the high voltage tank, he would be an active and healthy ham now.

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MINIATURE SUPER

by

T.M. Lott, VE2AGF, Methods Engineering, N. Electric.

This miniature receiver, like the transmitter described last month, was designed and built to provide a small, compact unit, capable of performance equal to a normally sized counterpart. It's somewhat easier to carry around, and also serves as a useful standby when a periodic revamping of the station receiver is going on..... changes so dear to the heart of any ham.

Because I was traipsing around in Europe when the receiver was done and I never knew quite what power supply I would encounter next, and because 6.3 volt miniature tubes were almost impossible to obtain, the receiver was designed to use 1.5 volt tubes and be operated by dry batteries. Superior performance could doubtless be obtained by employing 6.3 volt tubes, and a new version of this set, a new double superhet using them (6.3) is now under way. As this new set will have what amounts to a built in Q-5'er, it should eliminate a little QRM encountered with this 1.5 volt version, due to the high I.F. (1600kc) giving insufficient selectivity on a very crowded ham band. The great advantage of such a high intermediate frequency is complete elimination of images due to second channel interference. The resistor R-16 is switched into the circuit when the phones jack is in use, and serves as a dummy load on the output stage.

Another feature to be added for mobile operation is a noise limiter, a must for car operation. As can be seen from the circuit, the receiver is quite straight forward with a 1T4 tuned R.F. Amplifier, a inductively coupled to a 1R5 mixer with a 1T4 triode as a separate oscillator. The mixer is followed by two stages of 1600 kc IF using 1T4's, a 1S5 is 2nd detector, AVC, and first audio. The B.F.O. is a triode connected 1T4, controlled by SW5 which is actually a part of SW1 a two pole, 3 way switch arranged to give AVC, MVC or BFO. The AVC is effected by applying a variable amount of the negative voltage developed across R17, to the grids of the I.S. amplifier stages, by means of the variable pot. R18.

A fairly good idea of the layout can be obtained from the photos on page 7, and although many parts in the set are of British make, you should be able to substitute for

And there's another story too, of a non-amateur which illustrates carelessness, and perhaps ignorance of what electricity could do. A young garage mechanic named Verne Walker, living in Wallaceburg, Ontario, had been called out on a towing job - to pull a car out of the ditch. This car had skidded on the pavement, smashed into a Hydro pole and come to a halt just below it. Walker, backing his truck into position didn't notice a 2200 volt line swaying in the light breeze, a line which had snapped off from the pole and dropped down to near the ground. He backed his truck into it, then stepped down from the drivers seat to be smashed into the side of the truck by the voltage. The 2200 held him there for forty minutes while three people watched him burned to a crisp, helpless and unable to do anything.

Then, in St. Lambert, Quebec last week, a trolley support wire had dropped down from an overhead electrified railway system, and was hanging about three feet clear of the ground, over one side of the main highway. Traffic in the other lane kept one driver busy enough he didn't see the wire until it was wrapped around the car, scaring him half to death. This one wasn't fatal, but it was close enough to be mighty unpleasant and nightmarish. He won't forget the scare for some time to come.

So what, you say - what are you trying to prove. Nothing except that death is so permanent, and in many shacks across the country it can be avoided.

Now that the winter operating season is here you'll be spending more time behind the mike and key and not so much on making the rig safe to operate. Just stop for a minute and think what dangerous features on YOUR rig haven't been dealt with, because you " hadn't the time to bother" If you don't look after them now, it's quite possible we'll read about it in the papers, and you'll have plenty of time from then on.

Just remember that it doesn't take very much voltage to leave you lying on the floor another Silent Key. And at the same time it won't take many hours to look after the weak spots on your own safety campaign.

Death by electrocution isn't very pretty. It's very permanent, and its' only merit is that usually it's mighty fast so you never do know what hit you. But it's not a pleasant thing for your family to find you lying there, smoking, swollen and blue, as your body lies across the high voltage lead. Check <u>YOUR</u> rig - be an amateur and not a statistic.

Jennwick VE6 2771

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by

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them without too much trouble. The loudspeaker, a $2\frac{1}{2}$" Celestion, can be obtained from Payette in Montreal and most of the other parts have almost exact Canadian or U.S. equivalents. The most difficult is the I.F. used which were Wearite in the original - and the three gang tuning condenser, the nearest to which seems to be a Bud MC886, which has greater behind the panel depth. The gang shown had a capacity of 90 mmf per section and was used for general coverage. For bandspread, most of the plates are now removed, with 2 fixed and 3 moving left. This works down to a 20 mmf capacity to give coverage of the amateur bands completely.

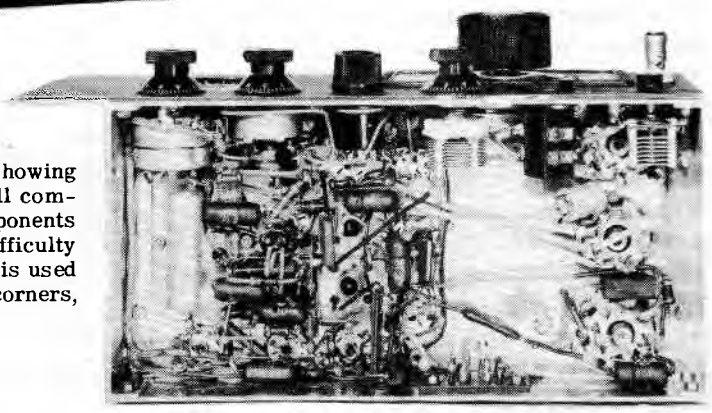
The receiver is built on an aluminum chassis $8\frac{1}{2}$" X $4\frac{1}{2}$" X$1\frac{1}{2}$" with a 10" X $4\frac{1}{2}$" panel, with the lettering done by a Decal transfer kit as was the transmitter. The main tuning dial is a National MCN, and the small dials are from the TA12, obtained at Radio Centre. A long, narrow tip should be used in the soldering iron for wiring, and all components have to be laid out as neatly as possible to facilitate easy servicing. The filament and ground leads are run around first, then the R.F. and I.F. wiring, and lastly, the audio and B+ circuits, with all leads kept as short as is possible.

When completely wired and ready for testing, the simplest thing in the receiver checking is to start at the audio stage and work back. Touch the rotor of the volume control R13 and a loud hum shows the audio is working. The I.F. should be aligned with a signal generator or modulated oscillator tuned to 1600 kcs. After this comes the adjustment of the R.F. circuits. As experiments in a Q meter have shown that much better Q's could be obtained on 14 and 28 mc, without the powdered iron tuning slugs, the R.F. and Mixer coils on these bands are air cored and the use of a grid dip meter is suggested to match them evenly. Otherwise, they must be wound as closely alike as possible. The other band R.F. and Mixer coils and ALL the oscillator coils are adjusted by means of the tuning slugs.

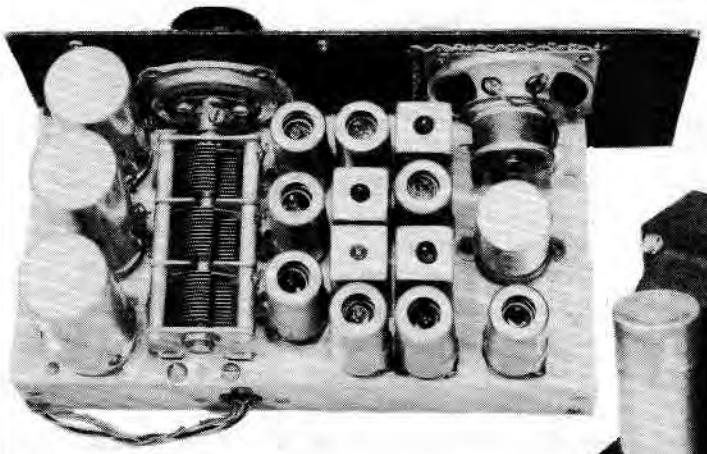
THE POWER SUPPLY.

The power unit for the miniature transmitter described in October, 1949 Skywire is quite straightforward and really consists of 3 separate but identical supplies, the circuit for only one of which has been shown on page 30, along with the circuit of the receiver. Essentially, the circuit used for the power unit is the Hammond one for use with their 284 type transformers, and three of these transformers were used simply because no single transformer was available giving the required 300 volts at 225 mils. The use of 3 circuits also gave much better inter-circuit decoupling as the three HV+ supply

1. Front panel view of the completed receiver. To the left of and behind the speaker is the battery compartment (See 3) so that unit is completely self contained except for additional coils.



2. Under chassis view of the receiver showing that careful layout is required to make all components fit without jamming. If the components are laid out carefully there will be no difficulty in wiring experienced, provided a fine tip is used on the soldering iron to get into the tighter corners, without damaging other parts.



3. To the left - the top-of-chassis layout. At the extreme left of the unit are the plug in coils (see text), then the tuning gang, with the I.F.'s clearly shown. Wiring is straightforward. Note space behind panel available for batteries.

4. The completed power supply, built in triplicate, although circuit diagram is for one. Build three exactly alike on the one chassis to provide the current required for the miniature transmitter shown last month (October Skywire) and this small receiver. Transformers used as standard Hammond stock.

connections were kept separated. One feeds the PP 6AQ5 P.A. stage only, one the PP 6AQ5 modulators, and the third the crystal oscillator, doublers and speech amp. The centre taps of the three transformers were commoned and connected to ground via the transmit switch.

The power unit was built on a 1442 Hammond chassis, to fit it into the battery case of the BC221 used to house the complete rig. It was connected to the transmitter by means of an 8 way cable, terminated at each end with an octal plug. The 67½ volt grid bias battery was also connected to the power supply via two short flex leads with press stud fittings.

COIL DATA BELOW.

All wire used, standard, enamelled.

ANTENNA COILS. (L1)

Band	Primary	Secondary
3.5 mc.	20T, 32E.	94T, 30E.
7.0 mc.	10T, 30E.	35T, 26E.
14. mc.	8T, 20E.	28T, 18E
28. mc.	4T, 18E	17T, 16E.

NB. All coils close wound on form.

MIXER COILS (L2)

Band	Primary	Secondary
3.5 mc.	30T, 32E	94T, 30E.
7.0 mc.	13T, 30E	35T, 26E.
14. mc.	10T, 20E	28T, 18E.
28. mc.	6T, 20E.	13T, 16E.

NB. All coils close wound on form. L1 and L2 for 14 and 28 mc, wound on Millen 74002: all others, 74001.

OSCILLATOR COILS (L3)

Band	Primary	Secondary.
3.5 mc.	25T, 32E	86T, 30E.
7.0 mc.	12T, 30E	30T, 26E.
14. mc.	8T, 22E	25T, 18E.
28. mc.	4T, 20E	10T, 16E.

N.B. All coils close wound.

RECEIVER PARTS LIST.

R1 - 25K	R10 - 1 meg	R18-5K
R2 - 5K	R11 - 68K	Potent.
R3 - 75K	R12 -4.7 meg	R19-250K
R4 - 47K	R13 - 2 meg	R20-250K
R5 - 5K	potentiometer	R21-100K
R6 - 47K	R14 - 10 meg	R22-100K
R7 - 5K	R15 - 3.3 meg	R23- 5K
R8 - 47K	R16 - 5 ohms.	R24- 47K
R9 - 15K	R17 - 820	R25-100K

C1C2C3 - Gang - see text (20mmf)
C4C5C6 - 3-30 mmf trimmers.
C7,8,9,10,11,12,13,14,15,16,20,23 and 24 - .01 - 150 volt type.
C17 - 100mmf
C18 - 50mmf
C19 - .002mfd
C21 - 8/150v
C22 - 10/25v
C25 - 100mmf variable padder.
C26 - 100mmf
C27 - 500mmf
C28 - 35 mmf variable
C34 - .02 midget

Please note the diagram on P.30 shows two C-35. Correct values are shown in the tables herein.

C-35 as audio coupler is .01 mfd.
C-35 as oscillator coupling is 100 mmf midget mica.
C36 - BFO coupling, 2T wire wound around the grid lead.

T1,T2,T3 - 1600 kc midget I.F.'s
L4 - 1600 kc BFO midget coil.
T5 - 5,000 ohm small output unit.

PARTS LIST FOR POWER UNIT, PAGE 31

PHONE PATCH!

In a good many QSO's these days, and especially when shooting any traffic along, the man at the other end is heard to say - " I want to plug the phone patch in, so hang on for just a minute, and then you can talk direct to your addressee".

And there seem to be about as many different typesof such fone patches as there are hams. Some work exceptionally well, and then there are others whose performeance leaves a lot to be desired.

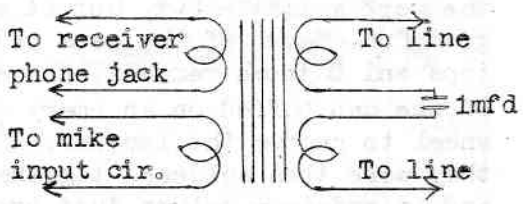
In this very brief article, we present one unusually simple circuit which has several distinct advantages. One of these is the very low cost involved; another is the small amount of time it takes to incorporate in any existing amateur set-up, and a very important third advantage is the clearness and lack of hum, linesing, RF pickup when using it.

A word of warning however. There are various regulations in this country with regard to the use of such a patch. In some sections of Canada it is outlawed because the phone companies don't like anyone using their facilities on a "long-distance" call, without paying for their use.

We're not suggesting you flout such regulations, but where the phone patch is permissible, you can add a lot of fun to your operating. Check first, and then build the unit.

The components needed - a 1 mfd. condenser (anything in the surplus bathtub type is okay) and a 903 Hammond transformer. The cost is about ten bucks plus your time.

In the diagram, any line to line transformer may be used. The sec. windings are in series, with the condenser blocking. Make sure, of course, that the transformer is a split winding affair if you're substituting for the Hammond 903. One half of the primary goes to the phone jack through a shielded cord, the other half to your mike connector, through shielded line. Turn the gain up a little on the speech amplifier, adjust the receiver to the desired level, listen to the conversation on the handset which is now the monitor. Go to it.



HAMMOND TYPE 903.

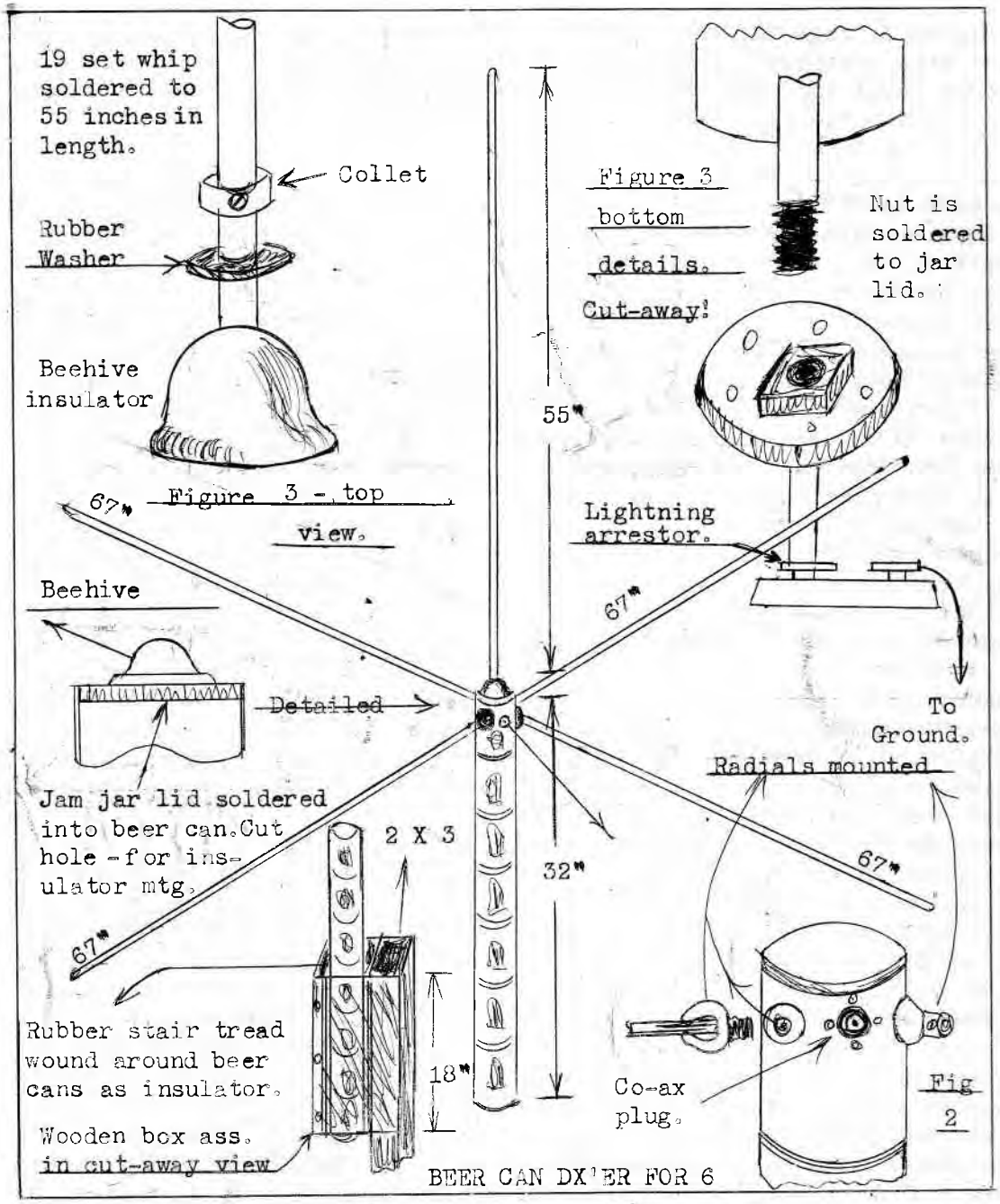
BEER CAN DX

by
Paul Daoust!

From my experience, if everyone working on the 50 mcs band would use a co-axial ground plane type of antenna, the question of polarity would be nil. The writer has so far been able to receive ALL stations operating in the home area, on 6 meters, and when the band was NOT open for DX, stations almost a hundred miles away. It certainly has plenty of gain over several other types of receiving antennas tested.

It all started on a week-end when the urge to build a co-ax job was there, but all normal sources of supply for the material needed had closed down. Like most of the gang there was a good junk-box collection available for a lot of the components, and I really enjoyed getting the co-axial section, made from beer cans, ready. Those cans had to be completely emptied and cleaned before use. That phase of operations perhaps slowed down the work a little bit, but it was good fun. Seven of the cans had tops and bottoms removed, the edge of the can buffed on an emery wheel to remove the lacquer, and they were then soldered together, end to end in a column just over 32 inches in length. A Heavy duty iron should be used for soldering these and all other joints. By the way, you could use a number of small tins such as those containing fruits or asparagus, as they have the same diameter-- 2 5/8 inches. They're just a bit shorter however, so you'd likely have to use eight of them, and it would take you longer to collect them!

The diagrams on the opposite page will show as much detail as possible. You'll also need a set of 4 sections of the Mk 19 Set Whip Antenna (16') which is to be cut to a length of 87", and all joints in this length soldered well. Tin a spot 55 inches from the top to receive short connection from the co-axial connector. Use the remains of the whip for the radials. You'll also need a collet with set screw to lock up the assembly, a rubber washer to stop rain from entering at the top, a single Beehive insulator of the 2" diameter size. You'll also need a jam jar cover to fit inside top beer can (with the centre removed to act as a rest for the Beehive insulator, and a jam jar cover for the bottom, to which is soldered a nut as in



BEER CAN DX'ER FOR 6

diagram 3, page 11. Four more 19 set whip sections (bottom part) worth about 25¢ each will be needed for the radials; a co-ax connector for 52 ohm cable, the co-ax lead needed to get into the shack, a bolt to fit the aforementioned nut, with the head removed. The bolt is then soldered to the lower end of the vertical element. From the junk-box of electrical parts, we salvaged four 110 volt brass socket tops (the lower part from a light socket unit) and soldered those 90 degrees apart around the top beer can, as in drawings. Four 110 volt fixture links also were found and these of course, thread right into the light socket tops. Radials are fitted to the fixture links, soldered tight, as in the number 2 drawing, page 11.

Mounting the antenna posed a problem for a minute, but a rubber stair tread looked like it might have possibilities, as indeed it did, and it wound up as the buffer between the beer can co-axial section and the wooden box built as a mounting (figure 4). That wood box section, illustrated, is also from the junk-box, or more exactly the wood box and consists of four pieces of one by six, approximately a foot and a half long. Then the entire unit was mounted at the top of a piece of two by three at the peak of the roof and we were in business on 6. A later addition was a lightning arrestor block as shown in figure 3 again. And don't forget to run a ground wire down from the bottom of the lightning arrestor!

One other thing - when making up the ground plane radials, the 110 volt fixture links are usually triangular in shape, and a hack saw near the point of the triangle will open a gap just large enough to permit you to slide in the 19 set whip sections and solder them in there tight. These radials are 67 inches long, and the pieces left over from the original long 19 set antenna used for the vertical section are added to the 4' sections to make this length. Be sure all connections are soldered well with a heavy,hot iron. And don't forget to puncture one or two holes in the bottom of the co-axial section - that is,the lower jam jar lid, so that no moisture will accumulate in the beer can section of the antenna.

The drawings on page 11 show the broken-down detail of what was done in making this unit, and it is left to the individuals ingenuity to produce a duplicate with whatever substitutions are required in your city. If you can't get the 19 set sections, although they're still available surplus, use any quarter inch rod or tempered tubing you can get your hands on. Good luck and good listening on six meters.

TUNING THE BEAM

by

Fenwick Job, VE2TH.

In the many publications on antennas, one subject seems to have been studiously avoided - How To Tune A Beam. And since this is a most important aspect of using a beam, if you'r interest in both forward gain and back to front ratio is more than slight, here's one method you can use.

Some amateurs will have their own ideas and perhaps disagree with this article, but it was the late W1BDB (ex5BDB) who first brought multi-element beams into amateur circles, and he spent many long hours and a lot of money in the development of this system. As Mims famous close-spaced array is now in commercial production and the suggested tuning procedure is the same as to be presented now, it may help some of you to snag some extra DX this year.

To go back several years, Old Timers will remember that Mims had one of the most outstanding signals on 20, directly due to his now famous " Signal Squirter" as he called it. He was one of the first to use an inductive coupling ring for feeding power to the array, dispensing with twisted lines and wiping contact rings failing at a critical time. Mims, if anyone, should have been able to get the most out of his experiments, so let's start to quote him.

The Primary Requisite - a simple field strength meter - well worth the cost of parts in the results it will give. A few precautions - enclose the complete unit in a suitable metal container. Bring the antenna out the SIDE of the box, so that the complete pickup system is HORIZONTAL. Even an inch or two or vertical antenna on the F.S. meter is bad. A two section auto whip with a plug on the end, is best suited to this work, as the variable length permits adjustment of input to the unit for a FULL SCALE deflection of the meter, even at comparatively low power inputs to the rig. AND, each variation of antenna length on the F.S. meter calls for retuning of the meter unit. DON'T use a thermo-galvanometer F.S. unit if avoidable as the half wave antenna you must use for pick-up, parallel to the beam elements, can act as an additional element to the beam. In testing - DON'T USE RECEIVERS ACROSS TOWN. Their S-meter reading can be very faulty. DON'T USE THEM.

The Field Strength meter must be located a minimum of 135' from an array, and note more than 150'. If circumstances necessitate its' use at some other distance, it should be slightly further away, rather than closer. The meter should be set up on a WOODEN box, about 24" to 30" above ground (that's inches above ground) and the person taking the readings should be at least three feet from the meter, and clear of the F.S. antenna. Do NOT use the meter at the same height as the array. The phasing will be incorrect and produce inferior results. If you use open wire feedline, locate the meter on the opposite side - away from them.

Careful attention to minute detail in the following procedure is essential for phasing of parasitic elements in a three element array. Remember, the ACTUAL and EFFECTIVE height above ground are bound to cause considerable variation in the actual element lengths for a given phasing condition. And this method should permit anyone, regardless of location or height to reach proper phase relationship, resulting in maximum performance.

First, set up the F.S. meter. You need three men - one at the transmitter to cut it on and off, and at the same time, MAINTAIN A CONSTANT INPUT TO THE TRANSMITTER AT ALL TIMES DURING TUNING. The second man is at the F.S. meter to take reading from which to direct adjustments. The third man works on the beam itself.

As the tuning procedure is carried through, the exact point of resonance in the final tank will vary slightly and this is correct. There is no reason why a final should resonate at the same point, loaded or unloaded. See November, 1937 QST, Seeley, if doubtful.

For a three element array, here's the tuning procedure. Load the rig to about 200 watts if possible, and maintain that input at a constant level until tuning is completed. After each change in element length you'll need to re-adjust the input. Be sure to check both the loading AND resonance of final for each measurement.

Length of director is varied in half inch steps first, and a F.S. reading log made for each reading. Do this until a peak is reached and passed through on F.S. unit.

Now, for the reflector, which is a much broader circuit than the director. This unit will give almost full maximum forward signal through the greater portion of any variations. Make rough adjustments of reflector for maximum field strength indication with the director at its' peak too. Now, turn the beam, with the reflector toward the F.S. meter.

Make careful adjustments of the reflector length for MINIMUM SIGNAL indication on the meter. Each check point must be made with the array in the exact position as previous readings, and it will be noted that the signal off the end of the array will fall to a minimum at this time.

If using open line, check for standing waves as outlined in the Handbooks, and correct by the means outlined, until no SW's are apparent, or until minimum has been reached. Standing waves can also be corrected by a small change in length of director or radiator elements. Work on the radiator first. Adjustment is made for maximum field strength readings AFTER the entire array has been tuned as outlined. Very slight changes in the length of the director also have great effect on any tendency for standing waves and these adjustments will still stay within the range of maximum forward gain of the director.

Correct phase relationship between various elements is established in this manner, to provide maximum forward gain, and extreme attenuation in all other directions. When tuning has been completed, the field strength antenna should be adjusted in length to give a full scale deflection of the meter, or the transmitter input increased for same results. With the array FACING the meter, make the changes to the F.S. unit or transmitter. As the array is rotated, the F.S. meter should fall off quite rapidly, down to zero off the ends, and with slight indication about 30 degrees past the ends: then back down to .01 of your scale, off the rear.

Line current in the feed system should be quite close to theory, based on Ohms law, and it is the usual thing to assume transmitter efficiency of 70%. If line current is abnormal, chances are that you have standing waves. These should be eliminated as outlined in the Handbooks. Thermocouple meters vary considerably at 14 and 28 mc. and if meter doesn't indicate the current it should, and the usual standbys for detecting standing waves show the line as okay, you're reasonably safe in presuming the line has been correctly adjusted. Most meters have been found to be accurate to 10 percent.

Close attention to the above tuning procedure should give about 40 db front to back ratio on a 3 element array, more on a 4 el. On rotating the beam, forward gain is quite sharp, with the signal remaining down through 270 degrees of rotation. If you want to check closely, turn off the AVC and then watch what happens as the beam goes through a signal. Great feeling!

DX PREDICTIONS

Prepared by C.B. McKee, Engineering Division, CBC International Service

On these pages are shown frequency predictions for ham communications over various circuits to almost any part of the world from major cities in Canada. Choose the city nearest you for your own DX use.

Figures shown indicate a maximum usable frequency via F layer, and don't consider effect of Sporadic E which may enable unexpected and unpredicted distances to be covered on frequencies higher than those shown on the chart. The figures shown under the local times read direct in megacycles.

PREDICTIONS FOR DECEMBER, 1949:

SACKVILLE TO :	00	02	04	06	08	10	12	14	16	18	20	22	AST
Europe	7	7	7	14	28	28	14	14	14	7	7	7	Mc/s
Africa	14	-	-	28	28	28	28	28	14	14	14	7	
Caribbean	7	7	7	7	28	28	28	28	28	14	14	7	
S. America	7	7	7	14	28	28	28	28	28	14	14	14	
Australia	7	-	7	7	14	14	-	-	-	-	-	-	
U.S.A. - West	7	7	7	14	7	14	28	28	28	28	14	14	
U.S.A. - Cent	7	7	7	7	14	28	28	28	28	28	14	14	
U.S.A. - South	7	7	7	7	14	28	28	28	28	28	14	14	
Vancouver	7	7	7	7	7	14	28	28	28	28	14	14	
Watrous	7	7	7	7	7	28	28	28	28	28	14	14	
Toronto	7	3	3	3	7	14	14	14	14	7	7	7	
Montreal	3	3	3	3	7	7	7	7	7	7	7	3	

MONTREAL TO :	00	02	04	06	08	10	12	14	16	18	20	22	EST
Europe	7	7	7	14	28	28	28	28	14	7	7	7	Mc/s
Africa	14	-	-	14	28	28	28	28	28	14	14	14	
Caribbean	7	7	7	7	28	28	28	28	28	14	7	7	
S. America	7	7	7	14	28	28	28	28	28	14	14	14	
Australia	7	-	14	7	14	14	-	-	-	-	-	-	
U.S.A. - West	14	14	14	7	7	28	28	28	28	28	14	14	
U.S.A. - Cent.	7	7	7	7	7	14	28	28	28	14	14	7	
U.S.A. - South	7	7	7	7	14	28	28	28	28	28	14	7	
Vancouver	7	7	7	7	7	14	28	28	28	28	14	14	
Watrous	7	7	7	7	7	14	28	28	28	14	14	7	
Toronto	3	3	3	3	7	7	14	14	7	7	7	3	
Sackville	3	3	3	3	7	7	7	7	7	7	7	3	

DX PREDICTIONS FOR THE MONTH OF DECEMBER, 1949

TORONTO TO :	00	02	04	06	08	10	12	14	16	18	20	22	EST
Europe	7	7	7	7	28	28	28	28	14	7	7	7	Mc/s
Africa	14	-	-	14	28	28	28	28	28	14	14	14	
Caribbean	7	7	7	7	28	28	28	28	28	14	7	7	
S. America	7	7	7	14	28	28	28	28	28	14	14	14	
Australia	7	-	14	7	14	14	-	-	-	-	-	-	
U.S.A. - West	14	7	7	7	7	28	28	28	28	28	14	14	
U.S.A. - Cent.	7	7	7	7	7	14	14	14	14	14	14	7	
U.S.A. - South	7	7	7	7	14	28	28	28	28	28	14	7	
Vancouver	7	7	7	7	7	14	28	28	28	28	14	14	
Watrous	7	7	7	7	7	14	28	28	28	14	14	7	
Montreal	3	3	3	3	7	7	14	14	7	7	7	3	
Sackville	7	3	3	3	7	14	14	14	14	7	7	7	

WATROUS TO :	22	00	02	04	06	08	10	12	14	16	18	20	MST
Europe	7	7	7	7	14	14	28	14	7	7	7	7	Mc/s
Africa	7	-	-	7	14	28	28	28	28	14	14	7	
Caribbean	7	7	7	7	14	28	28	28	28	28	14	14	
S. America	14	7	7	7	14	28	28	28	28	28	14	14	
Australia	7	-	7	7	7	7	14	-	14	28	-	-	
U.S.A. - West	7	7	7	7	7	7	14	14	14	14	14	14	
U.S.A. - Cent.	7	7	7	3	3	14	14	14	14	14	14	7	
U.S.A. - South	14	14	14	7	7	28	28	28	28	28	14	14	
Vancouver	7	7	7	7	7	7	14	28	28	28	14	14	
Toronto	7	7	7	7	7	14	28	28	28	14	14	7	
Montreal	7	7	7	7	7	14	28	28	28	14	14	7	
Sackville	7	7	7	7	7	28	28	28	28	28	14	14	

VANCOUVER TO:	21	23	01	03	05	07	09	11	13	15	17	19	PST
Europe	7	7	7	7	7	7	14	14	7	7	7	7	Mc/s
Africa	7	7	7	7	7	14	28	28	28	28	14	14	
Caribbean	7	7	7	7	7	28	28	28	28	28	14	7	
S. America	7	7	7	7	7	28	28	28	28	28	28	14	
Australia	14	-	7	7	7	7	14	14	-	28	28	14	
U.S.A. - West	7	3	3	3	3	3	14	14	14	14	14	7	
U.S.A. - Cent.	7	7	7	7	7	14	28	28	28	28	14	14	
U.S.A. - South	14	14	14	7	7	28	28	28	28	28	28	14	
Watrous	7	7	7	7	7	7	14	28	28	28	14	14	
Toronto	7	7	7	7	7	14	28	28	28	28	14	14	
Montreal	7	7	7	7	7	14	28	28	28	14	14	7	
Sackville	7	7	7	7	7	14	28	28	28	28	14	14	

In all Canadian call areas, use the predictions for the city nearest your own. Times given are local in each case. Good DX

DX PREDICTIONS FOR THE MONTH OF DECEMBER, 1949

National

MB-20 If the number of letters we have received is any indication of the general interest aroused in our MB-20 multi-band tank, there certainly must be plenty — at least our office is kept busy by inquiries.

The MB-20 was originally designed as a low power multi-band tank, primarily to be used in grid circuits of transmitter stages where relatively low powers (20 watts input) are to be encountered. This unit may be used either in push-pull or single-ended circuits. It is small and compact and tunes all amateur bands from 3.5 mc. to 30 mc. in 180° rotation. Several interesting things were noted when we were designing a test fixture for the MB-20. Actually, these tanks are tested in the same set-up as the MB-150 with a necessary jig to adapt it to the machine and a switch to cut down the amount of power that the tank will dissipate.

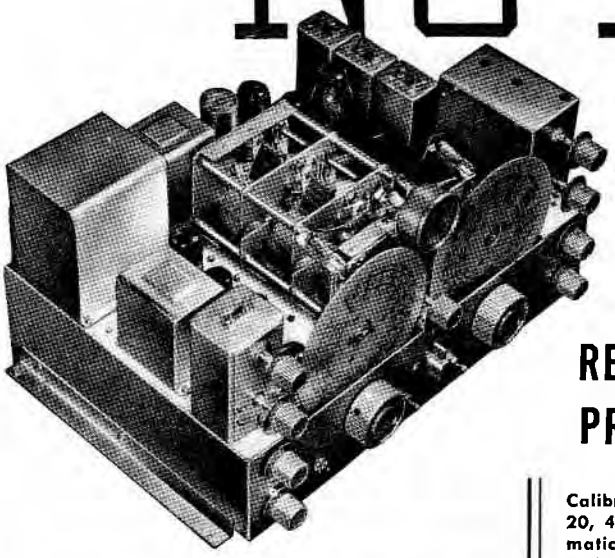
While experimenting to find how much we had to cut down on this power it was noted that the gadget made a pretty swell low powered plate tank for possible mobile or portable work. We found that the MB-20 would handle powers in the order of 40 watts input if the link is kept loaded. If the link is left unloaded, the coils tend to get quite warm and it is certain that the tank under these conditions would not dissipate much more than 25 watts and stay relatively cool. At higher than rated inputs, the condenser does not arc over except at 30 mc. Here again, it can be pointed out that in plate circuit applications the MB-20 can be used in either push-pull or single-ended amplifiers or multipliers either neutralized or not with tubes like the 6L6, 815, 832 and triodes of similar ratings, keeping in mind all of the above.

So summing it all up, here is the tank for all of your exciter grid and plate requirements which will get rid of all your plug-in coil or bandswitching worries. Of course the MB-150 is available for higher power application. Application notes on MB-150 apply in usage for the MB-20, or a direct inquiry to us will produce our new pamphlet on MB-20 applications.

Robert J. Murray, W1FSN

National

NC-173



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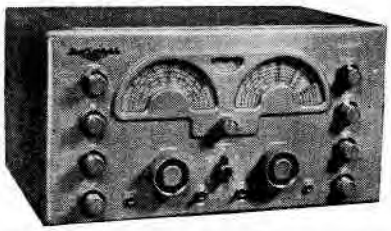

Calibrated electrical bandspread for 6, 10-11, 20, 40 and 80 meter amateur bands! Automatic noise limiter effective on both phone and CW, with adjustable threshold! Highly flexible crystal filter provides 6 steps of selectivity! S-meter for both phone and CW! Temperature compensation and voltage regulation assure exceptional stability! Accessory socket for NFM-73 adaptor! Trimmer control permits panel adjustment of RF stage! Tone control. Phono input jack also provided.

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DX QTH's

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EA8BC - Box 8, Laguna, Tenerife, Canary Islands.
JA2CK - Box 104, Noumea, New Caledonia.
JA2MY - Box 27, A.P.O. 994, c/o PM., San Francisco.
KG6GA - U.S. Coast Guard Depot, Navy 926, FPO, San Francisco.
KG6SF - 426 E 18th St., National City, California (st'n Saipan.)
PK5HL - Box 21, Banjarmasin, Dutch Borneo.
SP5AC - Box 320, Warsaw, Poland (?)
TI2CG - C/O U.S. Embassy, San Jose, Costa Rica.
VK5AE - Box 119, Darwin, North Australia.
VK5AS - Box 119, Darwin, North Australia.
VK5CV - Box 119, Darwin, North Australia.
VP4CO - A.P.O. 869, C/O PM., Miami, Florida.
VQ3AD - C/O C.I.R., Arusha, Tanganyika.
VS1DZ - G.H.Q., Signal Rest, Singapore.
VU2DX - 126 Palace Road, Mylapore, Madras, 4.
YN4NW - Box 51, Bluefields, Nicaragua.
ZA3B - Radio Marine Station, Durazzo, Albania.
ZD2P - D.C.Piccirillo, R/O, Posts and Telegraph, Pt.Harcourt, Nig.
ZD2S - G. Sherwood, C/O W.A.A.C., Ikeja Airport, Lagos.

The above QTH's are those reported to Short Wave Magazine by the English amateurs. Proportionately, on a population basis, there are more than three times as many hams licensed in Canada. Skywire is particularly interested in what the VE and VO hams are doing in DX, and where that DX is located. If you've worked something unusual and been able to get his address, pass it along to the rest of the boys in this column and the DX news on the opposite page. There's plenty of DX being worked, but few are saying anything about it. Take ten minutes once a month to run through your log and make a list of what you have heard and worked, the frequencies and QTH's and send it along.!!

DX NEWS

There are a couple of things in the DX world this month that will interest you.... two contests in which the VE ham has a better opportunity to snaffle some rare DX than his American brother! And if that isn't news, nothing is.

First, the Radio Club of India, which publicized a contest not long ago, has now re-arranged the rules so we can enter their contest which is International in scope. The contest week-ends are to be December 11th and 12th, and December 17th and 18th, 1949. The probable starting times will be much the same as before, with 1700 hours, Indian Standard Time each Saturday being the kick-off, and the closing of each week-end will be 2400 hrs IST (This is 1130 GMT Saturday to 1830GMT Sun. Distinctive certificates will be awarded to the leading station in each zone from which five or more entries have been received. Complete rules haven't come thro' on the lesser details. It's very likely most of them will remain the same as before - and briefly here they are. The log is to show the date and time (IST or GMT), frequency, call of station worked, five or six figure groups both sent and received and total points claimed. When submitting log detail outlined here, include the following information..... Your call, name in block letters, address, details of xmitter, input power, receiver used, antenna used during contest and a declaration signed by yourself that you will abide by the rules of the contest and the spirit thereof, that your contacts have been in accord with this policy, and that you accept decision of the ARCI in all cases of dispute.

Proofs of contact will be needed, so suggest to your DX sending a QSL or other confirmation direct to P.O. Box 6666, Bombay, 20, India. These will be forwarded to their owners at a later date.

In logging phone exchange five figure reports such as 58001, with the 58 indicating signal strength and the 001 indicating the first contact. The last digit changes with each contact. CW scoring is much the same, only using six numbers as 589001 for RST, with the last three indicating serial number. Only the 14 and 28 mc bands will be used and a bonus will be given to the operator who uses CW exclusively. Stations worked in the first weekend may be contacted again the following week-end for additional points.

Band monitoring stations under the Amateur Radio Club of India will be checking during the contest and off-frequency operators will be disqualified. Logs from your station, plus other data required are to be submitted at once to the box number given here in Bombay.

The next news is about the BERU contest, familiar to almost all DX'ers, which has been moved up to take place in January of 1950 to avoid clashing with other DX doings and make use of the DX bands while at their hottest. BERU is the best contest going for VE operators and the only one in the world in which the tables are now turned and the VE becomes real DX. If the rules seem a little stiff, remember that just Empire hams compete against one another, and this more than evens things up. Eligible hams for the awards in Canada are those who belong to RSGB, ARRL(Canadian Section), the MARC or CAROA, which takes in just about everyone who might be interested. Even if you're not a member of one of these, get in and pitch at the stuff you hear.

There are THREE contest periods this year - one for phone, two for CW operation. In addition there will be a receiving contest during the phone week-end. A fine trophy or small cup will be given to the fully paid up member of RSGB scoring highest in each section. Merit certificates will be awarded the first three ops in each section and to leading ops in each prefix zone, where at least three entries have been received from that zone.

There are two classes of operation for both telegraphy and fone. Class one in each case is not more than 150 watts input, and Class two, not over 25 watts in. Here's how they break down - (a) CW, 150w class, from 1700GMT on Jan. 14 to 1700 GMT on the 15th. and from 1700 GMT, Jan 28th to 1700 GMT Jan 29th, 1950. The 25w ops will operate the same week-ends. The phone period is to be from 1700 GMT the 21st of Jan., to 1700 GMT the 22nd.

Since there will be another issue of Skywire prior to the actual contest periods, and since also it will be fresher in your minds what is required, we'll print the complete details of the BERU contest in the December issue, so you'll have a handy and exact reference. In the meantime, get your rigs polished up and the new building bugs out, ready to go. BERU is great if you want to get the country total moving up again and the sky is the limit.

At the same time, let's hear from you direct this month about the DX you're working. Send us detail!

Monty Montgomery, 2KG

No one this month seems to be doing anything around the shack. And we're still waiting to hear from other districts in Canada, the clubs and SCM's, as to what the country as a whole is up to now that winter activity is about to start again. Here's the news so far.

AJA new St. Lambert ham is on with a single 807 into dipole, modulated. Seems to be getting out. MX in same town as AJA is busy trying to get new exciter perking. UV changed over from 52 to 300 ohm line, pruned the antenna and is now very happy about it all. IE has worked up to 150 watts to T-125, cathode modded. WY took down beam for moving and is now using folded doublet. XP working hard on new tower for a 10 over 20 set-up. AKC came on 10 for first time in October. QS wants WAC and WAS for sure this winter. He has two new antennas to do the job. AEL bought himself a surplus cabinet and put the rig beyond reach of trouble. FO has a 70 year old father who is primed to take his ticket test this month. BD because of a business trip to California, is working from W6 shacks now. NI formerly AFV hooked 4X4AD in Tel Aviv recently on 20 meter phone. Congrats to Dick Wanless, now AKM He's first sightless ham in this call area and 11th in all of VE's since the first ham licensed in this country. XR gave Dick a big helping hand in studying and getting rig together. XX moved into new house at Dorval and rig is on the basement floor in pieces. NJ lost her brother in death Nov. 7. Our sympathy, Nan. OS has portable rig at work to contact xyl NJ at lunchtime, and maybe work DX too! LP now to be found around C.E.S. each day. EX and UN working this winter on two 27' cabin trailers, sharing free time with ham radio. VV his first SSSC transmitter and receiver haywire worked so well, he's building them into permanent form. ER took the I do's in Oct. and is trying to convert the xyl. And Pssst - if you want another stag party organized, let KG know.

Hey - reporters from all districts in Canada are wanted to present news from every call area in Skywire. Club secretaries, SCM's and other interested hams are invited to use these columns for activities in your part of the world. Send data along to the Town and Country Editor, % Skywire Magazine and do some talking about the boys in your province or city.

CURIOSITY PAYS

And to - George B. McCullough, VE6AX, of 514 Scarboro Ave., Calgary, goes our National ICN Dial Award. The drawing was made from all the mail received, on the morning of November 18th, to allow mail posted on the 16th to arrive. Thanks to all of those who took the trouble to drop us a line. Hope you'll all enjoy the coming issues of Skywire, too. To George, our congratulations - hope you can use the ICN well.

AN OPEN LETTER TO ALL CANADIAN HAMS AND EXPERIMENTERS

We believe that the VE amateur is just as capable, if not more so, of producing high quality amateur equipment, as anyone else. It's up to YOU to prove that belief is justified. Not all of you stick to other-man-thought-it-up circuits and it's from your type of real amateur we want to hear. Write up your technical experiments so that someone else can follow what you've done, make the circuit diagram out clearly, with all components clearly marked, send photos if possible, and earn yourself a cash dividend. Skywire pays for all accepted technical material at attractive rates. You'll be advised by mail immediately, of the amount of payment to be made, if article is to be published.

HERE'S A SUGGESTION FOR CHRISTMAS -- Give a subscription to SKYWIRE. For the next twelve months, you'll read it first in these pages and you'll keep up to the minute on what your fellow-Canadian amateur is doing. Subscriptions to SKYWIRE are within easy price reach of every person today - $2.00 per annum - hundreds of pages of entertainment each year. Be sure YOU'RE on the mailing list next month, when Skywire takes on a " New Look " in readability. Send your money order, postal note or check(include exchange) today, with the form below filled out.

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LADIES PRESENT

This column is more particularly for the distaff side of the ham household, but the OM's will find a number of new developments in electronics which may prove interesting to them. Read on -

If a housewife wants to match a color in a piece of ribbon or in some other fabric she goes to a store, or sends her husband. The matching up is then done by eye, possibly with the salesgirl collaborating in the judging. And sometimes the color matching is fairly close!

But all this uncertainty has now been removed by a new electronic machine invented by an American. This gimmick can spot difference of color invisible to the human eye, and can identify more than one hundred million different tints and shades and colors - more than you thought existed.

The machine's invention came as a result of discoveries about the mathematical make-up of colors, and the machine used does complex mathematical calculation in reaching the final verdict. It will tell whether a given color matches another, and if not, it will tell the exact mathematical degree of difference in the two.

Scientists are learning more each day about the rays filtering down to earth from the sun, through our atmosphere. And some of these rays can now be duplicated by electronics. A Dr. Dulbecco has used two types of these duplicated rays, and with one he was able to kill a vast quantity of bacteria. With the other, and a day later, he was able to revive a large percentage of the bacteria he had killed. The result was the violation of the rule that death is final - but it actually DID happen.

What does this mean? Further tests along this line may show what part cosmic, ultra-violet and other kinds of rays in nature play a big part in our lives, in making us feel well, or dull and lifeless - in the aging of life tissue, and the like. This type of research could possibly shed some light on what happens when human cells form a cancer of wild cells that can be fatal. We'll have to wait for more tests to see if there are any real uses for this new find.

If your Junior operators are at all musically inclined, you may be interested in a new musical instrument which is played electrically. It's called the Martenot and resembles a small piano with

a keyboard of seven octaves. And attached to this is another instrument somewhat resembling a lute. This is described as a singing leafe, since when the keybcard is depressed, sound vibrations are produced in the strings of the so-called singing leaf section.

The instrument invented by a man named Maurice Martenot, arrived from Paris recently and was played by the inventors sister Ginette, at the Boston Symphony Orchestra on November 4th and 5th of this year. She is slated to appear with the New York Philharmonic again, on November 17th and 18th.

The U.S. Air Force has just come up with a weapon that can go looking for enemy planes on its own. It's called the Firebird and it is nothing more than a radar - equipped package of high explosive that can intercept automatically, at night or in bad weather, enemy aircraft or missiles. According to an Air Force report, the missile is still in the experimental stage. The proto-type probably won't be put into general production since the plan is to use the data it can provide to develop improved models.

This missile is carried by fighter planes and then launched in mid-air, near its objective, by the so-called Mother Plane. It is designed to fly in on the enemy target, seeking it out in mid-air. When the missile gets close to the objective - close enough to be sure of destroying the enemy, the warhead explodes on the same principle as the famous war-born proximity fuses. In case you're worried about a miss - the warhead is detonated harmlessly in the air, if the target is not reached in a pre-determined time.

A bulldozer and a Geiger counter were used on November 6th, 1949, in an unusual scavenger hunt at a garbage dump near Moline, Ill.. Expensive equipment and trained personnel were searching for a tiny vial about one inch long which held more than 800 dollars worth of radium. The small tube, a metal container, disappeared from the doctors office when it was apparently swept accidentally into a waste basket and then was carted off with the refuse. The searchers left no stone unturned in the hunt for the missing jug.

Science has come up with an X-Ray device which will enable you to check on whether you're getting what you pay for in shoe purchases. It's really just to protect you from buying shoes made of an inferior material.

The X-Ray manufacturer says all you do is hold the new shoes up under the machine and the stamped name of the material, which will show whether the shoe is made

of cowhide, cloth, or anything similar, will produce a fluorescent glow similar to neon.

Most housewives are still doing their ironing by hand, and if you're one of these, here are a few pointers on buying a new iron now that Christmas is getting close.

A hand iron should have about one thousand watts of power for fast heating. The handle should be, of course, heat resistant, and also shaped to fit the hand comfortably. The edges should be slant or bevel for ironing around the buttons. The cord should be well insulated where it is attached to the iron. The sole plate must be suited to the ironing job - a large plate for a big ironing, including lots of flat work, and a smaller, narrower iron for young children's clothing, ruffles, or other fine detail on clothing. And finally, that new iron should weigh in at less than four pounds unless you have a super-abundancy of energy - a heavy iron takes a lot of lifting.

A radio technician who learned the art under the great Marconi, a man named Adelmo Landini has recently obtained a patent in his native country, Italy for a system of radio communication based on reflection of short waves off the moon. His patent application states that this system is the result of nineteen years of study and research, which started in 1930. He and Marconi noticed in their experiments that the moon was sometimes sending back short wave broadcasts from Rio de Janiero. Landini said that he and Marconi had worked on the problem, trying to work out a useful system of making the most of this phenomena. They were said to be working on a sample channel from Rome to the southern portion of Argentina, with the moon acting as a relay point.

Marconi died before completing his research, Landini said, and he had continued on for these 19 years himself. And he now has a new system of radio communication for both medium and long distance, based on micro waves reflected from the moon. Landini says that reception in Italy of signals from the Antipodes has been extremely easy.

Landini's system depends on an instrument which can maintain radio transmissions constantly aimed at the moon. He cautiously said he thought it would work for radio-telephone and television communications. To the skeptics, he pointed to the United States Army researchers, who, in the post-war period, have been able to bounce radar signals off the moon, and record them back on earth as an echo on the radar screen.

TRAFFIC LIGHTS

by
Bert E. Altherr, VE2GM

The purpose of this monthly column will be to correlate news and information concerning any Canadian traffic or emergency net, regardless of affiliation, and act as a clearing house for such, to keep you posted on current activities. We'll try to keep up to the minute with new, conventional signs and net procedures as they become established. In the very near future, we hope to be able to publish a complete list of all Canadian nets, showing their frequency and times of operation, as well as the name of the net managers and other participants. The main objective then, is to encourage more amateurs in Canada to take a part in net operation and thus handle traffic. It's one of the most interesting phases of our hobby and without doubt, is one of the only tangible ways of serving the public and our country.

It will be very much appreciated if the managers of all the Canadian nets would drop us a line, in care of Skywire Editor, at the address given on the contents page of this issue, giving us all the gen on their own nets. Please include name, frequency, times and days of operation of your net. Any other items which would be interesting to and perhaps useful to other nets will gladly be accepted for publication in this column.

Since Skywire is now covering a very large percentage of all VE amateurs from coast to coast, it should be possible for you to keep your net informed on your activities in these pages. This could easily solve your problem of putting out a net bulletin from time to time. And since the column is published just a few days after compilation, rather than several weeks later as is the case in most magazines, you can include the last minute news and be sure the boys will get it immediately.

This is YOUR column - and the more data you provide, the more space will be available for your use. So let's hear from you NOW, via letter or radiogram, whether it's a CW or FONE net, so that we may help to publicize your net activities, and perhaps thereby, help you to get more stations on and interested in your own net operations area. QSK?- QSP VE2GM?

HOW'S UR OBS IQ?

A.R.R.L. OBS

The following official bulletins from Hartford are reprinted for your convenience. Since Canadian OBS amateurs are transmitting on a regular schedule in your area, it is suggested that you keep up to date by listening to the one nearest you, on your band. OBS often advise of major changes and events at the last minute.

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OFFICIAL BULLETIN #213, Oct. 26, 49
You are cordially invited to take part in the Sixteenth ARRL Sweepstakes Contest, November 19, 20, 21 and 26, 27, 28. Awards will be given in each ARRL section, one to leading radiotelegraph, and one to leading telephone operator. The complete rules appear on page 38 of November QST. Drop a postal, or send a radiogram to ARRL HQ, giving the call of the station from which this message was copied and you will receive gratis, some special Sweepstakes reporting forms. AR

OFFICIAL BULLETIN #214, Oct. 31, 49
International DX has been worked on 50 mc in phenomenal proportion during the past two weeks. HC2OT, Guayaquil, Ecuador, worked all US call areas, VE3, XE1 and YV5 on October 16th, and LU6DO and LU9AS were worked by W9 and WØ. 50 megs has been open from KH6 to JA, VK, ZL LU and W6 and W7 almost daily. LU9MA was worked by W1's ZE, EKT, JLK and DJ on October 28th A.M. and K6BF Santa Barbara, Calif., worked ZL4GY at 4.05 PM PST for what is believed to be the first W to ZL 50 mc contact. W6FFF worked ZL1HP shortly after. Automatic transmissions from JA2AZ have been heard in VR, ZL, VK, and KH6. Best DX has occurred immediately following ionospheric storms. Next predicted good dates, November 3rd to 5th, and 10th to 14th inclusive. AR.

OFFICIAL BULLETIN #215, Nov. 4, 49
FCC today authorized amateurs to disregard its Public Notice of Oct. 13th which prohibited U.S. amateurs from conducting radio communications with certain foreign countries. This authorization is effective until further notice. The practical effect of this latest notice is to allow U.S. amateurs to resume communications with stations in any of the countries listed in the Oct. 13th notice (see Oct. Skywire)! W1AW will carry news of any further developments. AR.

If you can't catch your local OBS, read it FIRST, in Skywire!

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pair - VE2KG.

PARTS
C29 -.01/160
C31 -.01/600
C33 - 20/450

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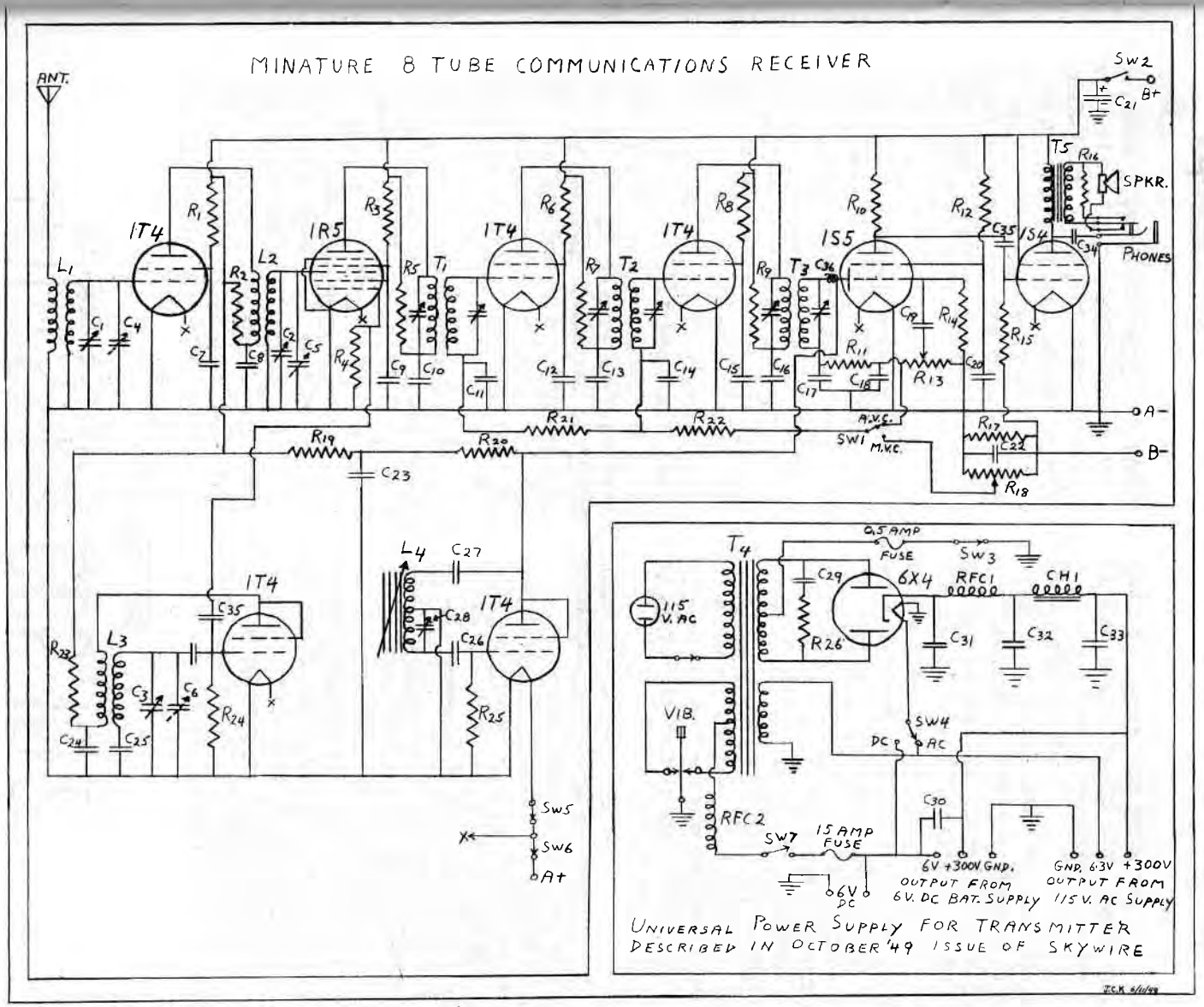

HAMADS

Skywire Hamads must pertain to amateur radio. Rates are 20¢ per word, per insertion for commercial advertisements for profit, 4¢ per word for non-commercial, non-profit ads by licensed radio amateurs, or experimenters. Full remittance MUST accompany copy. Print plainly, count address in ad. Do NOT send personal checks unless exchange is included. Closing date for copy for December issue - December 3rd. Send ads to address on contents page: Ed:

WANTED - Transmitter 150-175 watts input, CW on 80 and 40, phone on 10 and 11, with self-contained power supply for 25 cycles, 117 volts. NBFM or Amplitude modulation. Send full details and price. Also want Hammarlund HQ-129C. FOR SALE Harvey Wells TBS-50, power supply for same, 450V, 300 ma., 6.3 at 4a in Hammond cabinet. Hallicrafters S-40 receiver, Electro-Voice #75 mike, 2 crystals. Cost over $400.00. Best offer over $270.00 takes the lot or would arrange swap. G. Midwinter, VE2FL, at Bourlamaque, Quebec.

HALLICRAFTER HT-9 transmitter, output 100 watts CW, 75 watts phone, complete with 10 and 20 meter coils, but less mike; like new. Sacrifice at $375.00. Write K. Edmison, VE1GA, Box 25, Moncton, N.B.

LOG SHEETS, loose-leaf, fifty for fifty cents. Niagara Peninsula Amateur Radio Club, 67 Sherwood Ave., St. Catherines, Ontario.

FOR SALE at a bargain. Transmitter 400 watts 813's, Taylor Super-modulation audio, five hi-grade meters, phone, CW, BC610 exciter. Housed in a beautiful steel cabinet, grey crackle finish, 72"x 29" x 24", mounted on heavy roller bearings. Reason for selling, apartment too small. Best offer - VE2DD, 572 Third Avenue, Grand'Mere, Quebec.

FOR SALE - pair of 50mmf/5KV, 5amp WE Vacuum condensers. $3.50 for the pair - VE2KG, QTH in callbook. ((HAMADS CONTINUED ON PAGE 32))

PARTS LIST FOR POWER SUPPLY SHOWN ON OPPOSITE PAGE.

C29 -.01/1600v oil. C30 -.0001. R26 - 5K ½w RFC1 - 2.5 mh. RFC2 -
C31 -.01/600 v. C32 - 8/450 vdc. 55T #12E close wound, 1" diameter.
C33 - 20/450 vdc - for filters. CH1 - 10h/80ma. T1 - Hammond 284

Rectifier tubes 6X4's

HAMADS CONT'D

WOULD appreciate if someone would advise me where, or who, in Montreal teaches code. Please call LA 0704, 6 - 8 pm. if convenient, ask for Carl.

RME-45 Receiver with matching speaker, covering all bands 550kcs to 30mcs, in wonderful condition. Best offer over $150.00 takes it. Write Box 100, Skywire Magazine.

FREQUENCY meter, BC-221, $39.00, BC-375 transmitter complete, $75.00, TA-12 transmitter, $45.00, 1154 transmitter, $30.00, ABK transceiver, $9.00... Nick Dillon, 5584 Esplanade Ave., Montreal - CA - 5613.

TAPE RECORDER, Brush BK-401 table model, with added filter section, high and low impedance input as well as 500 ohm input and output circuit transformers. All modifications done with Hammond 800 and 400 series transformers. Ideal for ham shack recording. Less mike, in brown cabinet simulating wood (original case) best offer over $150. take this. Write Box 100, Skywire Magazine.

GET maximum circulation for minimum cost. Use Skywire Hamads to sell your unwanted radio equipment. A 25 word advertisement costing one dollar reaches hams from coast to coast - brings results for you.

WEBSTER wire recorder, model 79, with three built in amplifiers, most suited for amateur recording work. Best offer, starting from $100.00 Write, T.M. Lott, Apt. 26, 1730 Dorchester W., Montreal (WE 2175)

Because of the normally high costs involved, few amateurs have been able to use the QSL's they'd really like to design and have printed. If you can produce the art work in finished form, and four times the normal size ((so it may be photographically reduced to normal)) that brainchild of yours can be obtained at a very reasonable cost, in a quantity of 500 or 1,000, on hi-grade stock. Photomontage effects and photopaste-ups can be made to suit yourself, but please remember that if the final card size is to be standard $3\frac{1}{2}$" X $5\frac{1}{2}$" QSL size, the art work must be 7" X 11" (four times area) for good results. If you have been thinking about and wishing for an oustanding QSL, you can have it! Write to Skywire Editor, 284 Guilbault Ave., Longueuil, Quebec, submitting the paste-up or other art work, and you will be advised by mail if anything else is required. Cost is almost the same as ordinary cards obtainable in Canada today. Write for prices!

TELEVISION

The best of the many cartoonists gags on television for this month, is as its subject might suggest, one which showed up in Esquire. The scene is a darkened room with the old folks seated around one end at the television screen, avidly watching the show in progress. And at the rear of the group whole unconcerned with, and un-noticed by the old folks, is a young couple busily catching up on some romance!

A few days ago in New York, famous commentator Elmer Davis and advertising executive Charles Wolfe told newsmen of the U.S.A. National Association of Radio News Directors that they had no reason to fear that TV might at some forseeable future date, take over and supplant radio news.

Davis said - In a recent speech I made the prediction that TV news would drive AM off the air in 5 years - and felt at the time like a buggy whip manufacturer who had just heard about the automobile. But - he continued, I will not go into detail about the great expense to sponsors in television newscasting. In my opinion, TV news is no good and never will be.

Wolfe said - Supporters of television have been citing the switch from silent movies to the talkies, as an example of radios future. However, there is actually no parallel between the two, since broadcasting takes place in the home and will always have ear appeal.

Wolfe said - Radio will hold its' own nicely as an advertising medium on a cost basis for a good many years to come.

In Hollywood, a small group of pioneers are making a new kind of movie - films for use in television. They're working with amazing speed and economy, shooting half hour pictures in two days, at a cost of about ten thousand dollars. Movie theatre films take two months, as a rule, to make, and can cost one million dollars or more.

The television film pioneers feel there's a fine future in their new work. They think that in ten years they'll be making ten times as much film as Hollywood now makes for the theatres across the country. They also think that at least fifty percent of television programming is to be on film. President Hal Roach, Jr. of the Television Film Producers Association thinks TV eventually will be on the air, twenty four hours daily with at least eighty

percent of this programming on film. And the television film men think that their idea will dispense with lower grade pictures, because they say Hollywood will have to improve the quality of pictures to get people away from their TV sets at home, and into the downtown movie houses.

Hollywoods major studios have not entered the field for quite a number of reasons. For one thing , there's no money in it now, except for the one minute commercials. The union rates pose quite a problem too. But some unions are making concessions to the TV film groups. Another angle to television film work is provided by the kinescope, which photographs a live television show directly from a receiving cathode ray tube. One network says it has made enough film of live TV shows on the air last year, to be equal to almost 375 full length feature type pictures. And from New York, this network, NBC ships more than two hundred prints a week, of twenty eight programs, to their television outlets from one side of the continent to the other.

Speaking of NBC, this net gave a special TV broadcast, commemorating the production of RCA's one millionth picture tube at Lancaster, Pa.. The one millionth cathode ray tube for TV screenwork was a 16 " metal coned type, and at the finish of the broadcast, the tube was installed in a receiver and presented to a veterans hospital. In the special broadcast, viewers were given an eye-witness report of the actual manufacture of the tube. NBC's cameras were set up along the plants production line with Ben Grauer as the commentator, and the millionth tube was followed through the various manufacturing processes to final rigid tests before it was ready for installation in a receiver.

This particular tube was important because it signified the big strides TV has made in the past three years. In this period, the number of television stations had grown from five to sixty-seven, and more than 70 million people were within range of one of the transmitters. And in these past three years, more than one and one half million TV sets had been bought by the public. New network facilities had become available in this period, and in fact, the production of this one millionth tube could be seen on screens in about half the country - from Boston to Chicago.

Mass production of the TV picture tube on automatic machinery, and conveyor belt by RCA assured the television industry of a large volume supply of this most vital component in a home TV set, and about half of all sets in the U.S. use RCA cathode ray picture tubes.

CLUB ACTIVITIES!

The first group to be heard from this month was the Quebec Amateur Radio Club, which has been putting out for the French speaking hams of Quebec Province a complete and newsy bulletin. It's being sent, apparently to most of the smaller points too, giving the non-English speaking hams a break. Congratulations to the Executive of the RCdeQ, and our appreciative thanks for your accompanying letter, Marc Cimon!

The Niagara Peninsula Amateur Radio Club has done something very constructive about the current shortage in Canada of Log Forms. See the Hamads on Page 31. Let's hear more of youractivities in that area!!

The Saskatoon Amateur Radio Club Executive are reported to be busy stirring up both news and technical material for future issues of Skywire. Let's have these, boys - and from any other clubs in VE land.

Heard from the Hart House, University of Toronto gang last week. Now, if you fellows will let the rest of us in on what pet circuits you've doped out, that would be suitable for publication.....

Up in Abitibi, P.Q.(pronounced A-bee-ti-bee,they say) they've formed a new club which takes in hams from all the surrounding area. Marcel Phaneuf, VE2RB is the Sec'y-Treasurer, up in Amos.

The Montreal Amateur Radio Club announced the dates of the meetings in both November and December as the 30th of this month (Wednesday) and the 19th of next (this is a change of meeting night to MONDAY) with both meetings starting at 8.00 p.m. in the Breadner Room of the Canadian Legion Building on Mountain St. The December meeting is the best of the year, it's said, because of the terrific prizes drawn for.

Thanks also to the Halifax Amateur Radio Club (Binks Fisher,Editor) The Loyalist City Amateur Radio Club (Murray Doull, Editor) and to the Hamilton Ontario Radio Club (The Shack - W. White, Editor) for the fine club bulletins they've sent our way. There must be many more in the other major cities across the Dominion and we'd like to both hear from you, and publish your news and activities in this column!

RADIO CENTRE NEWS

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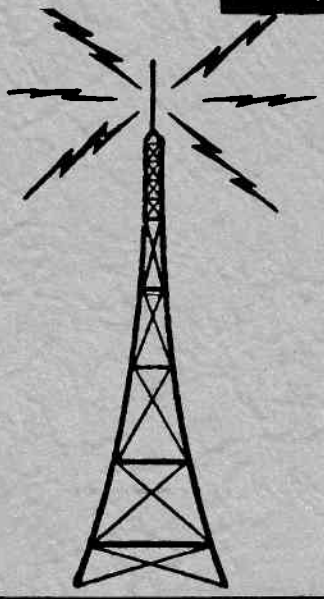

THE RADIO CENTRE CATALOGUE CONTAINS HUNDREDS OF GREAT SURPLUS BARGAINS. IF YOU HAVEN'T A COPY, WRITE FOR IT IMMEDIATELY.

THE RADIO CENTRE - 62 CRAIG STREET W. MONTREAL.

*John F. Rider says,**

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Gives complete understanding of TV principles, practice and operation. Covers Cathode Ray Beam modulation and synchronization. Complete analysis of tubes, circuits, antennas, etc. Glossary of terms. 216 pages, profusely illustrated.

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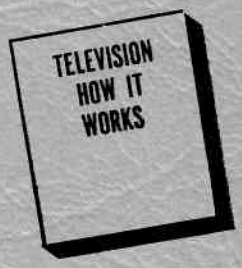

Another Rider first. A goldmine of informative theory for the serviceman right from the beginning. Deals with transmission and reception of signals, antennas, circuits, etc. The entire book carries the practical along with the theoretical.

YOUR COST . . $3.40

Milton Kiver's basic book on TV. Describing in a comprehensible way the mysteries of TV so that the average serviceman can understand it. Includes latest developments and colour television.

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Directions for installing, diagnosing, locating and repairing TV & FM receivers. Calculations for length of transmission lines and antennas. Complete alignment and servicing instructions. By Milton S. Kiver.

YOUR COST . . $3.75

**In his lecture to Radio Servicemen's Town Meeting, Montreal, October 19th, 1949.*

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