HAM HUM

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February-March

Vol. XV
No. 2-3

I hope the XYL's will enjoy the following poem as well as the OM's.

The dishes are done, the chillun's abed,
The cat is out, and the dog is fed.
The house is quiet, the day is complete,
And I am practically out on my feet.

There is the bed, so snug and warm,
I've longed for it since early morn.
But do I go, now that all is done?
Of course not, now's the time for fun!

For mine is the hobby of grid dip and load
Of learning some theory, and practicing code.
Of checking the meter and logging the call,
What am I? A radio amateur, that's all.

I tune up the rig. (I'm starting to smile)
The beam to the north (we'll try there for awhile).
And amid all the calls of CQ,CQ,
I clean forgot I'm tired and blue.

There's that VE4 I've been trying to get,
And the happy voices of the Clam Diggers Net.
I'm a mother, yes, and proud of it too,
But I'm also an amateur, a ham like you.

de Omarc - Western Electric

****

FEBRUARY MEETING

Sincere thanks to Alan H. McMillan, WØJJK, and Peter E. Trapolino, WØJHU, who arranged for our February program with material obtained from ARRL. This was a series of 107 slides and a very good tape commentary entitled "The First Thirty Years of Amateur Radio." It showed us many interesting highlights of the early days of hamming, complete with sound effects of a spark transmitter.

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HAM HUM is the official organ of the Ak-Sar-Ben Radio Club, Inc., of Omaha, Nebraska, mailed monthly to all members and to others upon request.

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Local area winner of Hallicrafters contest, recently concluded, is Garry "HOSS" Cartwright, WAØ-HNW, at Lincoln, Nebr. He entered through WRL and will win a HA8 "Splatter Guard." He'll also be eligible for regional and national awards up to $1,500.00 in gear.

Al - WRL

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Gentlemen:

I would like to send a few flowers of thanks to two fine members of the Ak-Sar-Ben Radio Club - WAØBID, Vi and WAØBIE, Bob. How many hours they spend for their fellow hams in outstate Nebraska, calling hospitals or some other Ham. They never refuse the many requests made of them. Many thanks from all of us in North Central Nebraska.

Matthew G. Beha, WØLFJ
Sunny Acres Farm
Box 112, Route 1
O'Neill, Nebraska 68763

****

Pete Trapolino now has a new call - WØJHU (ex K2RIT).

****

"WAØDGA" Harold and family send their thanks for the many cards and help the hams and friends did for us while I was home with a broken leg. God Bless.

Big 73
Harold WAØDGA

****

FOR SALE

Clegg Venus 6M SSB-AM-$400.00, Warranty in Box.

AC-DC power supplies - AC $40.00 - DC $80.00.

Hallicrafters T.O. Keyer and paddle - $60.00.

Ameco Code Course - $8.00.

Novice crystals - $.50 each.

TD-1 tape Doublet - $50.00, never used.

Hy-gain 3 element and AR-22 and mast, wire coax - $50.00.

Zeus 1000 Watt AC generator and special carrier $150.00.

Other Misc.

Nimrod Riviera camping trailer

Will consider trade for sta wagon or pickup.

M. W. Costello KØYWY
2718 North 93rd Street
Omaha, Nebraska

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HEART FUND DRIVE

The Ak-Sar-Ben Radio Club station WØEQU/Ø was in operation Sunday, February 21, 1965 to assist the Heart Fund Drive.

A 2 meter link at 145.295 mcs. was established between the Heart Fund Headquarters and the Red Cross Building, the base station. The base station relayed on 50.466 mcs. to the mobile units who made the pickup and deliveries for the Heart Fund Collection Teams.

The following persons volunteered their time and equipment to the drive:

Lou Cutler	WØVLI	2 meter link - Heart Fund Hqtrs.
Steve Lustgarten	WNØJES	2 meter link - Red Cross Bldg.
Harold McClenahan	WAØDGA	6 meter base - Red Cross Bldg.
Ed Donze	WØYEV	Mobile Dispatcher
Fred Fischer	WØEGP	Mobile Unit 1
Kurt Fischer	-	Rider Unit 1
Royal Enders	KØLYO	Mobile Unit 2
Steve Gottlieb	-	Rider Unit 2
Royce Johnson	WAØKIL	Mobile Unit 3
Dan Blinn	WNØKZA	Rider Unit 3
Bud Smith	WAØICK	Mobile Unit 4
Harry Silver	WAØDJK	Rider Unit 4
Dick Grimshaw	KØPQP	Mobile Unit 5
Glen Pollock	WAØFMY	Rider Unit 5
Del Gibson	KØUIV	Rider Unit 5
Thanks to		
Hugh Tinley	KØGHK	for use of Red Cross facilities

Mrs. Shirley Douglas, the Heart Fund Director wishes to thank those who participated in the drive.

Although the traffic was light, 15 messages were handled - it was a good practice and those that participated and monitored the frequency benefited from this experience.

Our purpose is to serve - and to serve properly - experience and training will be of benefit - if a serious need ever arises.

I wish to thank all that worked on the Heart Fund Drive as well as past mobile exercises.

Anyone who desires to join the mobile committee is welcome - you do not need to have a mobile unit to join this good group.

Fred Fischer
Vice President
Mobile Committee Chairman

****

RTTY HINT

To simplify measuring the loop current to your machine measure the voltage drop across a known resistance. This method eliminates the need to open the loop and insert a millamp meter. It is quite accurate also. For example the voltage drop across a 750 ohm resistor will produce a voltage drop of 45 volts when the loop current is 60 ma. Likewise, 500 ohms will produce 30 volts and 250 ohms a drop of 15 volts.

Usually you have a variable resistance in the loop, insert the voltage drop resistor and reduce the value of the variable by a like amount. Bring leads from each end of the voltage drop resistor to the front panel to some test points or pin jacks and you are in business. You can label the test points "loop current" - adjust for 45 volts (or what ever voltage your drop resistor provides).

Johnny, WØPHW

****

NEW CALL

John R. Evans (ex WNØIBD) has a new call - WAØLMA.

****

FOR SALE OR TRADE

1960 Hillman convertible - automatic transmission - red - executive car, for "S" line or equivalent.

Bob Miller, KØZLY
112 North 43rd St.
Omaha
Phone: 553-7005

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GALAXY V MODIFICATION

Galaxy Electronics has announced a modification. REMOVE 10 ohm ½ watt 5% resistors (IRC) - Resistors R-16, R-17, R-18, R-19. SUBSTITUTE 10 ohm 1 watt 5% resistors (AB). Date of modification: January 29,1965.

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FOR SALE

2 RM Series Surplus Receivers with power supply 200 Kc to 20 Mc. 1 6-meter converter.

Erv Heinz, WAØEEM
1933 South 51st Street
Omaha, Nebraska
Phone: 553-2033

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2-19-65

Gentlemen:

Am making the following recommendation concerning the drawing each meeting for a year's free dues: Place only paid up eligible member's names in the hat for the drawing. It is a waste of time drawing someone's name out who is not in good standing (as was done 2-12-65 meeting), and even if he or she were present, they would not receive the award of a year's free dues. This drawing still serves a good two-fold purpose, one of stimulating regular attendance and also, of keeping in current good standing by keeping ones dues paid up.

Resp'y Submitted,
Erv Heinz
WAØEEM

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FEBRUARY
MEETING
PHOTOS

By
WAØEEM

THE TRANSISTOR CORNER

A SIMPLE OSCILLATOR

Those of us that were at the January meeting were treated to a talk on transistors by Clarence Huntley, an engineer at GALAXY ELECTRONICS of Council Bluffs. I dare say, his simplified explanations were clear, and many of us learned, and more important, understood, some of the basics of transistors.

After the talk, Clarence gave everyone interested a free transistor. These were type 2N2926, a silicon NPN variety, and they can be used up to about 70 Mc. in oscillator circuits. It's perfect for this simple project, and if you didn't get one free then, they are available for under $1.00 at WRL. Other than the transistor and small batteries, I imagine most everyone can turn-up the other parts from the junk-box.

First, to identify the leads, lay the transistor on the table with the flatted side of the case up, and the leads towards you. Left to right, the leads will be E(emitter) C(collector) B(base). As this is a NPN type transistor, the battery is connected with the positive terminal to the collector and (through a dropping resistor) to the base. The negative battery terminal goes to the emitter.

Usually, protective circuitry is used in the form of biasing networks, to prevent thermal runaway in the presence of great heat or other unusual disturbances, but it was deleted in this project for several reasons. Only three volts is used; the silicon transistor will take substantial overloads; and it would take considerable heat to cause trouble - but don't the unit on top of a hot receiver, etc. About the only way damage could be easily done is if the base resistor would become shorted and apply the full three volts to the base - which would cause too much current to flow through the transistor and probably destroy it.

In this simple project, we will just construct a simple oscillator useful for a signal generator that may be used to calibrate a receiver, etc. However, you might see how far you can work using his flea-power as a CW rig, keying the battery lead. For reception in your own shack, the antenna lead need only be about a foot long. You will have about 15-20 milliwatts input.

Connect the various parts according to Fig. 1, except for the antenna wire, the crystal, and resistor R1. C1 can be a small ceramic capacitor of 20 to 100 pf. B1 is 3 volts--two penlight batteries, etc. RFC 1 is a 2.5 mh. choke that will handle 30 ma. or more. SW1 is a switch or your key. You can try about 100,000 Ohms as a starter for R1 if you don't have a VOM to make measurements (in which case attach the crystal). However, if you have a meter that will read about 10 ma. you can se R1. Connect the milliameter across SW1 which is opened, with the + meter terminal to the battery and the – meter terminal to the RFC. Start with a resistor about 330,000 Ohms or more

and check the reading on the meter. If it is very low - say under 4 ma., then reduce the value of R1 until the meter reads about 7 ma. Actually, the best way to check for an optimum value of R1 is to connect a VOM (20K resistance meter) from emitter to base and adjust R1 for a reading of about seven or eight *tenths* of one volt. This should then produce the collector current of around 8 ma. mentioned. A collector current of 10 or 15 ma. can even be tolerated in CW use with care. The lower resistance of R1 will provide greater base drive and greater collector current.

Now that the voltages have been set, the crystal can be connected in the circuit. Any regular ham-fundamental type crystal should be ok--a 160, 80-40 meter type, etc. I just solder the crystal right across R1.

I suspect your CW DX won't be great if you try it, because there is no matching circuit in this scheme to match an antenna - but maybe we'll both be surprised!

Some more info and other circuits will be forthcoming.

73,
Alan McMillan WØJJK

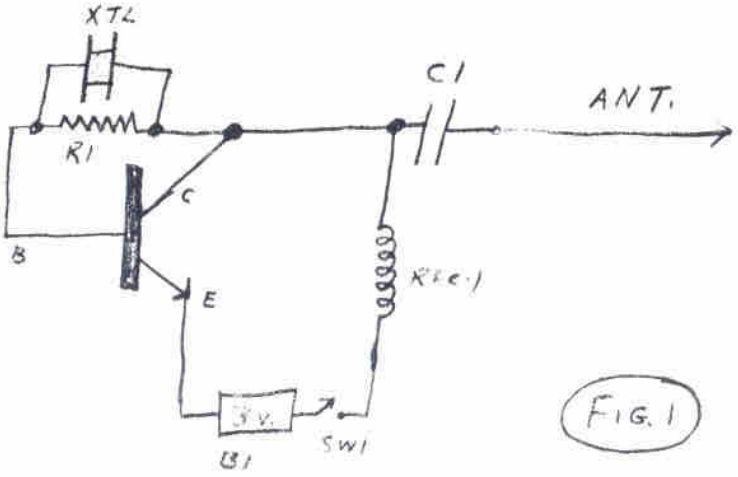

FIG. 1

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NEW ADDITIONS TO ROSTER

Steve E. Heil
3131 South 60th Street
Omaha, Nebraska 68106
Phone: 553-3409

Daniel S. Blinn, WNØKZA
6327 Florence Blvd.
Omaha, Nebraska 68110
Phone: 455-6358

David M. Watson, WAØDTT
5314 North 27th Avenue
Omaha, Nebraska 68111
Phone: 455-4472

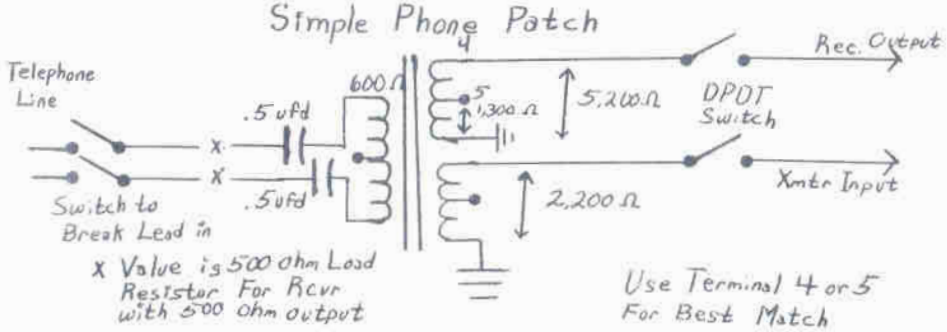
George R. Welshinger, WAØAKD
102 Osage
Papillion, Nebraska 68046
Phone: 339-8586

This month, we have one of those simple, one evening projects. It was sent in by Jim, WAØDVH, and looks like a straight-forward, simple, and best of all, cheap (cheep) construction project. So next time don't turn down the opportunity to help that poor fellow by running a phone patch. Instead, use your trusty "DVH" special.

Cheap and Easy Phone Patch
By Jim, WAØDVH

Here is a fine performing patch that anyone with a couple of bucks in his jeans can build. The transformer is the big cost, and that's a whopping dollar twenty-nine. I have seen these transformers in the display cases in Electronics Center, or, you can get one from Burnstein-Applebee, Kansas City, Mo. The stock number from B&A is 18C647 -- phone patch transformer. They enclose a schematic similar to the o I have copied here. The condensers can be of different values and still work. I have talked to operators who have used .01 mfd. The .5 mfd capacitor seems to give the best audio quality, however. As I understand it, these capacitors keep the ring voltage out and should be rated at 150 volts or better. Hook up the patch as per the print and good patching to all.

de Splatter, Minneapolis



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OFFICIAL BULLETIN NR 991 FROM ARRL

FCC has adopted the Conditional Class rules it proposed in Docket 15640, shown in full on page 56 of November QST. After April 15, applicants for Conditional Class under the distance rules must live more than 175 miles from an FCC office, quarterly or semiannual examination point. There is no change in eligibility by reason of physical disability, military service or overseas residence. Present holders of the Conditional Class license are not affected in any way. Full details will be shown in the April issue of QST AR

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Also coming from Jim this month, is a rather interesting article on generator phasing which he and Irv, WNØFBT, worked up.

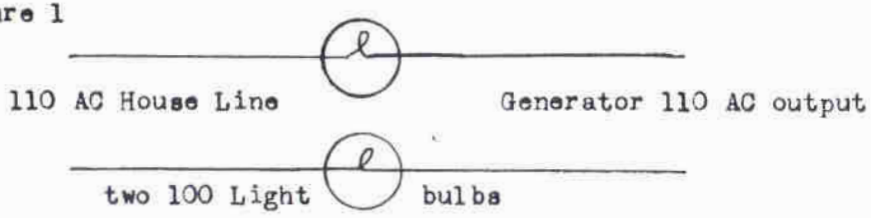
Light Bulb Phasing
or
How to go Crazy Watching the Bulbs Blink
By Jim, WAØDVH, & Irv, WNØFBT

With field day approaching, we dusted off the generator and cleaned it up for another go in the great outdoors, fired up the engine, and tuned it up to purr like a contented wildcat. Then I got to thinking, I wonder what the 60 cycle looks like so I hooked it up to the scope and matched it to the house 110 volt line.

About that time, Irv said, "Gosh Jim, you sure do things the hard way." So, always willing to learn, I listened. Irv is a real sharp electronics whiz and what he doesn't know about generators and associated stuff isn't worth knowing.

So Irv proceeded. First, he took two 100 watt light bulbs and two regular light sockets and hooked up the lights on the house line and on the generator output. (see fig. one) The lights rose and fell in brightness with the difference in frequency. Boy, is this neat and simple!

Figure 1



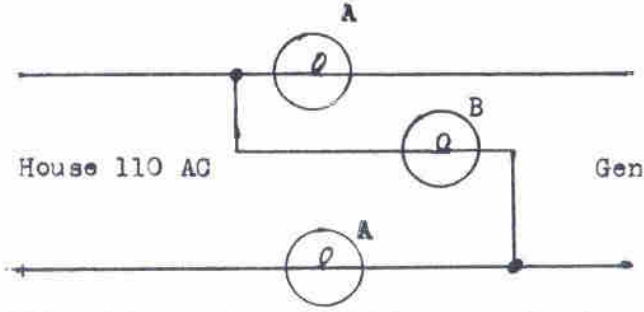
When lights are dimmest, frequency is matched.

All you have to do is adjust the generator speed to take the lights out and you're matched perfectly with the 60 cycle house frequency.

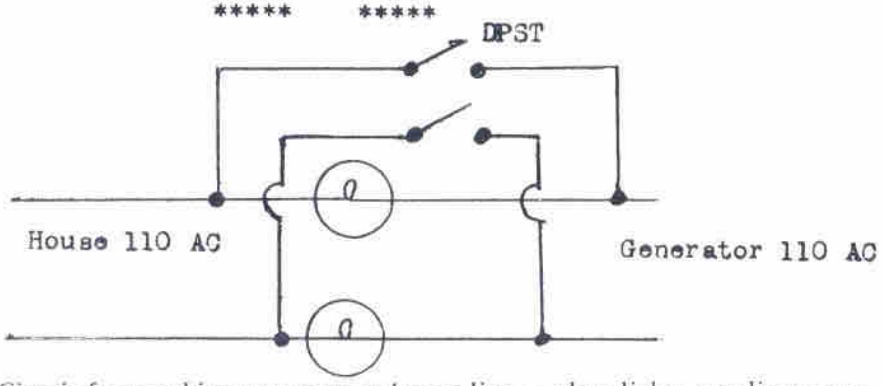
I guess that some of our neighbors thought that Frankenstein was at work, as the lights were going from light to dark as we experimented. Then Irv said, "Too bad we don't have a big SPDT switch. We could lock the generator in with the house line and they would both be together."

We didn't have a switch, but will give the drawing for anyone interested. Well, we're ready for field day and we sure had fun learning about checking the frequency on a generator. I wonder how many others might try their hand at blinking the light bulbs???

LIGHT BULB PHASING CIRCUITS



Lights will now alternate in brightness -- when lamps A are bright, lamp B will be dim and visa versa.



Circuit for synching generator to house line -- when lights are dimmest or out, throw switch, house line will control generator speed and frequency.

de Splatter, Minneapolis

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OFFICIAL BULLETIN NR 989 FROM ARRL HEADQUARTERS NEWINGTON CONN JAN 22 1965 TO ALL RADIO AMATEURS BT

The ARRL Committee of Tellers met today to count votes in reballoting for the office of Director of the Hudson Division. Harry J. Dannals, W2TUK, was declared the winner with 2651 votes to 2639 votes for Howard W. Wolfe, W2AGW. Director Dannals takes office immediately for a term which ends at noon January 1, 1967. The reballoting became necessary when the Tellers declared the regular election a tie at 2426 votes each on November 20, 1964 AR

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Here is one I thought up for the joke column: Daffy-nition Amateur Radio Field Day - Ham to Ham Combat.

Larry Caccomo
WØNMN

****

From "Amateur Radio" Journal of the Wireless Institute of Australia.

IS THE FUTURE OF THE AMATEUR SERVICE IN BALANCE

This is the question which every Amateur in the world might well ask himself or herself and one which vitally concerns the Societies representing the Amateur Service in the various countries where Amateur transmitting is permitted.

Those who have taken the interest in Australia to read the facts relating to International Conferences cannot help but wonder how long the Amateur Service can hold out against the ever-increasing pressure for frequency space by the rapidly expanding commercial service.

If you are concerned about the future of your hobby you are commended to read the article "Two Plus Two Equals Four" by A. Prose Walker, WØDCA, W4CXA, in the October 1963 issue of the American publication QST.

As well as giving an enlightened and experienced background of the modus operandi of International Conferences, Mr. Walker points up the great and urgent necessity for a world-wide American program of "defense" as a barrier against the future loss of Amateur frequency assignments. His summary in three major points is worthy of reprinting in this magazine.

(1) We must upgrade the Amateur Service to keep pace with the state of the art and through this acquired status gain increased prestige and respect from people and governments who exert vast influence on communications.

(2) We must prepare for conference participation on both the national and international level.

(3) We must establish liaision throughout the world to the end that we will work together in presenting a united front to our respective governments and through them, to the I.T.U.

The Wireless Institute of Australia, representing the Amateur Service in this country, has been working along the line of these three major points for the past five years or more with greater vigor than hitherto was possible.

Our policy is now being planned a long way ahead and the road will not be an easy one. Whether you hold an A.O.C.P. or an L.A.O.C.P., your cherished hobby hangs in the balance because the pressure for frequencies now extends from the b.c. bands into the gigacycle region. If countries like America, where Amateur Radio holds the highest population density, are concerned with future prospects, then the problem is multi-fold in Region III, where the density is far less and widely dispersed. We might add another important point to Mr. Walker's summary.....

(4) We must use every resource at our command to encourage the full and continual use of every frequency assigned to the Amateur Service.

FEDERAL EXECUTIVE W.I.A.

de Auto-Call - Washington, D.C.

****

LEO SAYS: BUY DIRECT AND SAVE BIG ON THESE WRL HAM EXCLUSIVES

Leo I. Meyerson
WØGFQ

NEW

WVG MARK II ALL BAND VERTICAL ANTENNA

Low cost — self-supporting 10-80 meter antenna. Tunes 3.5 — 30 Mc with manual tap adjustment. Feed with 52 ohm coax. Quick installation. Amazing efficiency for DX or local contacts. Used as portable antenna also.

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Maximum power: 1000 watts AM or CW — 2 KW PEP. Omnidirectional. Vertical polarized.

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Low cost, compact, 6 meter transceiver

Stable superhet receiver. 5 watt transmitter, featuring PTT, using std. (Ft 243) 8 Mc range xtals, non-critical coils, plate modulation, power and modulation indicators, 10 tube performance. Step-by-step manual included. Wt. 9 lbs. 115 VAC Power supply (kit) — **15.95.**

only **$39.95** kit

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PSA-63 POWER SUPPLY

Universal Power Supply: Powers most AM rigs up to 100 watts, SSB units — up to 200 watts, PEP. Silicon rectifiers provide both 300 VDC & 600 VDC @ 300 Ma., ICAS (210 watts total), plus 6 VAC @ 10A or 12 VAC @ 5A, plus 95 VAC @ 10 Ma. Size 11¼" x 4¾" x 6". Wt. 15 lbs. Kit — 24.95, Wired — 39.95. Opt'l cabinet — 4.95.

only **$24.95** kit

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NEW 80-40 meter diapole using proven parallel diapole principle to resonate on both bands. Requires only one 52 ohm feed line (coax not supplied). Kit includes wire, insulators, center connector & full instructions. Complete formula supplied & quick graph chart for easy adjustment. May be used on **15 meters also.** SWR: Better than 2:1 at resonance — 80/40. Max. length — 123 ft.; 140 ft. for lowest CW range. Easy to install. Wt. 4½ lbs. Shipped Parcel Post.

80-40 Meter Diapole
One Feed line

$7.95

NEW **WRL'S 12R GENERATOR**

$149.95

Shielded ignition, 1250 Watts, 115 VAC, 60 cy., 77 lbs.
(FOB Milwaukee, Wisconsin)

SS-3 "Q" MULTIPLIER

- Notch and peak
- Self Powered
- One simple receiver connection

Int'l 115 VAC P.S. Plugs into Collins 75S-1, KWM-2 & others. Use with receivers having 455KC-IF: AC or DC powered. Adj. selectivity: 300 cy. to 10 KC. Sharp rejection (50DB) null for hetrodynes. 6¼" x 4¼" x 4¾".

$15.95 kit

ANTENNA TUNER MM-100

$10.95 kit

Specifically designed to match end-fed long wire which is ½ wave, or multiples thereof, to 50 ohm transmitters. Panel lamp indicator. For inputs up to 150 watts SSB, 100 watts CW, 75 watts AM. 4 x 5 x 4 steel case. Reduces TVI.

$4.98 **$6.37**

WRL NUVISTOR PREAMP PRINTED CIRCUITS

PA50-2 Stage preamplifier for 6 meters. Use 2 RCA 6CW4 nuvistors. Highest grade glass epoxy board. Assembled and pre-aligned for 50 ohm input-output. Requires 60-120 VDC @ 10 MA. & 6.3 VAC
Size 2¾" x 2¼". Wired **$6.37**
PA-144 Same as above except only 1 6CW4 nuvistor & for 2 meters. Wired **$4.98** (less 6CW4 tubes).

WRL

WORLD RADIO LABORATORIES, INC.
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