

AMATEUR RADIO

73

October 1960

37¢





WHERE TIME AND DEPENDABILITY COUNT IN COMMUNICATIONS . . .

INTERNATIONAL'S *ONE DAY CRYSTAL PROCESSING
SERVICE AVAILABLE WORLD WIDE

AMATEURS • EXPERIMENTERS • COMMERCIAL

AMATEUR CRYSTALS (FA-5, FA-9 spot frequencies 1000 KC to 137 MC .01% Tolerance.

Wire mounted, plated crystals for use by amateurs and experimenters, where tolerances of .01% are permissible and wide-range temperatures are not encountered.

Designed to operate into a load capacitance of 32 mmf on the fundamental between 1000 KC and 15 MC. Designed to operate anti-resonance on 3rd overtone modes into grid circuit without additional capacitance load. Fifth overtone crystals and seventh overtone crystals are designed to operate at series resonance. (Write for recommended circuits.)

Custom made COMMERCIAL CRYSTALS 70 KC to 100 MC

Wire mounted, plated crystals, for use in commercial equipment (Type F-6) where close tolerances must be observed. All units are calibrated for the specific load presented by equipment.

Circuit: As specified by customer. Crystals are available for all major two-way equipment and in most cases the necessary correlation data is on file.

Prices on request.

How To Order: For fastest service, our crystals are sold direct. Terms F.O.B. Oklahoma City.

**One Day Processing . . . Orders for less than five crystals will be processed and shipped in one day. Orders received on Monday through Thursday will be shipped the day following. Orders received on Friday will be shipped the following Monday.*

Now IN ONLY MINUTES **CONVERT YOUR CAR RADIO**
FOR SHORT WAVE RECEPTION WITH A **MOBILETTE**



International's NEW all transistor, Crystal Controlled Converter.

- Easy to Install.
- Works on 6 or 12 volts without change.
- Power connector plugs into cigarette lighter socket. (No external power supply needed.)

Designed by International for Amateurs, Citizens Licensees, Short Wave Listeners, Hobbyist.

Available in Seven frequency ranges covering the Amateur bands, 75 through 10 meters, the Citizens band, and WWV National Bureau of Standards Time Broadcasts.

Three simple steps to install (1) Remove antenna lead from car radio and plug into input of Mobilette. (2) Plug jumper wire from Mobilette into antenna connection of car radio. (3) Plug power connector into cigarette lighter socket. Mobilette normally wired for negative ground battery system. When ordering positive ground, add Suffix "P" to catalog number.

International Mobilettes cover these short wave bands.

Catalog No.	Frequency	Catalog No.	Frequency
630 - 105	75 meters (Amateur)	630 - 102	15 meters (Amateur)
630 - 104	40 meters (Amateur)	630 - 101	11 meters (Citizens)
630 - 106	10 MC (WWV Time)	630 - 100	10 meters (Amateur)
630 - 103	20 meters (Amateur)		28.5 - 29.5 MC

Available soon for 6 and 2 meters at slightly higher price.

**INTERNATIONAL
CRYSTAL MANUFACTURING CO., INC.**

18 NORTH LEE • OKLAHOMA CITY, OKLA.



Complete, ready to
plug in and operate
... only \$19.95

Order direct from International. Terms F. O. B. Okla. City. Include postage. Shipping weight 2 lbs.

Send for FREE Catalog covering International's complete line of Crystals and Equipment.

STABILITY



1 PART
IN 10^8
PER DAY

DIRECT
READING
320,000
FREQUENCIES

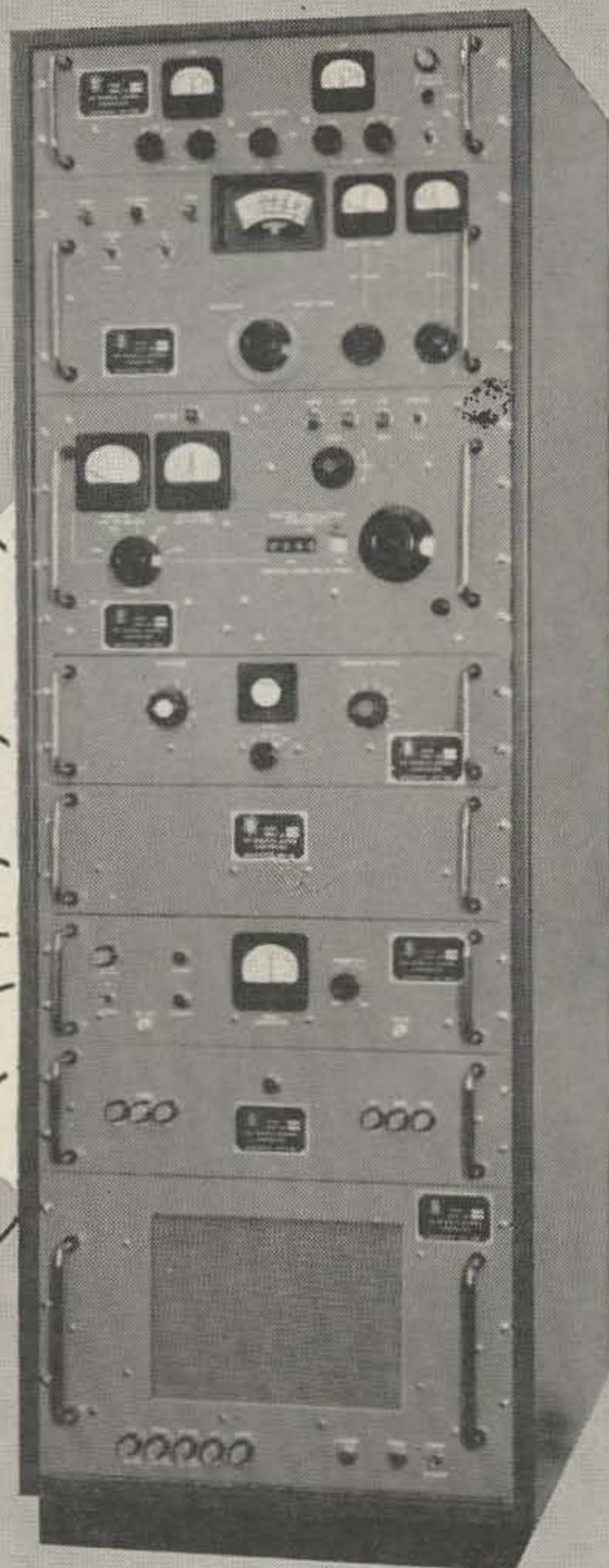
COLOR
CODED
CONTROLS

BOTH METER
AND NEON
SYNC INDICATOR

SPECIAL
CRYSTAL
FILTERS

15 KC
BAND WIDTH
(7.5 PER
SIDE BAND)

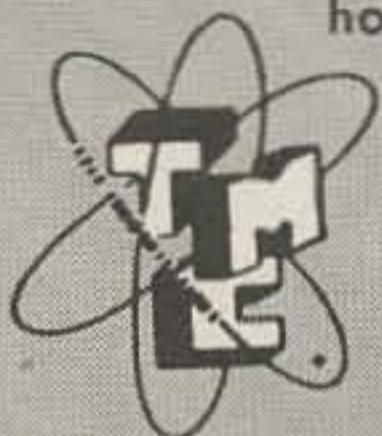
PULL-OUT
FLIP-OVER
DRAWER
CONSTRUCTION



AN/URA-30

SBG-1 SINGLE SIDEBAND GENERATOR

For full detailed
information write for
BULLETIN 228



The Model SBG-1, Single Sideband Generator, is a stabilized direct reading exciter system adjustable to 320,000 frequencies over the range of 1.75 to 33.75 megacycles in 100 cycle steps with a basic stability of 1 part in 10^8 per day. The generator is an all purpose device providing SSB, DSB, ISB, and AM.

All frequency determining elements in the SBG-1 are derived from a 1 mc source which has a phasing control for correction to an external standard. Also, the unit may be connected to an external standard of greater stability without degeneration to the standard. When the sideband exciter unit is bypassed, the Model SBG-1 may be used as an ultra stable R.F. frequency source.

Housed in a standard relay rack with 60 inches of panel space, the control portion requires only 29½ inches of rack space. The other components may be housed separately in the event this makes for a more convenient installation.

The TECHNICAL MATERIEL CORPORATION

IN CANADA

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.....de W2NSD

Please understand that this is Volume 1, Number 1 of 73. It is NOT perfect—it isn't even anywhere as good as I'd like it to be. But, all things considered, a major miracle has been worked and this issue IS in print.

Feedback

We both have a vested interest in 73 being as interesting as possible. You can help me keep my finger on your pulse by sending a postcard every month listing the articles in the order of your interest. I will publish results of this monthly survey as an encouragement to the authors. The top author each month will get, in addition to the compliment, a check from us for 50% of his original payment. Thus your vote each month will serve to help me in the selection of future articles and will encourage good writers both with plaudits and some extra cash!

Writing For 73

ONE of the first moves in planning the publication of 73 was to get in touch with past authors of ham articles and explain to them that there was a new magazine coming and that it needed articles. To encourage them we established the firm policy of paying for all articles immediately upon acceptance. This encouraged quite a few, as you can see in this issue, and as you will see in the subsequent issues.

There must be a lot more of you with interesting ideas to communicate. Naturally we prefer technical and construction articles, but if it is interesting and hammy we'll probably shell out. One author has hustled us for over \$1000 so far and shows no sign of drying up yet.

Suggested Procedure

If you're in doubt about whether we'll buy or not just send in an outline and, if possible, some pictures. We'll probably OK it. Try to get the best pictures you can and type it up double spaced (use a dictionary).

Laboratories Needed

Readers and manufacturers both expect us to run the same old tests on new equipment and write up pleasant little blurbs which carefully sidestep the obvious shortcomings of the gear and repeat almost verbatim the specifications published in the ads. I have tried running honest reports on equipment in the past only to meet mountains of emotion from the manufacturers and their advertising agencies and

apathy from the readers. This was obviously not the correct approach.

After much stewing over this problem I think I have an answer that will satisfy everyone . . . even me. Unfortunately, even with the twenty-four year collection of radio debris around the shack I don't have the necessary equipment to do the job of testing that I have in mind. And any of you chaps with an inclination to do something helpful for us all suitably equipped? You'd need a pretty good 'scope, dummy loads for various power levels, an rf voltmeter, an ac ammeter, a KW Variac for line voltage tests, an audio oscillator, frequency meter, antenna tuner, etc. This would enable you to run fairly good checks on a transmitter. The receiver tester would have to have different gear.

What I want is a thorough technical listing of the facts about the equipment. For a transmitter we want to know the list price, weight, size, tubes used, bands covered, ac power on standby, ac power under full load, heating under full load, input to final, output power, efficiency, frequency stability during transmit, drift during standby, antenna switching provisions, compatibility with other commercial gear, how well fused, how well the operator is protected from electrocution, ease of servicing, TVI, ease of tuning, ease of band-changing, calibration of VFO (if any), resetability of VFO, backlash of VFO dial, spotting switch, high voltage on standby, high voltage under full load, interlocked, overload relay or protection, 108 volt test, 132 volt line test, audio response, shipping weight, connecting wires supplied, driving power required (amplifiers) on various bands, etc.

Then comes the objective on-the-air activity with the rig for a couple of weeks to get the feel of it. By this time the writer should be able to turn out quite a piece, listing the statistics and pointing up the more positive aspects of the equipment in a general commentary.

We need the same treatment for receivers and other ham items. Anybody interested? The pay is miserable. All those who do not volunteer take one step backwards.

Our Advertisers

It takes a lot of personal interest in the hobby for an advertiser to run an ad in a brand new ham magazine. He has to put aside questions about what this will cost him in dollars per thousand readers and how much duplication he is getting of readership in other ham magazines. He already has his budget allocated for a long time ahead and this means an extra unexpected expense which may well bring little return.

Since it is advertising revenues that make it possible for magazines to be published we all owe a lot of gratitude to the handful of

(Continued on page 25)