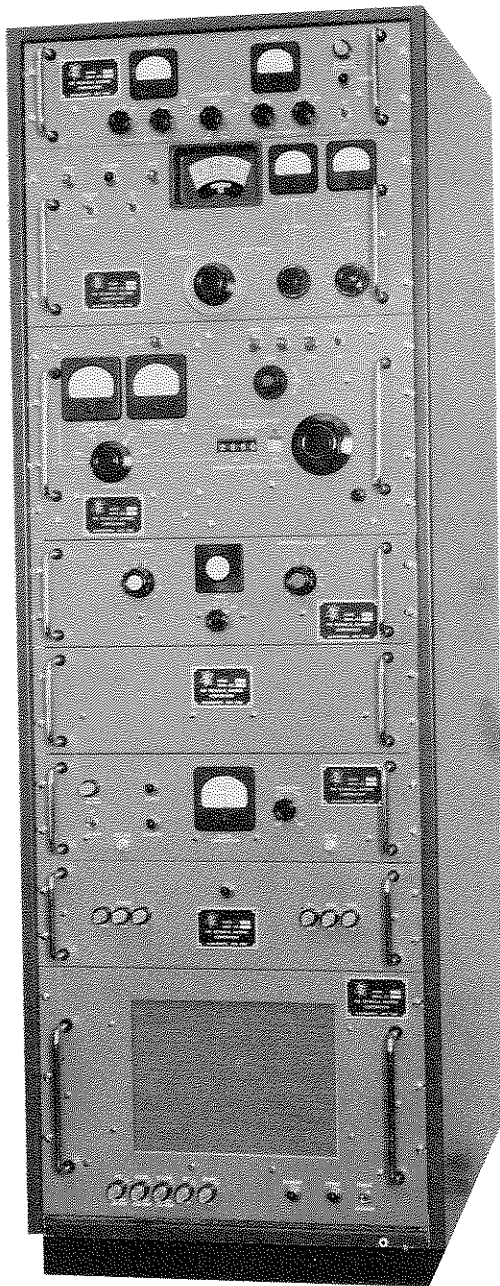
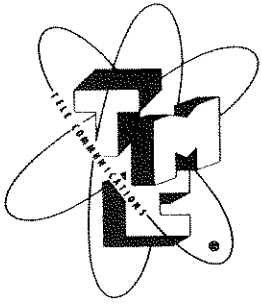


SALES SERVICE BULLETIN NUMBER 228

Single Sideband Generator, Model SBG-1
(AN/URA-30)



The TMC Model SBG-1, Single Sideband Generator, is a stabilized general purpose exciter system adjustable to 320,000 frequencies over the frequency 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 SBG-1 are derived from a 1 mc source to provide the stability of 1 part in 10^8 . In addition to the master 1 mc standard, the unit provides an emergency standard with a stability of 1 part in 10^6 per day. The Model SBG-1 may also be connected to an external standard of greater stability without degeneration of that standard.

A phase detector comparison circuit with direct meter indication allows the built-in standard to be compared to and corrected to a master or station standard.

The Model SBG-1 is housed in an attractive relay rack enclosure and consists of two major units, the Model CPO, Controlled Precision Oscillator and the Model CBE-1, Sideband Exciter. The control portion of the unit requires only $29\frac{1}{2}$ inches of rack space. All other units may be mounted separately in the event this makes for a more convenient installation package.

The Model CPO-1 may be used independently as an ultra stable R.F. frequency source by bypassing the Sideband Exciter. Of course, the same frequency range and stability prevail.

*With any degree of carrier suppression down to a maximum of -55 db.

TECHNICAL SPECIFICATIONS

FREQUENCY RANGE:	1.75 to 33.75 megacycles in 100 cps steps.
OPERATING MODES:	*Single Sideband. *Independent Sideband (separate intelligence). *Double Sideband (same intelligence). Amplitude Modulation.
FREQUENCY CONTROL:	All frequency determining elements referenced to a built-in 1 mc source.
FREQUENCY STABILITY:	1 part in 10 ⁸ per day under normal fixed station operating conditions.
OUTPUT POWER:	Continuously adjustable from zero to 1 watt PEP.
OUTPUT IMPEDANCE:	72 ohms nominal.
CARRIER SUPPRESSION:	At least 55 db down from PEP level.
CARRIER INSERTION:	Adjustable.
SIGNAL/DISTORTION RATIO:	45 db down from PEP Output.
SPURIOUS SIGNALS:	All spurious 60 cps removed from carrier down better than 60 db.
HARMONIC RADIATION:	2nd harmonic at least 45 db below PEP output. All others at least 55 db below PEP output.
UNWANTED SIDEBAND REJECTION:	500 cps single tone at least 60 db down.
AUDIO INPUT:	Two independent 600 ohm channels, balanced or unbalanced, -20 db level for full RF output.
AUDIO BANDWIDTH:	7.5 kc per sideband.
AUDIO RESPONSE:	350 cps - 7500 cps within 3 db.
INPUT POWER:	115/230 volts, 50 - 60 cps, single phase.
SIZE:	All units of the SBG-1 require only 58 inches of standard 19 inch relay rack space.
WEIGHT:	Approx. 450 lbs.
COMPONENTS AND CONSTRUCTION:	All equipment is manufactured in accordance with JAN/MIL specifications wherever practicable.

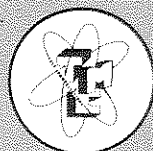
*With any degree of carrier suppression down to a maximum of -55 db.

THE TECHNICAL MATERIEL CORPORATION

700 FENIMORE ROAD

MAMARONECK, NEW YORK

CABLE
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COMMUNICATION ENGINEERS

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