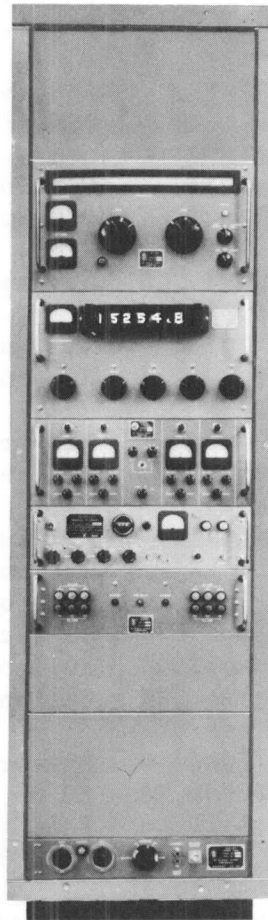




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TECHNICAL BULLETIN 2801
SINGLE SIDEBAND GENERATOR
TMC MODEL SBGD-3



- . 2 to 32 mc
- . ISB, SSB, AM, AME, CW, FSK, FAX, Pulse and Phase modulation modes
- . Remote control operation optional
- . Digital RF signal display
- . 1 part in 10^8 per day stability

TMC Model SBGD-3 Single Sideband Generator, provides 2 to 32 mc coverage in 100 cps increments with a stability of 1 part in 10^8 per day. Digital readout of the operating frequency, simplified RF tuning and optional bandwidths for the intelligence channels are but a part of the desirable features of this unit. With optional TechniMatic* remote-control system, the entire SBGD-3 automatically tunes to the frequency selected by the operator.

All operating controls and indicators are located on the equipment front panels for ease of operation. All assemblies and subassemblies are designed to allow easy access for maintenance.

*Trademark applied for

Serviceability of the unit is enhanced by slidemounted units that may be tilted either up or down for maintenance or dynamic tests.

TECHNICAL SPECIFICATIONS, TMC MODEL SBGD-3

Frequency Range:	2 to 32 mc. in 100 cps incremental steps.
Modes of Operation:	ISB, SSB, AM, AM Equivalent, CW, FSK, FAX, pulse and phase modulation.
Power Output:	Continuously adjustable from 0 to 500 mw PEP.
Output Impedance:	50 ohms unbalanced.
Frequency Stability:	1. one part in 10^8 per day, standard. 2. one part in 10^9 per day, optional.
Frequency Control:	All frequency determining elements referenced to a built-in 1 mc standard.
Tuning:	All tuning and bandswitching controls are on the front panel (no plug-in components or mechanical adjustments.) Self-cleaning contacts on RF bandswitches (no rolling contacts). Optional TechniMatic* tuning
Intermodulation Distortion:	Distortion products are at least 50 db below either tone of a two tone test, at full PEP output, from 2 to 32 mc.
Harmonic Suppression:	Second harmonic at least 50 db down from PEP output. Third harmonic at least 60 db down from PEP output.
Unwanted Sideband Rejection:	A 500 cps test signal is at least 60 db down from full PEP in the unwanted sideband.
Spurious Signals: (as per CCIR)	All spurious signals are at least 60 db below full PEP output.
Noise Level:	Noise level is at least 60 db down from either tone of a two tone test at full PEP output.
Carrier Suppression:	Adjustable from -55 db to full PEP output, switched as follows: 0, -10, -20, -30, -40 db, full.
Hum Level:	At least 50 db below full PEP output.

Metering:

Front panel meters indicate the operation of all critical circuits.

Sideband Filter Response:

Selection of any one of the following pairs of filters:

1. Crystal lattice filters flat within ± 1.5 db 250 to 7500 cps.
2. Crystal lattice filters flat within ± 1.5 db 250 to 6000 cps.
3. Multiplexing of four 250 to 3040 cps, ± 1.5 db, channels at CCIR or National Standard frequencies.
4. Symmetrical filters ± 1.5 db in 1, 6 and 15 kc bandpass.
5. Crystal lattice filters flat within ± 1.5 db 250 to 3040 cps.
6. Crystal lattice filters flat within ± 1.5 db can be provided to meet special requirements.

Audio Inputs:

600 ohm balanced, -20 to +10 dbm continuously adjustable to full PEP output.
-20 dbm input will produce full output.
An unbalanced input can also be applied.

Storage Conditions:

Equipment will not be materially affected under storage of -30°C to 85°C and humidity of 0 to 95%.

Altitude:

0 to 10,000 feet.

Cooling:

Filtered forced air.

Installation Data:

Weight: 600 lbs.
Size: 69" high x 24-1/4" wide
x 30" deep.

Primary Power:

115/230V AC single phase
(Approximately 750 watts)

Instruction Books:

TMC IN2012

Loose Items:

Mating RF connectors, fanning strips, and two (2) instruction manuals are provided.

Components and Construction:

All equipment manufactured in accordance with JAN/MIL specifications wherever practicable.

Options/Accessories:
(priced separately)

1 mc frequency standard with frequency stability of 1 part in 10^9 available.

TechniMatic* Remote-Control Tuning:

TechniMatic* remote-control tuning system automatically tunes the entire SBGD-3 to any frequency from 2 to 32 mc.

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