

MULTI-CHANNEL SIDEBAND EXCITER

SME-5



The SME-5 is a fully transistorized, eight channel ISB exciter with a frequency range of 2 to 30 MHz. It provides up to 100 milliwatts PEP output as drive power for an associated linear amplifier. Capable of operating in all modes normally encountered in this range, it is particularly useful as a single sideband device for voice, teletype, facsimilie or other type of communication.

The Model SME-5 is designed to accept a variety of audio inputs from two 600-ohm lines; a carbon microphone; a high impedance microphone; a low impedance microphone; and a telegraph key. Two independent audio inputs may be provided for simultaneous transmission in each of two sidebands. Voice operated relay (VOX) operation is available on special order.

Full front panel control facilities are available for channel selection; upper and lower sideband operation; PTT operation; and operating mode selection. A meter is also provided with a selector switch for measuring the operating levels of critical circuits. The exciter may be automated for remote selection of channel, mode and sideband operation. When used in this manner, information on band may be supplied an automated linear amplifier for complete automatic tuning of the entire transmitter through to the antenna.

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THE TECHNICAL MATERIEL CORPORATION

AND SUBSIDIARIES

TECHNICAL SPECIFICATIONS

FREQUENCY INFORMATION

Range

2 to 30 MHz

Stability

+/- 10 Hz max. deviation from 0 to
+50°C using temp-controlled oscillator

Presentation

Eight position channel select switch

OPERATING PARAMETERS

Modes

CW(A1)/MCW/AME/USB(A3A,A3J)
OPTIONAL: LSB; ISB(A3B)
FSK(A7J); FAX(A7J)

Power Output

0 to 100 milliwatts PEP

Output Impedance

50 ohms nominal unbalanced

Tuning

Eight pre-set crystal controlled channels
Remote selection is available on request

Metering

Built-in multimeter permits monitoring
of USB/LSB audio levels.

ALDC

Automatic Load and Drive Control
Accepts 0 to -11 VDC from an
associated linear to improve linear-
ity, limit distortion, and deliver a
relatively constant RF output.

Carrier Suppression

Level is continuously adjustable -50
to full carrier output, all modes.

Voice Operated Relay

OPTIONAL voice controlled switch
with adjustable threshold.

DISTORTION AND NOISE

Intermodulation

Min. 40db below either tone of a
standard two tone test; full PEP output

Spurious

Min. 60db below full PEP output

Harmonic Suppression

Second Harmonics
Min. 45db below full PEP output
Third and Higher Harmonics
Min. 55db below full PEP output
Filters available for additional rejection

Hum and Noise

Min. 60db down at full PEP output

AUDIO

Sideband Response

250-3040 Hz (CCIR), +/-1.5db
OPTIONAL:
250-6080 Hz (CCIR)
300-7500 Hz
350-3000 Hz

Inputs

Dual 600 ohm lines
-20 to 10dbm balanced or unbalanced

Microphone Control

-55dbm into 47K ohms; front panel jack
Microphone selection is made by USB
or LSB switch control

KEYING INFORMATION

| | |
|--------------------|--|
| CW | Up to 200 baud Rear panel, dry contact |
| FSK Sources | 20/60 ma, 50 and 100 volts Dry contact |
| Shift | Up to 2700 Hz with plug-in crystals for MARK and SPACE tones X 1000. |
| Speed | 1000 baud |

INSTALLATION AND ENVIRONMENTAL

Operating Conditions

0 to +50°C; up to 90% relative humidity
Storage: -40 to +85°C. 95% R.H.

Size and Weight

5¼" high X 19" wide X 18" deep
Approximately 30 lbs.
13.3 cm high X 98.25 cm wide X 45.57 deep
Approximately 14 Kg.

Primary Power

115/230 VAC, 50/60 Hz, single phase

Loose Items

Mating RF connectors
Primary power cable connector
Service Extension Board
Two copies of Instruction Manual

We reserve the right to
make engineering changes.



THE TECHNICAL MATERIEL CORPORATION

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