

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.

Revised 1 October 1975



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**

700 FENIMORE ROAD • MAMARONECK, NEW YORK 10543

SPRINGFIELD, VIRGINIA • OTTAWA, CANADA • LUZERN, SWITZERLAND • TEMPE, ARIZONA

(914) 698-4800 • (613) 822-0244 • twx 710-566-1100 • telex 013-446