

TECHNICAL BULLETIN NUMBER 2032

Sideband Strip Exciter

TMC Model STE-1



- 1.6 to 32 mcs
- SSB (upper or lower), AME, CW, AFSK, AFAX
- Push-to-talk
- Solid state
- 250 milliwatt output
- VOX and anti-VOX
- Plug-in RF heads
- Requires only 8 watts of power
- High and low impedance microphone

Model STE-1 is a complete dual frequency exciter in 1 $\frac{3}{4}$ " of rack space, capable of providing 250 milliwatts of drive to a following amplifier in upper or lower sideband, CW, compatible AM or frequency shift modes.

The unit is completely transistorized and contains its own power supply using a total of only 8 watts for full output. Since heat dissipation is so low, many such units can be placed in a single rack.

Operation is intended for a single frequency, simple crystal or optionally oven controlled. Side-step operation (i.e., operation on a closely adjacent frequency) is accomplished by a switch inside the tuning model. A second crystal removed no more than 0.5% of the operating frequency can be used without requiring alignment.

## Sideband Strip Exciter

In addition, with proper crystals, each module can be tuned to any other frequency within the octave of the tuning module by simple alignment procedures.

The modules are mechanically and electrically interchangeable with those in the TTR-10 Transmitter/Receiver, and all components are in the same general family for logistic support.

When ordering this unit, please specify: (1) frequency of operation, (2) oven or non-oven crystal control and (3) power source.

### TECHNICAL SPECIFICATIONS, TMC MODEL STE-1

FREQUENCY RANGE:	1.6 to 32 mcs by crystal controlled plug-in RF modules. Modules provide coverage of 1.6-2, 2-4, 4-8, 8-16, 16-32 mcs. In the 1.6 to 2 mcs range all operating modes except lower sideband are available. When ordering TMC Model STE-1 please specify frequency of operation desired.
MODES OF OPERATION:	Front panel selectable SSB (upper or lower), compatible AM, CW and Tone FSK.
FREQUENCY CONTROL AND STABILITY:	Crystal controlled. (For oven control, see Options/-Accessories.)
OUTPUT IMPEDANCE:	Nominal 50 ohms unbalanced.
UNWANTED SIDEBAND REJECTION:	At least 60 db below full PEP output.
SPURIOUS & HARMONIC OUTPUT:	50 db minimum below full PEP output.
DISTORTION PRODUCTS:	At least 45 db below full PEP output.
NOISE LEVEL:	Better than 40 db below full PEP.
CARRIER INSERTION:	Automatic compensation for carrier to sideband ratio is accomplished by the mode selector switch.
AUDIO RESPONSE/BANDWIDTH:	1. 3 kc $\pm$ 2 db, or 300 to 330 cps (crystal filter) 2. $\pm$ 2 db, or 250 to 3000 cps (crystal filter)
AUDIO INPUT:	600 ohm, -20 dbm, balanced and center tapped telephone handset, carbon mike, hi and lo Z mike.
VOICE OPERATED RELAY:	Voice operated relay with adjustable VOX and anti-VOX controls.
INSTALLATION DATA:	Size: 1 $\frac{3}{4}$ " h. $\times$ 19" w. $\times$ 15" d. Weight: 10 lbs.
POWER:	115/230v, $\pm$ 10%, 50/60 cps, single phase, 8 watts. (Oven requires 6 watts more.)
COMPONENTS AND CONSTRUCTION:	All equipment manufactured in accordance with JAN/MIL specifications wherever practicable.

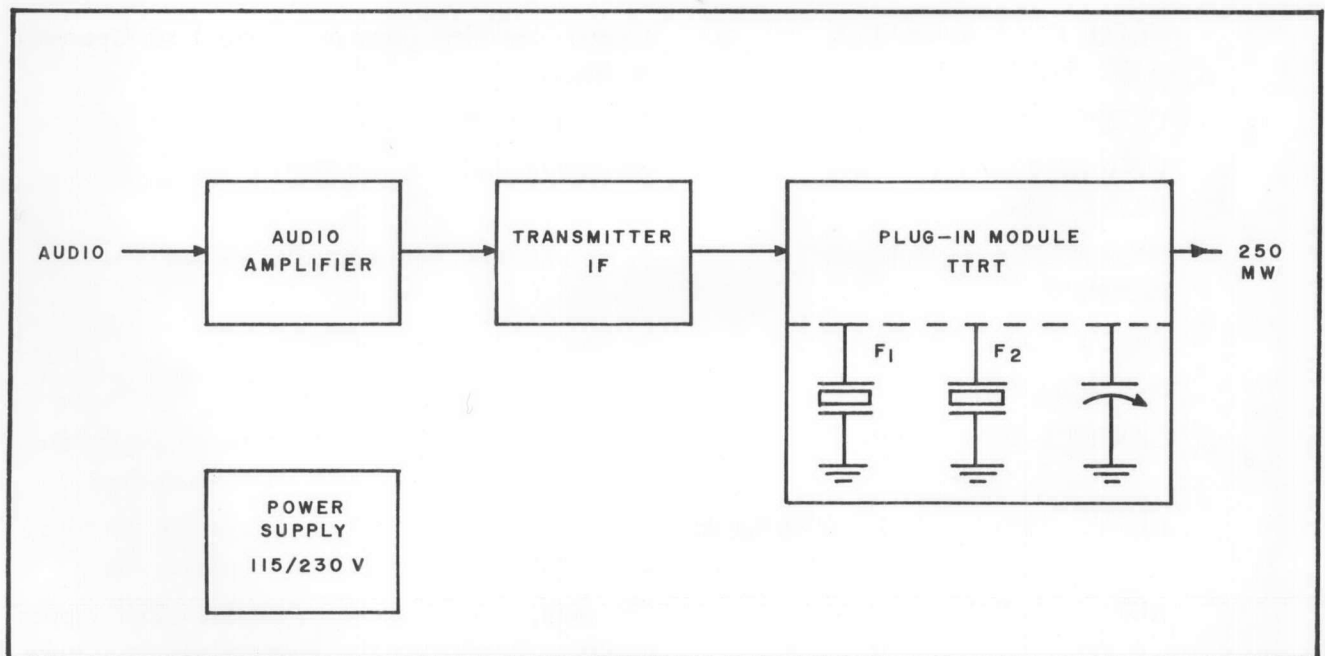
# TMC Model STE-1

## OPTIONS/ACCESSORIES:

(Priced separately.)

1. Crystal ovens to provide stability of 1 part in  $10^6$  per day or better. (Specify oven operating voltage, such as 115 or 230 volts.)
2. Tuning Drawer Storage Panel, Model THRA-1, provides space for 3 tuning modules and heater voltage for maintaining crystal ovens at operating temperature. (Specify oven operating voltage, such as 115 or 230 volts.)

Size:  $1\frac{3}{4}$ " h.  $\times$  19" w.  $\times$  15" d.



MODEL STE-1, FUNCTIONAL BLOCK DIAGRAM

COPYRIGHT 1964  
THE TECHNICAL MATERIEL CORP.

P



# THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, N. Y.

AND ITS SUBSIDIARIES . . .

TMC (Canada), Ltd., Ottawa, Canada  
TMC Industrial Corp., Mamaroneck, N. Y.  
TMC Systems, Inc., Alexandria, Va.  
TMC Systems, (Texas), Inc., Garland, Texas

TMC Systems, (Calif.), Inc., Oxnard, Calif.  
TMC Systems, (Florida), Inc., Pompano Beach, Fla.  
TMC Power Distribution, Inc., Alexandria, Va.  
TMC Systems, A. G., Luzern, Switzerland  
TMC Research Inc., San Luis Obispo, Calif.

CABLE TWX  
TEPEI 914-835-3782