

MULTI-CHANNEL SIDEBAND TRANSCEIVER

TM-125



The TM-125 Transceiver is a completely self-contained unit measuring 5½ X 14½ X 16 inches and capable of up to eight channels transmit, receive or transceive. In addition, on special order a 16-channel oscillator board can be provided, making possible half-duplex operation (transmit on one frequency and receive on another).

The transmitter provides up to 125 watts peak output from two 6146B tubes in parallel over the range of 1.6 to 26 MHz. The tubes have been chosen for their rugged design, reliability, low price and general availability. The highly sensitive receive portion provides up to two watts of low distortion audio from a built-in loudspeaker. All circuits are solid state up to the final tubes.

The unit operates from a 10 to 40 volt DC source or a 115/230 volt AC source depending on the power cord used and may be used for either mobile or base station operation. Suitable accessories provide for all necessary uses.

The front panel contains RF and AF gain controls, variable BFO (clarifier), squelch and switches for power, automatic noise limiter, and output power/received strength metering.

The TM-125 may be remotely controlled on special order and may also be used with a companion antenna tuner, Model ATU-350 (Bulletin 2054-1). On option, this unit may be equipped for selective calling. The TM-125 can be used to drive a higher power linear amplifier, Model TMA-350 for 350 watts peak output or the Model TMA-1K providing 1000 watts peak output. Each amplifier may be located remotely in its own cabinet and may be omitted or inserted in the transmitter chain as desired.

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THE TECHNICAL MATERIEL CORPORATION

AND SUBSIDIARIES

TECHNICAL SPECIFICATIONS

FREQUENCY INFORMATION

- Range**
1.6 to 26 MHz
- Stability**
One part per million/^oC
Higher stability available on request
- Control**
High frequency crystal oscillators
OPTIONAL: Ovenized crystal oscillators

OPERATING PARAMETERS

- Modes**
CW(A1); AME(A3H); SSB(A3J)
- Channels**
Up to eight, simplex channels
OPTIONAL: Eight half-duplex channels
- Tuning**
Front panel selection of pre-tuned channels with optional auto-switching
- Power Output**
1000 watts PEP
- Output Impedance**
Nominal 50 ohms, unbalanced
- Front Panel Controls**
 - Channel select Switch
 - RF and AF Gain
 - Variable BFO (Clarifier)
 - Squelch Adjust
 - Mode Select
 - Power/Operate Switch
 - Phone and Key Jacks
 - ANL and Meter Switches
 - Band and Tuning Controls
- Rear Panel Features**
 - Main Power Input
 - RF Input and Output
 - 600-ohm, 1mw, Audio Output
 - 600-ohm Audio Input
 - Amplifier Control Sockets
 - Push to Talk Line
 - Input Power Fuses

ENVIRONMENTAL AND INSTALLATION

- Operating Conditions**
0 to +50^oC; up to 95% relative humidity
- Primary Power**
115/230 VAC, 50/60 Hz, single phase
- Cooling**
High capacity forced air
- Size and Weight**
 - TM-125 cabinet (CAB-20):
5½" high X 14½" wide X 16" deep
 - Amplifier cabinet (CAB-21):
10" high X 20¼" wide X 15" deep
 - Approximately 130 lbs.
- Loose Items**
 - Power Cords
 - Mating RF Connectors
 - Desk Top Cabinets
 - Instruction Manual
 - Five-foot Control Cable (Auto-tune option only.)

RECEIVE SECTION

- Sensitivity**
1.0uv over range for 10db [S+N]/N
- Selectivity**
+/-3db at 3KHz; -60db at 11 KHz
- Automatic Gain Control**
Internal circuits insure a less than 10db change in output for an 80db change in RF over 1uv at the antenna input.
- Output Level**
One watt PEP into internal speaker.
0 dbm into 600-ohm balanced line.
- Input Impedance**
50 ohms nominal, unbalanced

TRANSMIT SECTION

- Signal/Distortion Ratio**
Min. 30db below full PEP output
- Unwanted Sideband Rejection**
Min. 50db below full PEP output
- Noise Level**
Better than 40db below full PEP output
- Spurious Emission**
Min. 40db down from mean power
- Audio Response**
300-3000 Hz, +/-2 db
- Audio Inputs**
600-ohm line, balanced or unbalanced
-20 to +10 dbm
High/Low Impedance microphone w/PTT

OPTIONAL ACCESSORIES

- Model ATU-1K Antenna Tuning Unit**
Provides antenna matching for TM-1000
- Series VTA Transmitting Antennas**
Suitable for both receiving and transmitting
18 or 35-foot aluminum or fiberglass whips
- Model HP-1 Headphone**
- Model MK-1 Microphone**
- Model KY-1 Telegraph Key**
- KIT O-5005-3**
Operating spare parts kit
- KIT M-5005-3**
Maintenance spare parts kit
- Model TOC-7**
Fiberglass Transit Carrying Case
- Model CAB-40**
4-foot relay rack cabinet, 19" wide
- Model BR-1 RF Bridge**
- Model TG-1 Two Tone Generator**
- Model WT-1 Forward/Reflected Wattmeter**

We reserve the right to
make engineering changes

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