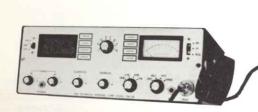
MULTI-CHANNEL SIDEBAND TRANSCEIVER, 1000 WATTS

TM-1000





The TM-1000 Transceiver is a 1000-watt PEP device capable of operating between 1.6 and 26 MHz in up to eight pre-set channels. The standard model is designed to transmit in the CW, AME, USB and LSB modes and with selected options, can be automated through to the antenna. Although simplex operation is standard, eight-channel half-duplex is available on special order.

The transceiver is actually a two-unit system: the TM-125 Transceiver driving the high efficiency TMA-1K Linear Amplifier. Both units are housed in strong, desk type cabinets that can be easily modified for land or marine mobile mounting. The linear is linked to the transceiver by a single RF cable and can be remotely located if desired. A front panel switch provides for automatic insertion or omission of the linear in the transmitter chain.

The automated TM-1000 includes bridge tuning of the linear amplifier when any transceiver channel is selected. Highly reliable servos and amplifiers in the linear are regulated by pre-set potentiometer controls and are automatically positioned for the proper tuning locations. If used with the ATU-1K antenna tuning unit, complete automated operation is possible through to the antenna system.

The TM-1000 contains front panel controls for AF and RF gain, variable BFO (clarifier), and squelch in addition to switches for power, automatic noise limiter, and output power/received strength metering. It operates from a 115/230 VAC source and is completely solid state up to the final RF stages. The transceiver is designed for rugged use in marine or land mobile and fixed station applications. On special order, it can be equipped for selective calling.

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THE TECHNICAL MATERIEL CORPORATION

AND SUBSIDIARIES

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

Power Output

125 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

Automatic Noise Limiter Switch

Monitor Meter Switch

Rear Panel Features

Main Power Input

RF Input and Output

600-ohm, 1mw, Audio Output

600-ohm Audio Input

Amplifier Control Output

Push-To-Talk Line

Input Power Fuses

ENVIRONMENTAL AND INSTALLATION

Operating Conditions

0 to +50°C; up to 95% relative humidity

Primary Power

10-40 VDC, negative ground

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

Cooling

High capacity forced air; heat sinks

Size and Weight

5½" high X 14½" wide X 16" deep

Approximately 40 lbs.

Shock and Vibration

Designed for fixed station or mobile use including maritime and vehicle mobile.

Loose Items

Power Cord

Mating RF Connectors

CAB-20 Desk Top Cabinet

Instruction Manual

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 RF change

over 1uv at the antenna input.

Output Level

One watt PEP into internal speaker.

0dbm into 600-ohm balanced line

Input Impedance

50 ohms nominal, unbalanced

TRANSMIT SECTION

Signal/Distortion Ratio

At least 30db down from full PEP output

Unwanted Sideband Rejection

Min. 50db down from full PEP output

Noise Level

Better than 40db below full PEP output

Spurious Emission

Min. 40 db down from mean power.

Audio Response

300-3000 Hz, +/-2 db

Audio Inputs

600-ohm line, balanced or unbalanced,

-20 to +10dbm

High/Low impedance microphone w/PTT

OPTIONAL ACCESSORIES

Model TMA-350 Linear Amplifier

Provides 350 watts PEP output with TM-125

Model TMA-1K Linear Amplifier

Provides 1000 watts PEP output.

Model ATU-350 Antenna Tuning Unit

Provides antenna matching for TM-125.

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 Headphones

Model MK-1 Microphone

Model KY-1 Telegraph Key

KIT O-5005-1

Operating spare parts kit.

KIT M-5005-1

Maintenance spare parts kit (6 months)

Model TOC-7

Transit Carrying Case, Fiberglass

Model CAB-40

4-foot relay rack cabinet, 19" wide



We reserve the right to make engineering changes

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