

GENERAL PURPOSE LINEAR AMPLIFIER

TMA-1K



The TMA-1K linear amplifier is the newest model in a versatile line of highly efficient 1000 watt amplifiers. Smaller and more light-weight than other units, the TMA-1K has decidedly advanced features which make it simple to operate and service.

The TMA-1K is designed to accept the output of any transmitter capable of 30 to 50 watts drive and will provide 1000 watts PEP output over the 1.6 to 26 MHz range. At reduced efficiency, it is useable beyond this range.

The amplifier is available either completely automated or manual. In the automated version, a highly efficient, reliable servo amplifier and motor combination completely tunes the linear when band information is provided. In the manual version, the motor and amplifier are eliminated although band information may still be supplied the linear by the preceding driver.

The TMA-1K uses two 8875 tubes in parallel, cathod driven and protected by heat-sensors. Cooling is by forced air using a small axial fan. The output of the amplifier will match the ATU-1K Antenna Tuning Unit (Bulletin 2054-2) as used in the TM-1000 Transceiver system, or the ATS-3 Antenna Tuning System (Bulletin 2053-2) as used in the GPT-1K Transmitter system. When using the ATU-1K, the amplifier is equipped with potentiometer controls that enable the transmitter to tune automatically to one of eight previously adjusted frequencies. The ATS-3 system is more sophisticated and is designed for completely automated tuning to any frequency in the 1.6 to 26 MHz operating range.

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THE TECHNICAL MATERIEL CORPORATION

AND SUBSIDIARIES

TECHNICAL SPECIFICATIONS

FREQUENCY INFORMATION

Range

1.6 to 26 MHz
1.6 to 30 MHz OPTIONAL

OPERATING PARAMETERS

Modes

CW/AM/AME/USB/LSB/ISB

Input Signal

30 to 50 watts average

Input Impedance

50 ohms nominal, unbalanced

Power Output

1000 watts PEP; 500 watts avg

Output Impedance

50 ohms nominal single ended

VSWR Rating

Will match into 2:1 VSWR

Tuning

Manual with local control
8-channel automated optional
with TM series Transceivers
Servo automation OPTIONAL
Remote Control on request

Metering

Indications of relative power
output and plate current.

Safety Features

Plate overload and heat sensors
to protect final tube.

Front Panel Controls

BANDSWITCH
TUNE
MANUAL/AUTO SWITCH
HV ON/OFF
INDICATOR LAMPS'

DISTORTION AND NOISE

Intermodulation

Distortion products are min. 30db below
either tone of a standard two tone test
at full rated PEP output

Harmonic Suppression

Second Harmonics
Min. 40db below full PEP output
Third and Higher Harmonics
Min. 50db below full PEP output
Filters available for added rejection

Hum and Noise

Min. 40db below full PEP output

ENVIRONMENTAL AND INSTALLATION

Operating Conditions

0 to +50°C; up to 90% relative humidity

Cooling

Forced air

Primary Power

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

Size and Weight

10" high X 20½" wide X 15" deep
Approximately 55 lbs.

Added Features

Mating RF connectors
Power Cable
CAB-21 equipment cabinet
Two copies of Instruction Manual

OPTIONAL ACCESSORIES

Model ATU-1K Antenna Tuning Unit
Model ATS-3 Antenna Tuning System
Forward/Reflected Power Meter
Model HFL-100 Linear Amplifier for use with
TMA-1K and 100-mw RF drive unit.



We reserve the right to
make engineering changes.

THE TECHNICAL MATERIEL CORPORATION

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