

## 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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