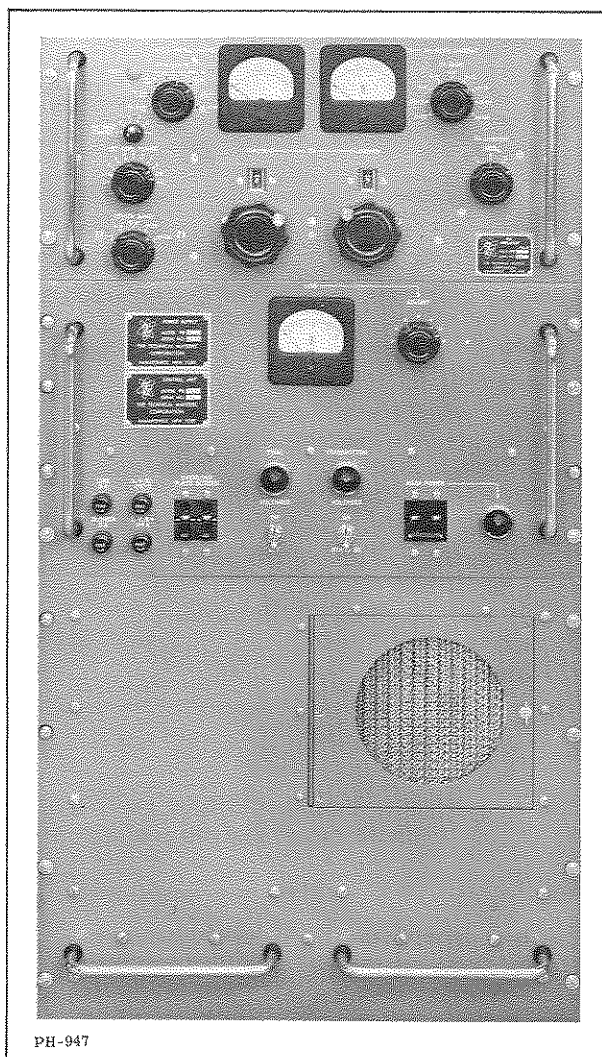


SALES SERVICE BULLETIN NUMBER 221

Linear Power Amplifier
TMC Model PAL-1K

NEW



The TMC Model PAL-1K is a conservatively rated Linear Power Amplifier delivering 1,000 watts PEP SSB or 1000 Watts CW and FS throughout the frequency range of 2 to 32 mcs.

The PAL-1K is completely bandswitched and continuously tunable with all controls on the front panel. There are no plug-in components. The final is Pi-tuned and incorporates a ceramic tube for increased efficiency. ALDC (Automatic Load and Drive Control) and inverse feedback are used to improve linearity and suppress unwanted transmission products.

The PAL-1K consists of three (3) units, an RF Amplifier (TMC Model RFD), a low voltage power supply (TMC Model PS-4) and a high voltage power supply (TMC Model PS-5).

Although the PAL-1K is designed primarily for single sideband service, it may, with suitable exciters, be used for many types of emission.

TECHNICAL SPECIFICATIONS:

FREQUENCY RANGE: 2 to 32 Mcs.
OUTPUT POWER: At least 1000 Watts PEP. 1000 Watts CW and FS.
OPERATING MODES: CW, MCW, SSB, DSB, ISB, FS (with appropriate exciter (See Chart)).

Type of Emission	Exciter
a. CW (Keyed carrier)	TMC Model VOX or PMO and SBE
b. FSK (Frequency Shift telegraph)	TMC Model XFK and SBE or XFK and VOX
c. SSB (Suppressed Carrier)	TMC Model SBE
d. DSB (Suppressed Carrier)	TMC Model SBE
e. ISB (Separate intelligence)	TMC Model SBE
f. Single or double sideband AM or MCW (with carrier) (Low Level Modulation)	TMC Model SBE (plus tone generator for MCW)

TUNING: All tuning and bandswitching accomplished from front panel (no plug-in components).

OUTPUT IMPEDANCE: Will match any unbalanced load from 50 to 600 ohms at ± 45 degrees.

OUTPUT CONNECTION: Type C coaxial

INPUT REQUIREMENTS: 100 mw will produce full output.

INPUT CONNECTION: Type UHF coaxial.

SIGNAL TO DISTORTION RATIO: Better than 40 db down relative to PEP output.

HARMONIC SUPPRESSION: Second harmonic at least 40 db and all others at least 50 db down from PEP output.

ALDC: An automatic Load and Drive Control is provided to limit distortion during high drive peaks or load changes.

PRIMARY POWER REQUIREMENTS: 115/230 volts single phase 50/60 cycle AC approximately 1900 watts.

SAFETY: Full interlock protection. Full overload and fuse protection.

COOLING: High capacity, filtered, forced air cooling

TEMPERATURE, HUMIDITY: Designed to operate in any ambient temperature between the limits of 0 and 50 degrees C for any value of humidity up to 90%.

MOUNTING: Standard WECO 19" panel spacing.

SIZE: RFD - 8-3/4 x 19
PS-4 - 10-1/2 x 19
PS-5 - 15-3/4 x 19

APPROXIMATE WEIGHT:	<u>UNPACKED</u>	<u>PACKED</u>
RFD -	40 lbs.	80 lbs.
PS-4 -	60 lbs.	120 lbs.
PS-5 -	160 lbs.	300 lbs.

COMPONENTS AND CONSTRUCTION: Equipment manufactured in accordance with JAN/MIL specifications wherever practicable.

TUBE COMPLEMENT:

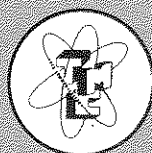
<u>RF AMPLIFIER (RFD)</u>	<u>LOW VOLTAGE POWER SUPPLY (PS-4)</u>	<u>HIGH VOLTAGE POWER SUPPLY (PS-5)</u>
1 PL-172	1 5R4GY	2 872A
1 6CL6	2 OB2	
	1 6X4	
1 6146	3 OA2	

THE TECHNICAL MATERIEL CORPORATION

700 FENIMORE ROAD

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COMMUNICATION ENGINEERS

IN CANADA:
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