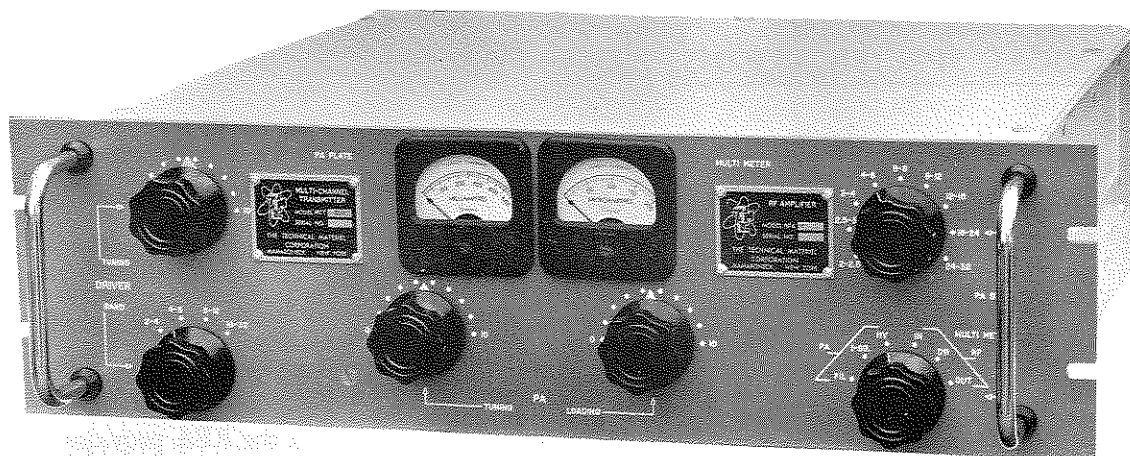




TECHNICAL BULLETIN NUMBER 2002

Linear Power Amplifier
Model PAL-350C
AM-2867/GRT-9



PURPOSE:

A compact linear amplifier providing 350 watts PEP output over the frequency range of 2 to 32 mHz.

APPLICATION:

- Final Amplifier to low level driver
- Custom Installations
- Ship-Shore-Ship service
- Extended telephone service
- Pipe Line service
- Contingency transportable applications
- Ranger stations

FEATURES:

- 2 to 32 mHz
- Solid State Power Supply
- Compact, 5¼" × 19" panel
- 100 milliwatts drive for full output
- Filtered Forced air cooling
- Fully metered
- Easy to operate

DISCUSSION:

The Technical Materiel Corporation's Model PAL-350C linear amplifier is a conservatively rated general purpose amplifier that allows custom installation to meet many operational requirements where the only limitation is that imposed by the associated exciter. This linear amplifier will provide up to 350 watts PEP output from a 100 milliwatt drive. Cabling from the associated power supply may be extended to allow inclusion of the 5¼" linear amplifier in the much needed eye level section of an operating console. Solid state rectification affords long term trouble free operation. Human engineering of the front panel controls minimizes operator learning time and provides ease in frequency changing.

For nomenclature on our product line see Field Engineering Bulletin 4.

Linear Power Amplifier

Associated components, such as TMC Model SBE Sideband Exciter, Model GPE General Purpose Exciter and antenna accessories such as Model ATS-2, Antenna Tuning System, provide a complete operating transmitter.

Full interlock, overload and fuse protection provides for safety of equipment and operating personnel. An effective ALDC (Automatic Load and Drive Control) system limits distortion and protects the linear amplifier during high peaks of excitation.

TECHNICAL SPECIFICATIONS:

FREQUENCY RANGE:	2 to 32 MHz continuous bandswitched.
OUTPUT POWER:	350 watts 2 tone PEP. 200 watts key down, CW or FSK.
OPERATING MODES:	With appropriate exciter, AM, AME, CW, MCW, SSB, ISB, FAX, FSK or pulse operation. (Special mode selection switch in the RFA provides optimum operation in the CW mode.)
TUNING:	All tuning and bandswitching controls on the front panel. (No plug-in components.)
OUTPUT IMPEDANCE:	Nominal 50-72 ohms with up to 2:1 VSWR.
OUTPUT CONNECTION:	Type UHF coaxial.
INPUT IMPEDANCE:	72 ohms.
INPUT REQUIREMENTS:	100 milliwatts will produce full PEP output.
INPUT CONNECTION:	Type BNC coaxial.
DISTORTION PRODUCTS:	At full PEP output, 3rd order distortion products are at least 40 db below either tone of a standard two tone test.
HARMONIC SUPPRESSION:	Second- at least 40 db down from PEP output. Third- at least 50 db down from PEP output.
ALDC:	An Automatic Load and Drive Control is provided to limit distortion during high drive peaks.

Model PAL-350C

PRIMARY POWER
REQUIREMENTS:

115/230 volts, $\pm 10\%$, 50/60 Hz, single phase, 550 watts under 350 watts PEP output conditions. Power supply uses solid state rectifiers throughout.

SAFETY:

Full interlock protection. Full overload and fuse protection.

COOLING:

Filtered, forced air blower system.

TEMPERATURE,
HUMIDITY:

Designed to operate in any ambient temperature between 0 and 50° C for any value of relative humidity up to 90%.

RUGGEDNESS:

The unit is designed for mobile application with the addition of shock mounts.

INSTALLATION DATA:

Size: RFA-1C, 19" w \times 5 $\frac{1}{4}$ " h \times 17" d.
PSP-350C, 19" w \times 8 $\frac{3}{4}$ " h \times 13" d.

SHIPPING WEIGHT:

165 pounds, commercial or military packing.

COMPONENTS AND
CONSTRUCTION:

All equipment manufactured in accordance with JAN/MIL specifications wherever practicable.

