

The LA-100LD is a solid State RF Power Amplifier for the VHF FM broadcasting band (87.5 to 108MHz). It features the latest technology in LDMOS solid-state power transistors, used in a combination of 4 devices to provide up to 100W RF output power for Single Carrier or linear for Multiple Carrier applications. The superior linearity of this amplifier allows multiple carriers with Inter-modulation Products (IM's) below the allowable IM parameters.

This high performance RF power amplifier is compatible with narrowband and wideband modulation schemes and is self-contained with an integral Switch Mode Power Supply Unit and high volume cooling fan assembly. Cooling air-flow is from the front panel and exhausted out of the rear of the unit. Dry relay alarm and status contacts are provided for connection to external remote monitoring equipment if required. The unit is housed in a 5RU 19" rack mount module with reduced depth for installation in medium depth enclosures, with cable and supply connection at the rear of the unit.

The LA-100LD RF amplifier can be used in combination with other associated modules to provide a complete multi-channel tunnel rebroadcast system. from 6 to 24 Channels, using the following additional modules; RMC-1 (6 Way Receiver splitter), TL1-6T (6 channel rebroadcast Frequency Translator), LPSP2 / 4 (2 and 4 way low power combiner/splitter), RFoF (RF over Fiber distribution system)

FEATURES

- 100W single Carrier or Multiple Carrier Power Amplifier operation.
- High-Linearity, 4-stage, 5th generation LDMOS design.
- ALC built-in for control of RF output power.
- 3 Digit, 7 segment digital display of main Parameters.
- Integral fan cooling system.
- Remote Telemetry with voltage free contacts and sample voltages.
- Low Pass RF output filter for out-of-band harmonic attenuation and isolation to higher band frequencies typically found in a tunnel rebroadcast system.



LINEAR VHF RF POWER AMPLIFIER SPEC'S

RF SPECIFICATIONS

Operational bandwidth	87.5MHz to 108MHz
RF Output power	≥ 100W, (RMS)
3 rd order Intermodulation	≤ -50dBc (12 x 2W) 25W version only
Harmonics	≤ -60dBc
Input/Output Return loss	≥ 25dB
RF Gain	+47dB nominal
Gain Adjust	5dB Nominal via ALC

PHYSICAL / ENVIRONMENTAL

Dimensions	485W x 412D x 222H (5U) mm
Weight	18kg (50-100W),
Operating temperature	-5°C to +45°C <90% Humidity
A/C Mains Voltage	85 to 240V
A/C Mains consumption	480VA (100W).
Cooling system	Forced Air +/- 500cubic m/ hr Front to rear

TELEMETRY

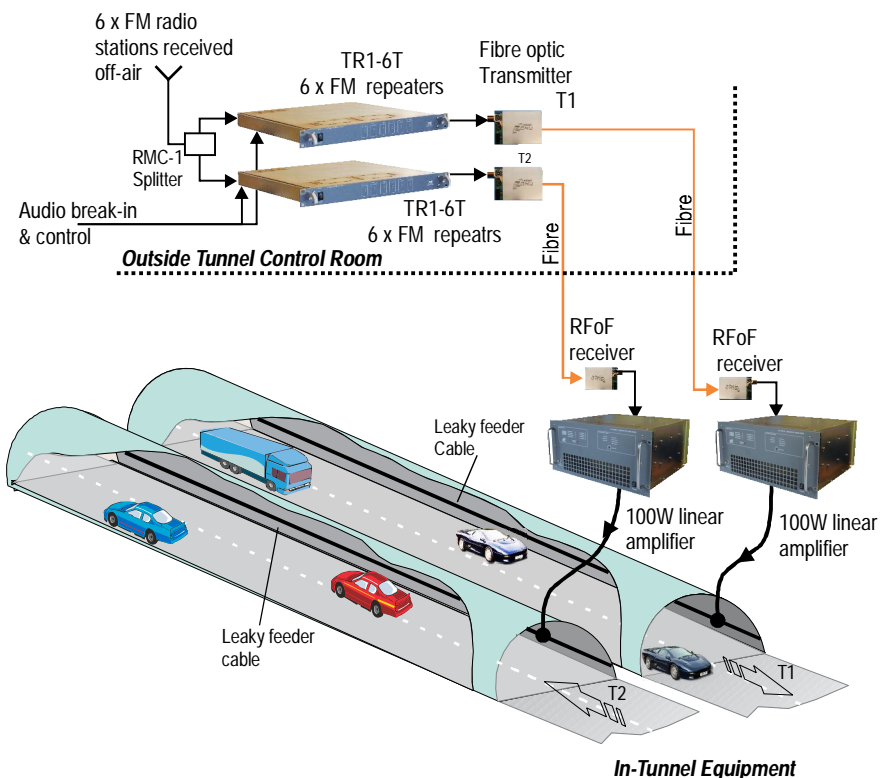
Alarm Fault Contacts	Forward & Reflected Power, Temperature PSU fault.
Alarms/voltages monitored	Forward and Reflected Power, Temperature s/c contact to disable RF
Telemetry RF Enable	

HIGHER POWER RF AMPLIFIERS

LA-100LD-100 100W linear RF Amplifier (4 Stage LDMOS, 480VA PSU)

CONNECTORS

RF Input	BNC female
RF Output	N Female
A/C Mains	EC standard
RF Monitor	BNC female
Telemetry	D9



Typical 6 Channel, Dual tube tunnel FM repeater system