Aimed at increasing the range and distance of of both paging and telemetry networks, the 11-54 VHF & 11-99 UHF power amplifiers offer upto 25W output from an input of only 3W. The 11-99 power amplifier has two variants to cover the UHF frequency bands. 11-99-1000 covers 400-440MHz & 11-99-2000 covers 450-500MHz.

11-54 & 11-99 Power Amplifiers

The **11-54** power amplifier operates over the frequency range 138-162MHz and with 4-5 watts input it will deliver 25 Watts. It has a switching bandwidth of ±5MHz with 20 Watts minimum output.

The power sense operates with a minimum of 3 watts input and switches both the power and aerial relays. The 11-54 will operate satisfactorily with down to 400mW drive but the PTT connection must be grounded to operate the receive to transmit changeover.

A 2dB 50S input matching pad allows for connection to a wide range of driving devices and mis-tuning without the risk of instability.

In the receive mode it will pass a receive signal with less than 1dB attenuation. The 3 stage aerial filter attenuates all spurious emissions to less than -30dBm.

The 11-54 is protected against accidental power connection reversal.

The 11-54-0000 VHF Power Amplifier

The **11-99** power amplifier has two variants to cover the UHF frequency bands. 11-99-1000 covers 400-440MHz & 11-99-2000 covers 450-500MHz and with 4-5 watts input both are designed to deliver 25 Watts output. Both cover the full switching bandwidth without retuning with 20 Watts minimum output.

The power sense operates with a minimum of 1 watt input and switches both the power and aerial relays. The 11-99 will operate satisfactorily with down to 1W input power and will give approximately 10 Watts out.

A 2dB 50S input matching pad allows for connection to a wide range of driving devices without the risk of instability.

In the receive mode it will pass a receive signal with less than 2dB attenuation. The high pass filter is in circuit in the receive mode.

The 3 stage aerial filter attenuates spurious emissions to less than -30dBm.

The 11-99-0000 UHF Power Amplifier

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Technical Specification 11-54-0000 – 25-Watt VHF Power Amplifier	
Frequency Range	138-162MHz - VHF
Frequency Selection	Factory preset
Power Supply	+13.8V typical (11 to 15 VDC range)
Power Consumption	Standby: 4mA Normal Operation: 4A Maximum: 5A @ 25W output
Transmit Power	25W @ 5W input
Transmit Duty Cycle	50% at 25 Watts
Power Input	PA Receiver Switching = 3W min PA Only = 0.4W min for 10W output typical
Switching Bandwidth	PA Receiver Switching = ±5MHz, 20W min with 4W input PA Only = ±5MHz, 20W min with 4W input
Transmit Enable	PA Receiver Switching = Power sense circuit operates relay PA Only = Ground PTT, 3mA source
Connectors	PTT - 2 way plug & socket, screw connections (supplied)
Power Connector	2-way plug & socket, screw connections (supplied)
RF Connector	50Ω BNC (both Input and Output)
Environmental Protection	Not suitable for outdoor use and should be protected from adverse environmental conditions
Operating Temperature	-10ºC to +60ºC (+14ºF to +140ºF)
Indicators	Power LED (Green) - Solid On = Normal Operation Status LED (Red) - Solid On = Active Signal Present
Weight	400g
Enclosure Dimensions	100mm x 130mm x 30mm (WxDxH)
Enclosure Material	Extruded aluminium
Colour	Matt black
Type Approvals	AS 4295: 1995 (RF)

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Technical Specification 11-99-0000 – 25-Watt UHF Power Amplifier	
Frequency Range	400-440MHz - UHF (Model No. 11-99-1000) 450-500MHz - UHF (Model No. 11-99-2000)
Frequency Selection	Factory preset
Power Supply	+13.8V typical (11 to 15 VDC range)
Power Consumption	Standby: 4mA Normal Operation: 4.5A Maximum: 6A @ 25W output
Transmit Power	25W @ 4W input; 18W @ 2W Input; 10W @ 1W Input approx
Transmit Duty Cycle	50% at 25 Watts; Maximum 1 minutes on time
Switching Bandwidth	50MHz, 20 Watts minimum with 4 Watts input
Transmit Enable	Power sense circuit operates relay (1W min)
Receive Mode	<2dB loss between Input and Output connectors
Power Connector	2-way plug & socket, screw connections (supplied)
RF Connector	50Ω BNC (both Input and Output)
Environmental Protection	Not suitable for outdoor use and should be protected from adverse environmental conditions
Operating Temperature	-10ºC to +60ºC (+14ºF to +140ºF)
Indicators	Power LED (Green) - Solid On = Normal Operation Status LED (Red)
Weight	400g
Enclosure Dimensions	100mm x 130mm x 30mm (WxDxH)
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