

Afracal 2

DUAL POWER AMPLIFIER
TACTICAL MILITARY POWER AMPLIFIER: HF / VHF / UHF*



Afracal 2

VERSATILE MILITARY COMMUNICATIONS 1.6 to 88 MHz/ 30 - 512MHz

MAIN FEATURES

DUAL POWER AMPLIFIER 125W/50W

- LINEAR HF / VHF / UHF
- Rugged, Compact, Reliable
- Radio user interface RS232 / RS485 control
- Automatic RF source and antenna port selection
- Automatic output filter select
- Forward power indication
- VSWR bar graph
- 1 m water immersion
- 3 year warranty
- MIL-STD-810 G



COMPACT SOLUTION FOR ANY MISSION

The Afracal 2 is a DUAL Power Amplifier facilitating uncompromised communication for tactical missions through HF, VHF and UHF. Amplifier 1 covers 1.6-30 MHz at 125W and 30-88 MHz at typical 100W. Amplifier 2 covers 30-512MHz at 50W. Each Amplifier has its own RF input which is automatically routed to the applicable PA while the outputs are switched automatically through to the correct band antenna by the antenna switch based on a priority selection with two radios connected.

With a single wide band radio connected to Radio1 ports, Amplifier 1 will provide 125W for the HF and 100W for VHF Low Band. An automatic selection of Amplifier 2 from 88MHz upwards enables 50W from 88.1MHz to 512MHz to provide seamless triple band 1.6 – 512 MHz amplification.

The amplifier and low pass filters switching are controlled from the Radios and Amplifier logic to ensure seamless performance.

The Afracal 2 can also be provided in a single amplifier configuration with only HF/VHFL (1.6-88MHz) or VHF/UHF (30-512MHz)

DETAILED FEATURES FOR ANY MISSION

Compact design

At only 11 kg, this Amplifier is one of most advanced and flexible wideband amplifiers available to fit into confined spaces.

Rugged MIL-STD-810G Full Immersion proof IP67

The enclosed epoxy powder-coated T6-Aluminium casing ensures compliance to MIL-STD- 810G specifications.

Set-up and user controls

No-set up or controls are required as it is all done automatically from the radio RS232 control.

User friendly display

The user friendly display features the selected Frequency, Output Power achieved and VSWR is indicated on a bar graph.

Data performance

The amplifiers are extremely linear at the rated power to ensure higher data rates to cover extended range.

Extended life-time

Life-time is extended by operating the amplifiers at more than -3dB below rated power of the output electronic devices.

Wide supply window

The Afracal2 Amplifier can operate from 10Vdc to 35Vdc and supplies all connected radios with a stable 12Vdc. This simplified supply configuration reduces cabling.

ATU control

The amplifier facilitates the conversion from the radio RS232 control signals to RS485 robust control for external high power antenna tuners.

Mounting

The amplifier can be installed on any rack or shelf; however, purpose built base station and vehicular mount racks are available to facilitate quick extraction, cooling and vibration damping. Contact our sale team for custom designs.

ENVIRONMENTAL

Shock, Vibration & Immersion	MIL-STD-810G
EMI / RFI	MIL-STD-461E
Operating Temperature	-30 to +65°C
Storage Temperature	-40 to +85°C

AFRACAL REAR PANEL



SPECIFICATIONS

RF Output Power	AMP1: 125W (1.6-30MHz) PEP 100W (30-88MHz) PEP AMP2: 50W (30-512MHz) PEP
Operation Cycle	Continuous with optional cooling fan.
Gain Amp1	13dB ±1dB
Gain Amp2	13dB ±1dB
Harmonic Suppression	> 50dB (typical)
Max Load Mismatch Protection	VSWR 1: 5
Power Source	Temperature, VSWR. 12Vdc nom. (10-36 VDC)
Power Connector	Amphenol 62-56-10-02P
RF Input connector	BNC - Female
RF Input/Output	50 Ohm unbalanced
RF Output connectors	N-Type Female
Intercom Interface	Via radio handset connector
External Audio	10W into 4Ω Optional Speaker (Aux Connector)
Aux Connector	62-502-12-14S
Control System	RS232 / RS 485
Data Connectors	62-56-14-19S
Cooling Fan Connector	62GB-5005-10-6S
Dimensions	194x150mm x354 (w x h x d)
Weight	11 kg (typical)
Power Consumption	
AMP 1 @125W/100W	18A/12A at 24V (typical)
AMP 2 @ 50W	7.5A at 24V (typical)

Specifications may change without prior notice. Please verify updated specifications on our web site and reconfirm on order.

Product color may vary as per customer requirement: Olive Drab Green, Battleship Grey, Desert Tan or any other colour required.



MILITARY
COMMUNICATION
SYSTEMS

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