

**RF-5830H-PA001 /
RF-5830H-PA002**
20 WATT HF/VHF POWER
AMPLIFIER/COUPLER

*provides 20 watt
output and
automatic tuning in a
compact package that
can be collocated
near the antenna*



The RF-5830H-PA operates with the FALCON® II RF-5800H-MP and AN/PRC-150(C) Transceivers.

The RF-5830H-PA operates in applications requiring low-power, short-range (100's of kilometers) communications. Applications include mobile, boat, or base station installations for general-purpose voice and data communications.

Automatic tuning is provided to a variety of whip, dipole, and long-wire antennas over the frequency range of 1.6 to 60 MHz. Operation of the unit, including system tuning, is fully automatic, eliminating any need for operator control or intervention.

The power amplifier section of the RF-5830H-PA is a broadband design requiring no tuning or adjustment. The antenna coupler section automatically matches the output of the power amplifier to the antenna and requires no special operator procedures.

The FALCON II Series Transceivers are designed with built-in, self-test features to permit operators or maintenance personnel to fully check PA/coupler system performance. Fault conditions are displayed on the radio's front-panel display.

Power output of the power amplifier is 20 watts PEP/Average for HF-SSB operation and 10 watts for VHF/FM operation.

The robust design and construction of the RF-5830H-PA Power Amplifier/Coupler provides high performance and reliability in the most severe environments.



Specifications for the RF-5830H-PA

General

Frequency Range	1.60000 to 59.99999 MHz
Modes of Operation	J3E (single sideband, upper or lower, suppressed carrier telephony); H3E (compatible AM single sideband plus full carrier telephony); J2A MCW (single sideband suppressed carrier keyed tone). F2B (FSK) F3E (FM)
RF Input/Output Impedance	50 ohms nominal, unbalanced
Power Input	+24 Vdc (per MIL-STD-1275) @ 4.0 Amps., maximum
Operational Temperature Range	-40°C to +70°C
Shock/Vibration	MIL-STD-810E.
Leakage	MIL-STD-810E (1 meter depth)
Humidity	MIL-STD-810E (0 to 95%)
Size	RF-5830H-PA001: 5.75W x 9D x 3.45H inches (14.6W x 22.9D x 8.8H cm)
Weight	RF-5830H-PA001: 5.5 lb (2.6 kg)

Power Amplifier

Power Output	20 Watt PEP/average SSB into 50 ohms, 1.6 to 30 MHz 10 Watt average FM, into 50 ohms, 30 to 60 MHz
RF Drive Requirements	Nominal 100 mW (+20 dBm)

Antenna Tuner

Antenna Tuning Capability	Standard 8-, 10-, and 16-foot whips: 1.6 – 59.9999 MHz RF-1936: 2.0 to 12 MHz 50 ohms: 1.6 – 59.9999 MHz
Tuning Time	Learn Tune: < 2 seconds Memory Tune: < 10 milliseconds

Classification

RF-5830H-PA001	20-Watt PA/Coupler
RF-5830H-PA002	20-Watt PA/Coupler with Low Pass Filter

Accessories

SB-V	Whip Antenna Series
RF-1936	NVIS Antenna Series
RF-1912	Dipole Antenna Series
RF-5830H-SK001	Site Spare Kit for the RF-5830H-PA001
RF-5830H-SK002	Site Spares Kit for the RF-5830H-PA002
10535-0720	RF-5830H to RF-5800H or AN/PRC-150(C) Control Cable
10181-9824	RF-5830H to RF-5800H or AN/PRC-150(C) RF Coax Cable
10181-9827	RF-5830H to Vehicle DC Power Cable

Systems

RF-5800H-V005	20-Watt Vehicular System
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