

RF-382A Series
FAST TUNE AUTOMATIC
400 WATT ANTENNA
COUPLER



The RF-382A Series couplers efficiently and automatically match the output of 125 to 400 watt transceivers to a wide variety of whip, dipole, and long-wire antennas over the frequency range of 1.6 to 30 MHz. Tuning time from memory is less than 200 milliseconds.

RF-382A Series couplers operate with ALE communications systems that require very fast frequency change. Rugged and reliable, they operate under the most severe environmental conditions in vehicular, transportable, shipboard, and fixed-station applications.

The RF-382A Antenna Coupler is designed for direct interface with FALCON® II HF systems and is fully compatible with the built-in MIL-STD-188-141B and STANAG-4538 Automatic Link Establishment (ALE) protocols.

The coupler requires a control cable and RF coax interface to connect to the associated transceiver. Separation can be up to 250 feet (76 m). A high voltage ceramic insulator provides the connection to the antenna. It is also equipped with a 50-ohm N-connector antenna port for coaxial connection to a fixed site broadband or resonant antenna.

Internal built-in test to the module level provides rapid diagnostic troubleshooting and repair. In addition, all key operating parameters are continually monitored during operation. If parameters are exceeded, a coupler fault is reported to the radio.



High Voltage Antenna Port

Rated RF Input Tuning Capability	Up to 150 Watts PEP and Average: 1.6 to 30 MHz: 9 to 35 foot whips; 35 to 150 foot long wires; 40 to 100 foot dipoles (including RF-1912 and RF-1936)
	Up to 400 Watts PEP; 250 Watts Average: 1.6 to 30 MHz: 75 to 150 foot long wires; 1.6 to 30 MHz: 40 to 100 foot dipoles (including RF-1912 and AS-2259/GR); 2.5 to 30 MHz: 35 foot whips; 4 to 30 MHz: 24 foot whips; 6 to 30 MHz: 16 foot whips
Tuning Accuracy Tuning Time	Automatically tunes to 50 ohms to within a VSWR of 2:1 200 ms tuning from memory based on prior tuneup. Initial tune time on new frequency typically less than 3 seconds (8 seconds maximum)
Efficiency	Whips: 1.6 to 4 MHz: 15 to 85%; 4 to 30 MHz: 50 to 95% Long Wires and Dipoles: 1.6 to 30 MHz; 60 to 95% Note: Efficiency depends on frequency, antenna length, and ground plane

50-Ohm Antenna Port

Rated RF Input Antennas	Up to 400 Watts PEP and Average Broadband and dipole resonant fixed frequency antennas
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Electrical

Channel Capability Protection Features	480 channel memory Protection from high VSWR, high temperature, RF over-voltage and over-current Lightning surge protection on all control lines and the RF path Can tune or key into an open or short without damage
Receive Bypass BIT	Automatic and manually controlled receive bypass Fault isolation to module level

Installation

Primary Power Requirements Remote Capability Weight Size	10 to 32 VDC at 4 amps maximum during tuning, 1.6 amps maximum when tuned Up to 250 foot (75m) separation between transmitter and coupler 31 lbs (14 kg) 7.65H x 11.25W x 18.5D inches (including projections) 19.4H x 28.6W x 47.0D cm (including projections)
Mounting Accessories Supplied	Four mounting hole dimensions: 7.25 x 15 inches (18.4 x 38.1 cm) Type N RF coaxial mating cable connector, control cable mating connector, cable installation material, coupler mounting hardware, installation material, and the Intermediate Maintenance manual
Color	RF-382A-15 is CARC Green 383; RF-382A-04 is navy gray; RF-382A-34 is NATO Green 285

Environmental

Test Method Shock and Vibration Immersion Operating Temperature	Per MIL-STD-810F Ground tactical 3 feet (0.9 m) of water -40°C to +70°C
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Accessories and Cables

Cables	Control: 10181-9823 Coax: 10181-9824
Shock Mounts	Tracked Vehicles: RF-383VM-01 Wheeled Vehicles: RF-384VM-03
Sun Shield	10330-9250
Safety Cover	10208-0014-01
Siting Kits	RF-5351-AT Series
Transit Case System	RF-382A-15TM

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