



1KW FAST-TUNE HF ANTENNA COUPLER

RF-2601

FEATURES

- > A rugged shipboard qualified high power antenna coupler

The RF-2601 Antenna Coupler is designed specifically for applications where fast frequency change is necessary, such as those incorporating automatic link establishment. It will operate continuously under the most severe environmental conditions in vehicular, transportable, shipboard, and fixedstation applications.

The RF-2601 efficiently and rapidly matches the output of 1 kW transmitters and transceivers to a wide variety of whip, dipole, and long-wire antennas over the frequency range of 1.6 to 30 MHz. Upon keying the associated transmitter on a new frequency, tuning occurs typically in 75 ms using previously stored (memorized) tuning information. Emissions are minimized during memory tuning by limiting actual on-the-air time to less than 30 ms.

The coupler is designed for direct interface with the RF-1140 1kW HF-USB Transmitter Series and RF-1145 1kW Transceiver System and can be remotied up to 500 feet from the transmitter or transceiver.

The RF-2601 provides extensive automatic monitoring of parameters during normal operation and also incorporates comprehensive operator-initiated static and transmit BIT. If a fault condition should arise, the processor-controlled BIT quickly identifies the source of the problem to the replaceable module level or lower, speeding mean time to repair.

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SPECIFICATIONS FOR: RF-2601

SPECIFICATIONS

Dimensions	Coupler Unit: 30L x 15W x 10.7H in (76.2L x 38.1W x 27.2H cm)
	Control Unit: 1.75H x 19W x 8.75D in (4.4H x 48.3W x 22.2D cm)

Weight	Coupler Unit: 86 lb maximum (39 kg) Control Unit: 10 lb (4.5 kg)
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ENVIRONMENTAL

Temperature	MIL-STD-810D; Method 501.2 Proc I and II (storage at +71°C and operation at +65°C). Method 502.2, Proc. I and II (storage at -62°C and operation at -54°C).
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Humidity	MIL-STD-810D; Method 507.2, Proc. II, (0 to 100% relative humidity).
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Vibration	MIL-STD-810C; Method 514, Procedure VIII, curve Y except 5 to 55 Hz and 0.15 inches dbl. ampl. or 2.5G, whichever is less. MIL-STD-167-1; Type I for shipboard equipment.
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Shock	MIL-S-901; Grade A, Class I (solid mount), Lightweight, type A.
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Altitude	MIL-STD-810D; Method 500.2, Proc. I and II, (storage and operation to 15,000 ft.).
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Salt Fog	MIL-STD-810D; Method 509.2, Proc. I
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Dust	MIL-STD-810D; Method 510.2, Proc. I and II (blowing dust and sand).
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Rain	MIL-STD-810D; Method 506.2, Proc. I (blowing rain).
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INSTALLATION

Power Supply	115/230 VAC $\pm 10\%$, 50/60 Hz single phase
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Power Consumption	145 watts maximum. Primary power derived from transmitter/transceiver.
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ELECTRICAL

Frequency Range	1.6 to 30 MHz
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RF Power	2 to 30 MHz: 1 kW PEP/Average; 1.6 to 2 MHz: 1 kW PEP/500 watts Average
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Tuning Capability	1.6 to 30 MHz: 35 foot whip, long wire, dipole, and broadband antennas; (The RF-625A Long-Wire Adapter is necessary for use with long-wires and dipoles.) 2.0 to 30 MHz: 16 to 24 foot mobile and shelter-mounted whips.
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Tuning Accuracy	VSWR of 1.2:1 typical
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Tuning Time	Memory: 75 milliseconds to 125 milliseconds; Learn: 2-3 seconds typical, 10 seconds maximum.
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Tune Power Requirements	25 to 280 watts
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Circuit Protection	Protection from high VSWR, high temperature, low pressurization, RF over-voltage, control line lightning surges, RF path lightning surges.
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Coupler Bypass	Automatically in fault mode; Manually, with RF-2602 Status Monitor.
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Remote Capability	Up to 500 feet separation between transmitter and coupler with the use of 1/2 inch or 7/8 inch foam dielectric coaxial cable. Up to 250 feet with the use of RG-213/U Coaxial Cable.
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OPTIONAL ACCESSORIES FOR RF-2601

RF-2601AC	Similar to RF-2601, except RF-2602 Status Monitor is deleted.
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RF-625A	Long-Wire Adapter. Permits RF-2601 to tune long-wire antennas.
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RF-628	Dry Nitrogen Kit. For inert gas pressurization of the RF-2601 Antenna Coupler. Includes 20 cubic feet dry nitrogen-filled cylinder, regulator, and 10 foot hose sufficient to pressurize the RF-2601 up to 12 times.
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RF-636	Dry Air Pump. Hand pump recommended for pressurization of the RF-2601 when dry-nitrogen pressurization equipment is not available. Includes hose. Desiccant condition shown by color indicator on pump body.
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