



H.F. ANTENNA TUNING SYSTEM

Model ATS-3

TECHNICAL BULLETIN 204-4423

- *Operating Range 2-30 MHz*
- *1000 Watts AVG or PEP*
- *Minimum tuning time*



The ATS-3 antenna tuning system is a highly versatile automatic device which will remotely tune a 35 foot shipboard antenna to match the 50 ohm output of a 1 KW transmitter over the range of 2-30 Mhz. It will also tune into a long wire antenna as short as fifteen feet depending on frequency and antenna configuration.

The ATS-3 consists of two parts; the station control unit and the completely sealed tuner normally located at the base of the antenna.

The control unit is completely solid state and is cable connected to the tuner. All necessary servo and pre-positioning controls are provided in the station unit as well as the power supply. Two front panel meters monitor "R" and phase sense. These enable the operator to monitor the status of the sensing circuits. Every attempt has been made to produce a "fail safe" device, and in the event of malfunction, the meters may be used to manually adjust the tuner. All parts are easily accessible for service and "LED" indicators continually indicate proper operation. Complete manual override is available.

The tuner is housed in a cast aluminum case completely protected from the elements by weather-proof fittings. Our tests have indicated that pressurization is not necessary, but the unit may be pressurized on special order. A humidity sensor is incorporated which will indicate if moisture accumulation is excessive.

THE TECHNICAL MATERIEL CORPORATION

TECHNICAL SPECIFICATIONS Model ATS-3

OPERATING PARAMETERS

Frequency Range	2-30MHz
Input RF Power	1000 watts PEP or 1000 watts average CW
Input Impedance	50 ohms nominal, unbalanced.
Output Impedance	Designed to match any antenna with a 10 to 1000 ohm impedance over the frequency range. Long wire antenna or standard 35-foot whip antenna.
Tuning	Automatic with pre-position information from transmitter.
Tuning Accuracy	Better than 1.5-to-1 VSWR
Tuning Time	Switched in less than 10 seconds.
Tuning Level	Will automatically tune with less than 200 watts input.

ENVIRONMENTAL AND INSTALLATION

Cooling	Convection
Operating Conditions	-20° to + 65°C, up to 95% Relative Humidity at MSL
Storage Conditions	-30°C to + 80°C, up to 95% Relative Humidity at MSL
Primary Power	115 or 230 Volts AC \pm 10%, 50/60 Hz, single-phase, 100 watts
Size and Weight	Control unit: 5.25" (14 cm) high x 19" (48 cm) wide x 20" (51 cm) deep; 27 lbs./13 kg. Tuning unit: 25" (64 cm) high x 18" (46 cm) wide x 13" (33 cm) deep; 70 lbs./178 kg. Commercial packing for U.S. shipment. Two (2) containers. Total weight and cube: 185 lbs./13 cu. ft.
Shipping Data	
Loose Items	Two Technical Manuals (Operator/Installation/Service) 50 ft. RF power cable and 50 ft. control cable.

ACCESSORIES (Option)

CA480-36-300	RF Power Cable, 300 ft. in length
CA1866-300	DC Control Cable, 300 ft. in length
DTA-11	Long Wire Antenna
VTA-2	Vertical Antenna, 35 ft. stainless
VTA-3	Vertical Antenna, 35 ft. fiberglass

ACCESSORY PRODUCTS are described in sections 4-9 of the General Catalog and include RF/antenna, terminal, data, connector, and power equipment. **TECHNICAL SERVICES** in design, engineering, training, and related areas are described in section 10. **OPTIONS** are listed after each TMC product in part A of the Price List.

Technical Specifications Are Subject to Change Without Notice

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