

Series STR-1700

VHF/UHF Data Compatible Radios



VHF/UHF Data Telemetry Radios

High Output Power - Ultra Clean Spectral Purity

Programmable for Wideband (25 KHz) or Narrow Band (12.5 KHz) Operation

Embedded FM Modem - Compatible with Most Common External Audio Tone Data Modems

Extremely Ruggedized - Fully Compliant With Mil-Std 810

Up to 8 Channel Preselects with Varying Frequencies, Bandwidths, and Output Power Levels

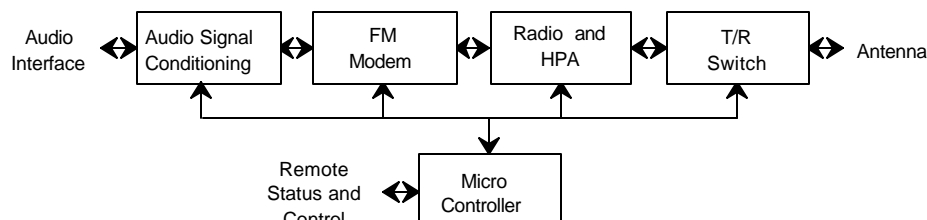
The **STR-1700** family of VHF/UHF transceivers represent a mil-spec ruggedized land mobile solution for applications requiring high power (up to 35 Watts) as well as high reliability. The ultra-compact size of these radios make them ideal for a wide variety of applications.

The STR-1700 provides the fastest transmit turn-on (20 msec) and receive recovery (30 msec) times of any similar high power products currently available. This makes them an ideal choice for time critical data telemetry applications. Supporting either 25 KHz or 12.5 KHz channel spacing, an external audio data modem can provide digital data transmissions at speeds up to 9600 baud.

The main chassis is one-piece, die-cast aluminum, providing a product which is resistant to impact while also being extremely effective at heat dissipation. The thermal design provides for a high ratio of transmit to receive duty cycles.

A single front panel DB-25 connector provides all user interfaces including those required for programming radio frequencies, bandwidths, and transmit power levels, as well as audio input/output, push to talk, and active channel selection. Rear panel connections are provided for the RF interface as well as primary power (+12 VDC).

Various models of the product family cover most commonly utilized VHF or UHF frequency bands. Different versions of the radio's are certified through the FCC, IC, ASA, and ETSI.



Model STR-1700 VHF/UHF Radio Specifications

RF Specifications

Frequency Range:
STR-1710 : 136 to 174 MHz
STR-1720 : 440 to 490 MHz
STR-1730 : 440 to 490 MHz (ETSI/ASA/Other Countries)
Consult Factory for Other Frequency Bands
Channel Spacing: 25 or 12.5 KHz
Preset Channels: 8
Stability: +/- 0.0005% of Fc
Duty Cycle:
Capable of 30 seconds continuous transmit or 25% continuous transmit/receive duty cycle
Compliance:
Various models available for:
FCC
IC
ETSI
ASA
type certification. Contact factory for further information.

Modulation

Type: FM
Rated Deviation:
+/- 5 KHz for 25 KHz Spacing
+/- 2.5 KHz for 12.5 KHz Spacing

Transmit Characteristics

Output Power: Selectable between 5, 25, and 30 Watts
Output Protection:
Operating into a 10:1 VSWR of any phase angle will not damage the transceiver
Spurious/Harmonic Output: -70 dB below rated power
Modulation Sensitivity:
Adjustable from 50 mvolt RMS audio input signal for 60% of rated deviation
Frequency Response:
Flat from 300 to 3000 Hz (no pre-emphasis)
Turn-on Time:
Within 25 msec (UHF) or 40 msec (VHF) of keying, radio reaches 90% of rated output power.
Output SNR: 30 dB minimum fully modulated
Audio Input Impedance: 50 Ohm

Receive Characteristics

Sensitivity: 0.25 uV (12 dB SINAD) typical
Dynamic Range:
0 to -100 dBm for 23 dB SINAD (1 KHz Tone at 60% dev)
Spurious/Image Rejection: 70 dB minimum
Intermodulation: 65 dB minimum
Selectivity:
75 dB typical for 25 KHz spacing
65 dB typical for 12.5 KHz spacing
Recovery Time: 30 msec from removal of key signal
Audio Output:
Adjustable from 60% dev for 1 V p-p output into 600 ohm resistive load
Frequency Response:
Flat from 300 to 3000 Hz (no deemphasis)
Overload Protection:
A +28 dBm input continuous applied to input will not cause any permanent damage

Programming Control Specifications

Platform: Windows compatible PC
Preset Channel Controls:
Frequencies
Bandwidths
Output Power Levels
Interface:
Special control cable from serial COM port to STR-17xx

Other Specifications

Chassis: ~ 2" High, ~ 6" Wide, and ~ 7" Deep
Weight: 3.3 lbs
Connectors
1 UHF for RF Input/Output
1 25 Pin D (Front Panel) for:
Programming Interface
Audio/Data Input/Output
Preset Channel Selection
PTT
Primary Power
13.6 VDC \pm 15% (transmit 12.5 A, receive 0.7 A)
MTBF: 25,000 Hours
Operator Adjustments: None
Temperature
-30° TO 60° C (Operational and Storage)
Vibration
2 g rms 5 Hz-300 Hz sinusoidal, 3 axes, continuous
Shock
10 g half sine, 15 msec; 3 axes
Humidity
Up to 100% 'non-condensing'
Altitude
10,000 feet operating and 40,00 feet non-operating

* All specifications subject to change without notice or obligation to retrofit.

Consult factory for custom options and/or alternate specifications



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