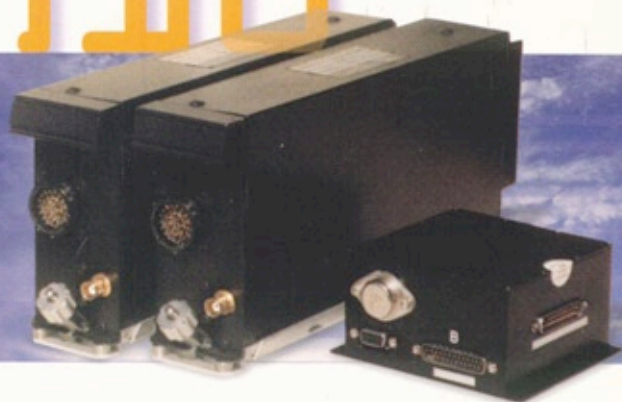


VRS 5910

REMOTE AIRBORNE
VOICE RELAY SYSTEM

MIL-SPEC INTEGRATED FLIGHT HARDWARE



The Aero Telemetry *VRS-5900 Series*TM airborne voice communication relay systems are designed specifically for use on high altitude unmanned air vehicle platforms where extreme environmental conditions demand compact size, light weight, and ruggedized construction.

The *VRS-5910* repeater system provides UAV operators with a turn-key, COTS/NDI solution for maintaining a reliable, frequency agile, two-way voice communication link with air traffic controllers (ATC) during extended range and duration flights.

The *VRS 5910* relay package features remote frequency control through any ground based computer, full VHF commercial band coverage, (118.000MHz to 135.975MHz with 25KHz channel spacing) and 20 Watts of transmit power for long range, reliable operation. UHF and VHF/UHF coverage is optional.

The Remote Frequency Control feature allows the user to select both the forward and return link frequencies (pilot to aircraft and aircraft to ATC) wirelessly, through any RS-232 or RS-422 serial port interface using simple ASCII commands. The frequency control link can be either an existing user supplied communications up-link or Aero Telemetry's *DLS-1000 Series*TM, long range, software programmable wireless data link system.

- ▶ Remote Frequency Control
- ▶ RS 232/422 interface
- ▶ Windows based GUI
- ▶ Qualified to 65,000 feet

COTS / NDI

- ▶ Compact, rugged assembly
- ▶ Low current draw
- ▶ MIL-E-5400 Class 2
- ▶ VHF, UHF, or VHF/UHF

VRS

5910

REMOTE AIRBORNE VOICE RELAY SYSTEM

TECHNICAL SPECIFICATIONS COMMUNICATION REPEATER SYSTEM

GENERAL:

FREQUENCY RANGE: 118.000MHz to 135.975MHz in 25KHz increments
FREQUENCY STABILITY: Within $\pm 0.0015\%$ over -65°C to $+71^{\circ}\text{C}$
CONTROL: PC remote control with software and I/O board interface
DUTY CYCLE: Four minutes receive - one minute transmit

TRANSMITTER:

MODULATION: 85% capability with 90% limiting provided
POWER: 20 Watts Minimum
SPURIOUS AM: Greater than 70dB down from carrier level
HARMONIC CONTENT: Greater than 60dB down from carrier level
AUDIO INPUT: 0.25 Volts RMS into 250 Ohms input circuits
SIDETONE OUTPUT: Transistor switched, adj. to receiver audio level
VSWR: 1.5:1 Maximum
RF IMPEDANCE: 50 Ohms Nominal
LOADING: Normal Operation into any Load VSWR and Phase Angle
OPEN/SHORT PROTECTION: Internal Isolator

RECEIVER:

SENSITIVITY: 3 micro Volts or less for 6dB signal
SELECTIVITY: 20KHz minimum at -6dB, 40KHz minimum at -60dB
OUTPUT: 100mW Maximum adj. into 600 Ohm load
AGC CHARACTERISTICS: 4dB Maximum deviation from 10 μV to 100 μV
SQUELCH: Automatic with manual disable and override
SPURIOUS OUTPUT: 80dB down minimum

POWER REQUIREMENTS:

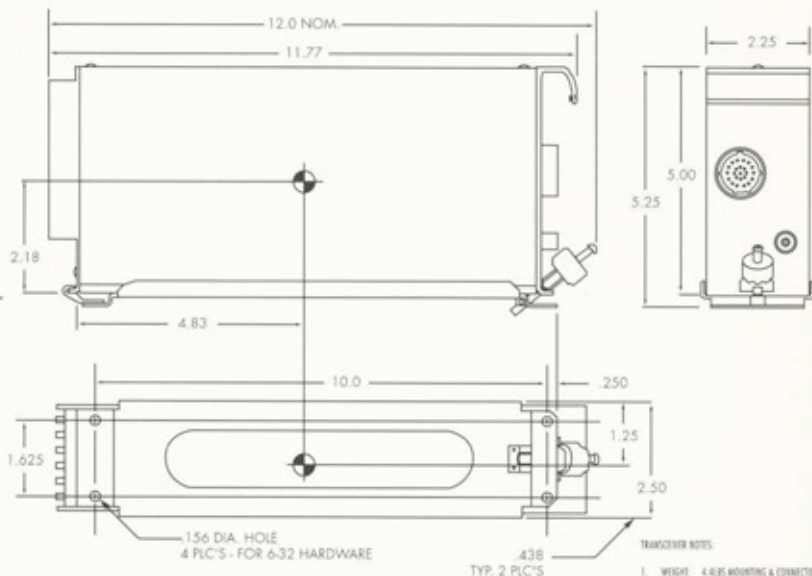
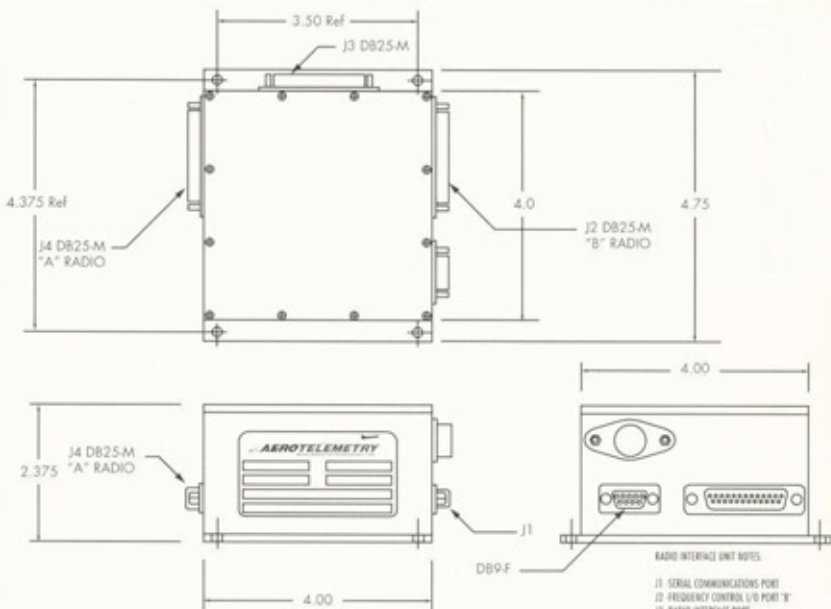
INPUT VOLTAGE: -28VDC, Reverse Polarity Protected
INPUT CURRENT: 0.58 Amps Receive, 3.95 Amps Transmit

ENVIRONMENTAL SPECIFICATIONS:

MIL-E-5400: Class 2
TEMPERATURE: -65°C to $+55^{\circ}\text{C}$ with short time operation $+71^{\circ}\text{C}$
VIBRATION: 20G's, 20Hz to 2KHz, 3 Axes
SHOCK: 1/2 Sine, 50 G Peak, 11mS, 3 Axes
ACCELERATION: 100G's, 3 Axes
ALTITUDE: Up to 65,000 feet MSL
HUMIDITY: To 95% at any Temperature forming Condensation

PHYSICAL CHARACTERISTICS:

DIMENSIONS: Per Outline Drawing
WEIGHT: 4.2lbs. Maximum
ENCLOSURE: Extruded Aluminum
FINISH: Mill Finish, SkyDrol Black Paint



You should hear what you've been missing.

AEROTELEMETRY
Military Avionics and Performance Data Links