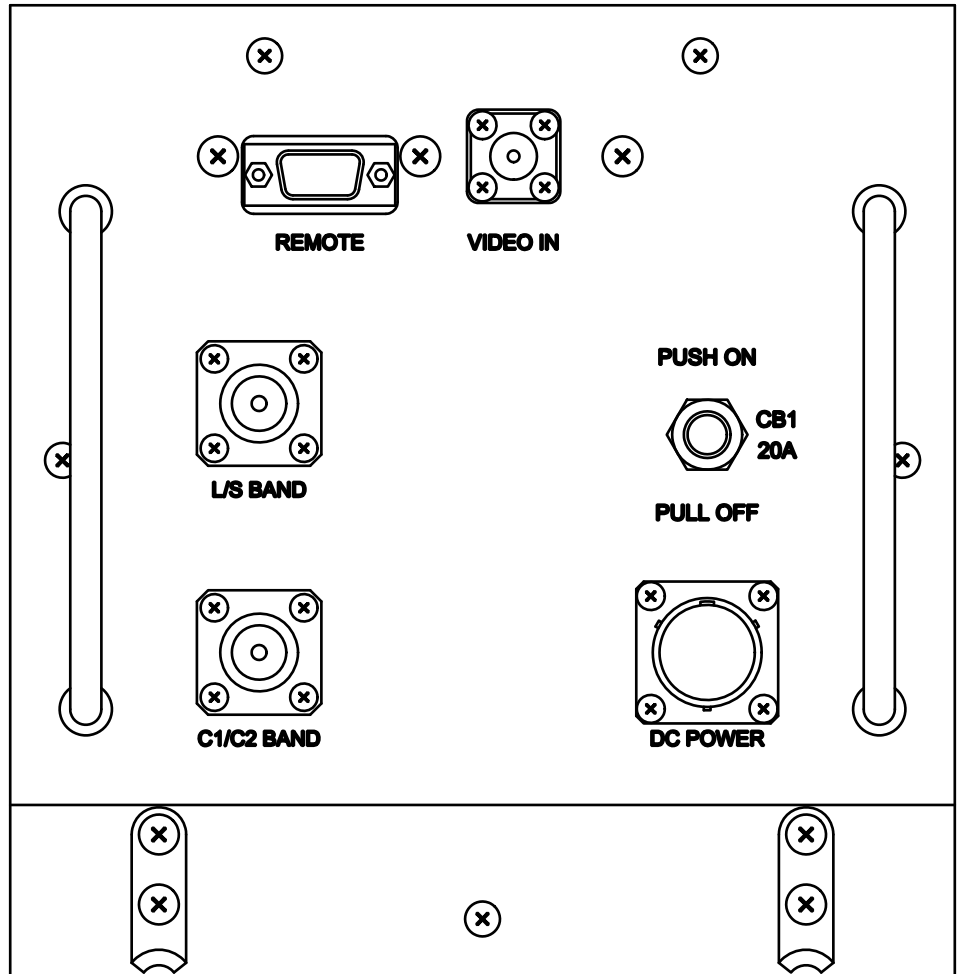
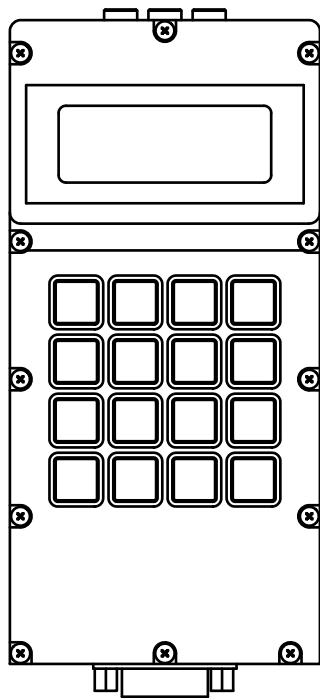


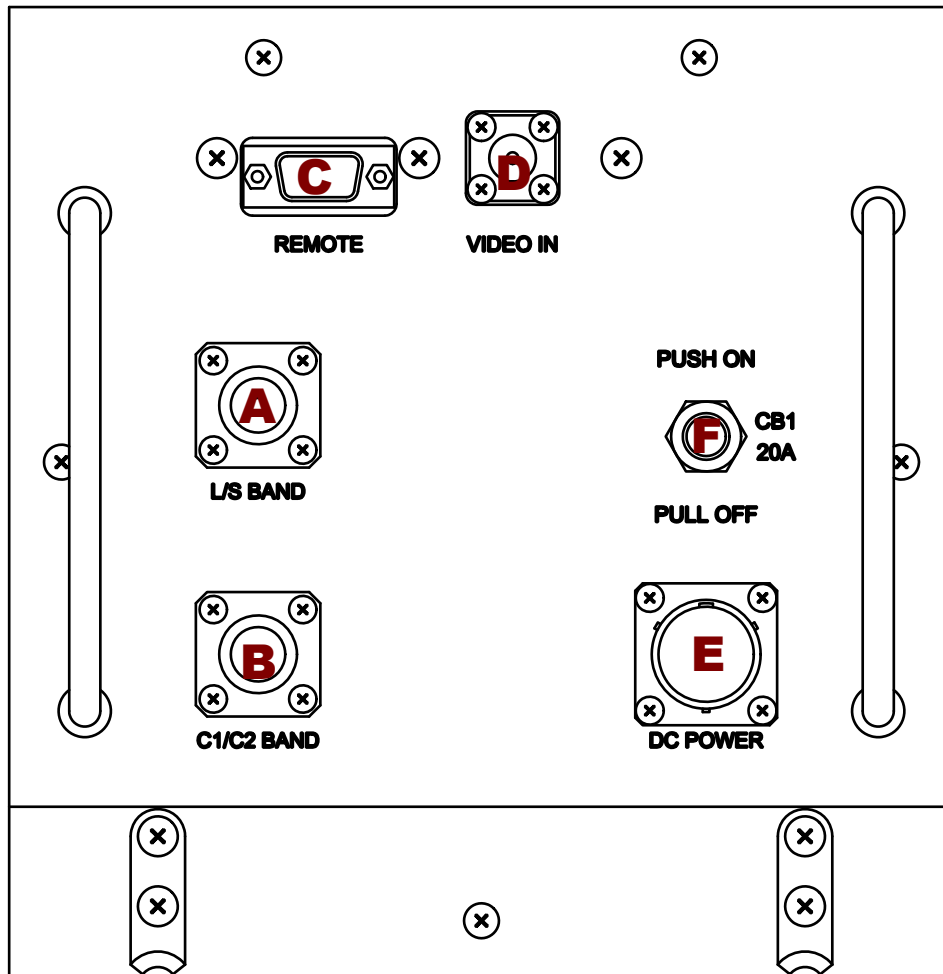
MAT1448VTX

Multi-Band Aircraft Video Transmitter

Operating Instructions

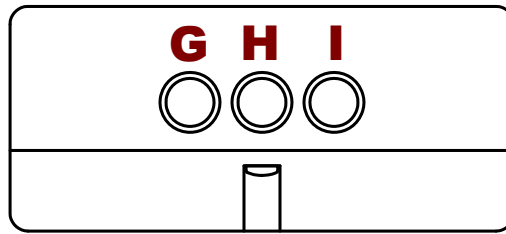


ARINC Transmitter Unit

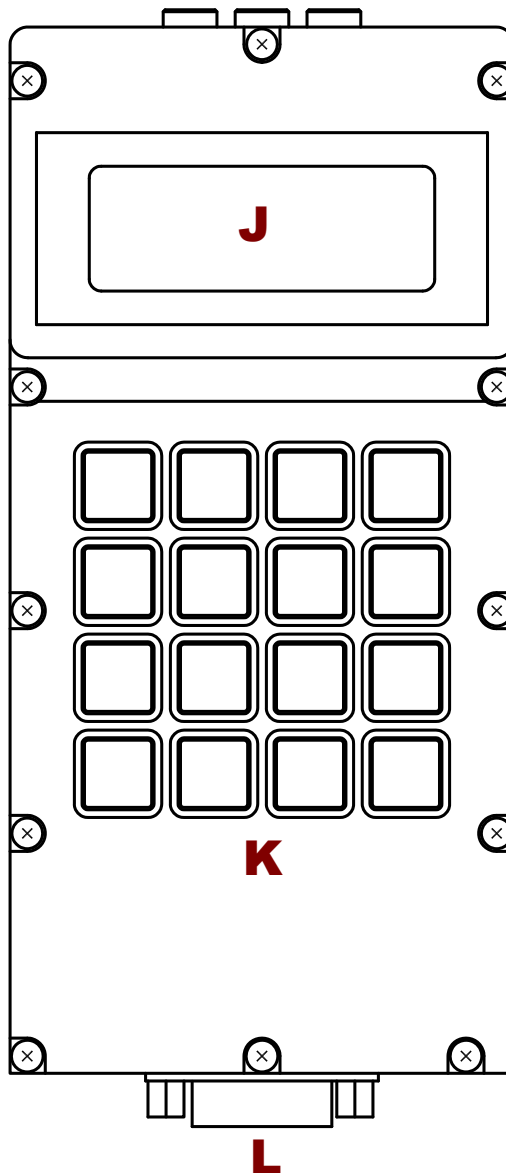


- A** - L and S bands antenna connector, N-type female, 50 Ohms
- B** - C1 and C2 bands antenna connector, N-type female, 50 Ohms
- C** - D-sub connector for remote controller
- D** - video input connector, BNC female, 75 Ohm
- E** - DC power connector
- F** - ON/OFF switch

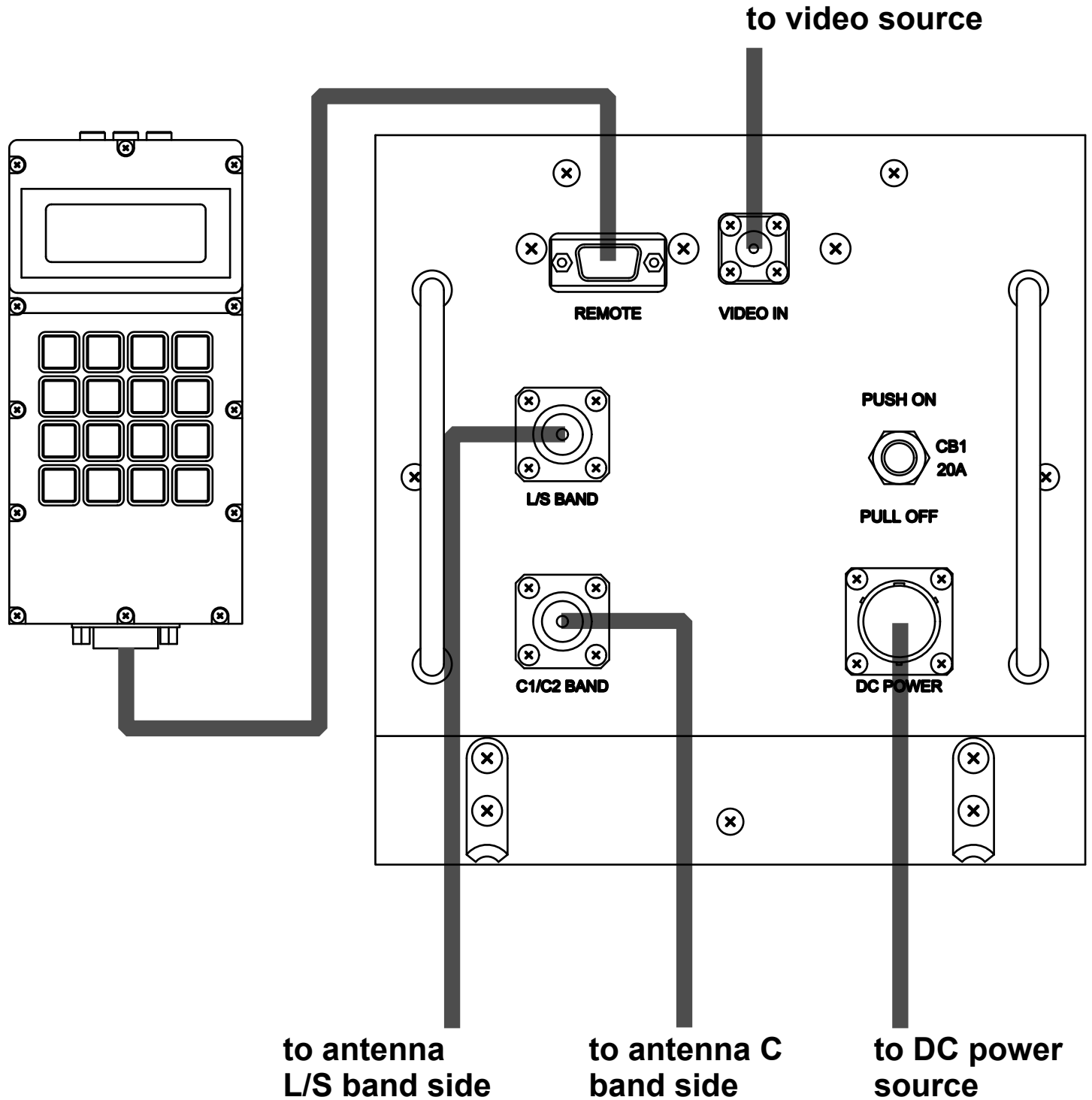
Remote Control & Display Unit



- G** - Red L.E.D indicator
- H** - Yellow L.E.D. indicator
- I** - Green L.E.D. indicator
- J** - LCD display
- K** - keypad
- L** - D-sub connector



Connection



The transmitter will be damaged when operated without an antenna connected to the output port. The antenna and the cable must handle 35 Watts minimum.

Setup and Operation

Connect antenna cables to **A** and **B**.

Connect Remote Control to Transmitter via **C** and **L**.

Connect video source to **D**.

Connect power cable to **E**.

Push **F** to turn on.

Use the keypad **K** to change the frequency and the power.

Enter Frequency: for example 1820 MHz **1** **8** **2** **0** **ENT**
MODE LOCK

Store Frequency: for example **Store** 1820 MHz in **Preset 3** **ALT** + **RCL** + **3**
PRE

Recall Frequency: for example **Recall** 1820 MHz from **Preset 3** **RCL** + **3**
PRE

Increment Frequency: for example **Increment** 1820 MHz by 1 MHz **↑**

Decrement Frequency: for example **Decrement** 1820 MHz by 1 MHz **↓**

Clear Display or Entry: **CLR**

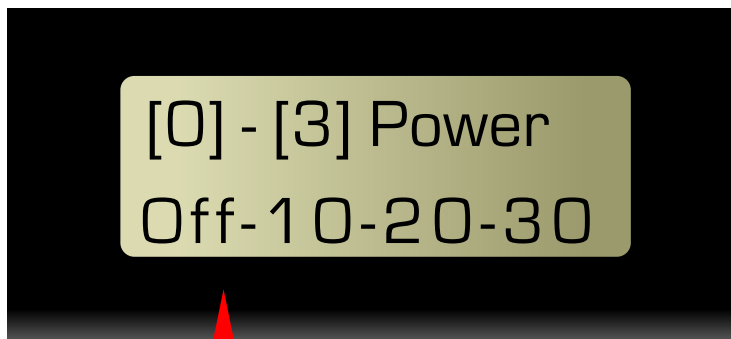
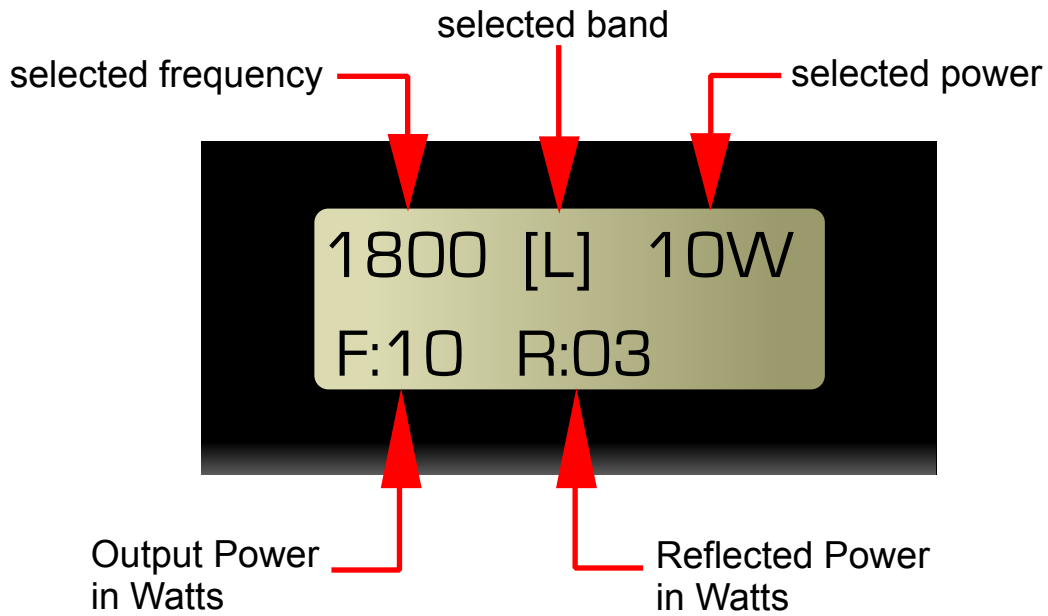
Select Power Output: **ALT** + **0**
MODE

0	zero or no power output
1	10 Watts
2	20 Watts for L, S, and C1 ; 15 Watts for C2 band
3	30 Watts for L, S bands only

Proper Shutdown

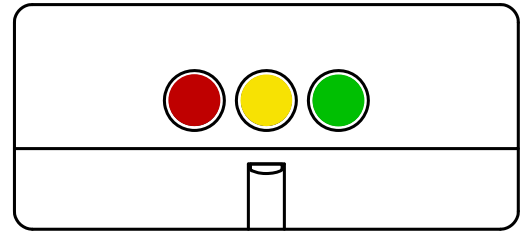
To shutdown the unit, set the power level to zero and turn off the transmitter unit. **ALT** + **0** + 0
MODE

LCD Display



- select **0** for zero or no power output
- select **1** for 10 Watts
- select **2** for 20 Watts
- select **3** for 30 Watts

L.E.D. Indicators



- Status is good.
- Transmitter is locking to programmed frequency or is locked and at zero power output setting, set the desired power level.
- One or more of the following is occurring:
 - A. transmitter is being operated without an antenna
 - B. transmitter antenna cable is shorted to ground
 - C. transmitter is not locking to the programmed frequency

When the transmitter is operated with a faulty cable or antenna, power will be reflected back to the transmitter. When the reflected power reaches half the current power setting, the power output will be set to zero or no power, and the L.E.D. will be Red.

The display will indicate the power out and the reflected power at the time the power output was set to zero or no power output.

Enter **ALT** + **0** + **MODE** + 0 to clear the display.

When the problem is resolved, the transmitter will become operational.

Troubleshooting

No Power Output - check if L.E.D. indicator is Yellow or Red; if Yellow, set the power to the desired level; if Red, one or more of the following is occurring:

A. transmitter is being operated without an antenna - connect the antenna

B. transmitter antenna cable is shorted to ground - check the cable for cuts, extreme bends, and check the condition of the antenna cable and connectors.

C. transmitter is not locking to the programmed frequency - check if power source is sufficient, the transmitter requires 28 Volts at 6 Amperes nominal; check if fan is operating and that unit is not overheating.

Remote is not ON - check the cable connection from the transmitter unit to the remote control; check if transmitter is turned ON

No Video - check if the transmitter is set to the desired power level; check if the transmitter is set to the correct frequency same as the receiver; check the cable from the video source to the video input port of the transmitter unit; check the condition of the video input port connector.

Specifications

RF

Frequency Ranges: L 1700 to 1850 MHz
 S 2200 to 2500 MHz
 C1 4400 to 5000 MHz
 C2 5250 to 5858 MHz

Frequency Resolution: 1 MHz

Frequency Selection: Direct User Entry
 Programmable Presets
 Auto Sweep Up, Down
 Automatic

Band Select: L,S 10 W, 20 W, 30 W selectable

Power Output: C1 10 W, 20 W selectable
 C2 10 W, 15 W selectable

Output Impedance: 50Ω

2nd Harmonic: -50 dBc

Frequency Control: Phase-locked to TCXO

Frequency Stability: 0.0001% (1 ppm)

Type of Modulation: FM

Transmit Bandwidth: 18 MHz

VIDEO

Input Level: 1 Vp-p (NTSC)

Input Impedance: 75 Ω

Bandwidth: 4.5 MHz

Channel Capacity: 1

POWER REQUIREMENTS

Input Voltage: +24 VDC min., +28 VDC max.

Current Draw: 6 A nominal @ +28V

Reverse Polarity: Protected

ENVIRONMENTAL SPECIFICATIONS

Operating Temp.: -10 to +60 degrees C minimum

Altitude: Unlimited

MECHANICAL SPECIFICATIONS

Transmitter Size: 12.70" x 7.60" x 7.80"

Remote Control Size: 5.50" x 1.20" x 2.60"

Transmitter Weight: approx. 15 lb

Remote Control Weight: approx. 0.8 lb

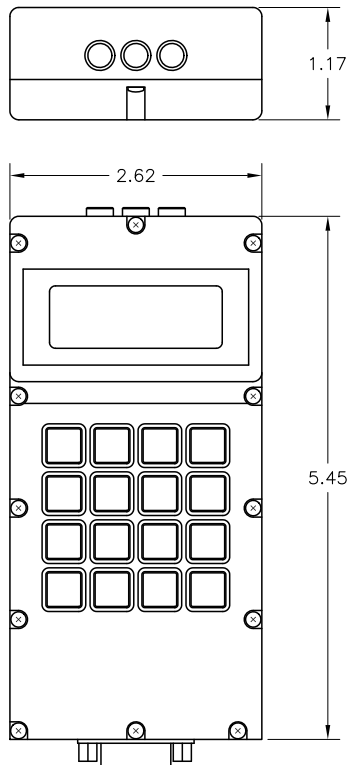
CONNECTORS

RF: N-type female

Video Input: 75 Ω BNC female

Remote Control: D-sub 9-pin

Remote Control Unit



ARINC Transmitter Unit

