

Specifications

RF

Frequency Range Selection: 1700 to 1850 MHz, 2200 to 2500 MHz,
4400 to 5000 MHz, 5250 to 5858 MHz
Frequency Resolution: 10 MHz
Frequency Selection: rotary switch
Band Select: automatic
Power Output: 250 mW
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: 6 MHz
Channel Capacity: 1
Internal Camera: pin-hole color

Subcarrier (optional)

Frequency: switch selectable
Type: data
Modulation: FSK, no tone
Deviation: +/- 75 kHz
Input: RS-232

VGA Input (optional)

Standard VGA Input 15-pin DB connector

Power Requirements

DC Voltage: 12V DC (100 - 240 V AC adapter included)
Transmit Current: 400 mA nominal
Duty Cycle: Continuous
Reverse Polarity Protection: Yes

Mechanical

RF Output Connector: TNC female
External Video Input: 75 Ω BNC female
Data: DB-9
Size: 5" x 3.1" x 1.7" nominal
Weight: 11 oz.

Environmental

Operating Temperature: -30 to +60 degrees C



COASTAL DEFENSE INC.

155 Orchard Hill Lane, Mill Hall PA 17751

Ph. 570-748-3844

Info@gocdi.com | www.gocdi.com

MBT1423

MBT1423 Video Receiver Test Set User's Guide



Operation

The Video Receiver Test Set is a low-power transmitter with a built in camera. The test set is designed to operate over the L-Band frequency range of 1700 - 1900 MHz, S-Band frequency range of 2200 - 2500 MHz, and the C-band ranges of 4400 - 5000 MHz and 5250 - 5858 MHz.

Antenna Connection: The transmitter has a TNC antenna connector. Screw the antenna into the TNC antenna connector.

Power Connection: The transmitter is designed to operate from a nominal 12-volt power supply. A 12-volt AC/DC Converter is provided with the transmitter. The converter comes with a variety of plugs; snap the plug corresponding to the AC outlet into the converter. Plug the converter into the transmitter and AC outlet.

Note: The AC/DC Converter provided with the transmitter is a "Universal" supply and is designed to work with either 110 volts or 220 volts AC.

Video Source: The transmitter has two video source options; Internal Camera and External Video. The video source is selected via a toggle switch. Internal camera is selected when the switch is in the "UP" position (Video 1) and External Video is selected when the switch is in the "DOWN" position (Video 2).

Power: Turning the power knob clockwise from the OFF position turns on the unit.

Transmitter Controls and Indicators: The transmitter has two LED's labeled PWR (Power) and STAT (Status). The Power LED is on as long as the unit is powered. The Status LED turns on and off once per second for the first four seconds after power-on; it then turns on or off as described below.

The Power LED is Green. It indicates that the transmitter is connected to a nominal 12 volt DC supply. The Status LED is Green. When the LED is "Off" the transmitter is not yet locked to the selected frequency. When the LED is solid "On" the transmitter is locked to the selected frequency and is transmitting. When the Power LED is blinking, a frequency outside the operating bands has been selected.

Frequency selection is via three rotary switches on the side of the transmitter. The left switch is 1000's MHz, center is 100's MHz and the right switch is 10's MHz. The sub-carrier frequency selection is via a single rotary switch.

Operating Instructions

- 1) Connect the transmit antenna to the transmitter TNC connector.
- 2) Select the transmitter frequency using the three rotary switches, as described above.
- 3) If applicable, select the desired sub-carrier frequency.
- 4) If applicable, connect serial data cable to the DB-9 connector.
- 5) Apply 12 volts DC (via AC Power Supply or battery adapter).
- 6) Select the video source.
- 7) Verify that the Green Status LED blinks at power-on and then stays on.



Frequency selected is 1840 MHz.



Frequency selected is 5250 MHz.



Sub-carrier Frequency

- 0 - OFF
- 1 - 4.5 MHz
- 2 - 6.2 MHz
- 3 - 6.8 MHz
- 4 - 7.5 MHz
- 5 - 4.5 MHz inverted
- 6 - 6.2 MHz inverted
- 7 - 6.8 MHz inverted
- 8 - 7.5 MHz inverted
- 9 - OFF

Sub-Carrier Option:

The metadata interface is designed for standard RS-232 levels; the DB-9 connector has standard pin-out (pin 3 is data in, pin 5 is ground).

VGA option:

The 15-pin high-density D-sub connector for the VGA input accepts up to 1024 x 768 video resolution at 60/75 Hz.

VGA option increases the current draw of the unit to 500 mA nominal.



The transmitter is designed not to be damaged when operated without an antenna. However, all transmitters are designed to operate into a 50 ohm load (the antenna) and operation without an antenna should be avoided.