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# MX-3000B

## AUDIO/VIDEO TRANSMITTER

### ISM BAND 2.4 GHz

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The new 2.4 GHz Audio/Video transmitter is a special design for Military applications capable to work in extremely low or high temperature range. This special audio/video sender has been designed for Aeronautic or Space experiments. This transmitter has 8 selectable channels with indication.



Operating Frequencies:	2300 MHz- 2500 MHz
Channels selection:	On board selectable
DC Voltage:	12 V
RF power:	50 mW/ 9 V
Minimum required voltage:	7 V
Battery power:	12 V
Video distortion:	2%
Maximum range:	3 miles from the AIR
Video Format:	PAL, NTSC
Current Consumption:	160 mA / 12 V
Antenna:	N/A
Antenna Connector:	SMA
Impedance:	50 ohms
Video Connector:	RCA F or open wire
Video Impedance:	75 ohms
Video level:	1 V
Audio level:	2 mV
Temperature Range:	-40 +75* C
Dimensions:	1.7" X 1" X 0.3"
Weight:	18 grams
Modulation:	WFM



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#### MX 3000B MORE INFO:

##### **Operating Distance**

3000 ft line of sight (US / Canadian version), more or less depending on conditions, antennas used, elevation, etc. Government & Export version will have considerably more range.

##### **Operating Frequency**

2300 MHz – 2500 MHz in 8 user selectable channels. Up to 8 systems may be used in the same area simultaneously with VRX 24L receiver.

##### **Transmission Type**

FM, Crystal referenced, synthesized phase locked loop. Frequency controlled by microprocessor.

Frequency stability (-40 to +75°C,	± 0.003%
Radiated power (US & Canadian version)	50mW- 80 mW (9V – 12V)
Spurious & harmonic response	< 50dBc

##### **Video System**

Video level (internally adjustable)	NTSC or PAL
Impedance	1.0 Volt p-p into 75 Ohms
Video deviation	75 Ohms
	± 6 MHz (adjustable from ± 1 to ± 5 MHz)

##### **Antenna US/Canada:**

3 dBi gain. Flexible helical type (Rubber Duck), reverse polarity SMA female connector

##### **Audio Modulation Type**

Maximum deviation	FM
System signal to noise ratio at 50kHz deviation	± 75 kHz
Pre & deemphasis	65 dBA
	75µ Second

##### **Audio Input & Outputs**

Microphone input level (full gain to minimum gain)	All dB figures referenced to 0 dB = 0.774Vrms
Microphone input impedance	-37 dB to -6 dB for ± 50 kHz deviation (5 mV)
Power for Electret microphones (switchable)	2k Ohms
Line input (full gain to minimum gain)	+9 VDC @ 1mA max.
Line input impedance	-4 dB to +22 dB for ± 75 kHz deviation
Frequency response at 20 dB below full deviation	10k Ohms
Total harmonic distortion (before limiting)	40 Hz to 15 kHz +1, -3 dB, 60 Hz to 10 kHz ± 1 dB (Option: may be extended to -3 @ 30kHz.)
	0.5% at 400 Hz (0.25% typical)

##### **Audio Carrier Offset from Video**

6.0 MHz

##### **Power**

9 V-12 VDC Nominal. See below for details.



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#### Transmitted power levels, current consumption and maximum voltage

Type of Transmitter: CVT-1000	Transmitted Power Levels	Current Consumption / Maximum Voltage
US & Canada version	80mW	135 mA / 14.4V Max
Government & Export version		
	POWER AMP VERSION	

#### Mechanical

**Size** 1.7" X 1" X 0.3"

**Weight** 10 grams  
with antenna & bracket 12.8 grams

#### Connectors

Power & Audio N/A  
Video IN BNC 75 Ohm  
Antenna SMA

#### Environmental

Operating temperature -40°C to +60°C  
Storage temperature -40°C to +70°C (-40°F to + 158°F)  
Humidity (non-condensing) 90%

#### Powerup

At powerup, the unit will retrieve the last used channel, program the PLL with this channel, and display the channel by blinking the LED the same number as the channel number.

#### Displaying Current Channel

Push button is located on the top of the unit. To display the current channel, press the pushbutton once and release. The current channel will blink. After approx. 5 seconds, the current channel will again blink.

#### Changing to a New Channel

To change to a new channel, press the pushbutton once and release. The current channel will blink. Press and release the pushbutton again **before** 5 seconds has elapsed and the channel will increment by 1 and the LED will blink the new channel. Repeat this step until the desired channel is reached, waiting for the blinking to stop each time before pressing the button again.

Once your desired channel is reached, wait 5 seconds until the LED again blinks your desired channel. Your new channel is now saved in memory.

#### 8 CHANNELS ARE AVAILABLE IN 2.4 GHz RANGE:

CH1- 2300 MHz CH2 2325 MHz CH3 2350 MHz CH4 2375 MHz CH5 2410 MHz CH6 2433 MHz CH7 2452 MHz CH8 2481 MHz