



















# **Description:**

The MOD 232 Modulator is designed to operate with a TX9 emitter operating on 2.3/2.8/3.3/3.8 MHz frequency. Each microprocessor controlled MOD 232 modulator can handle up to two audio channels. Baseband outputs can daisy-chain two MOD 232 together for four-channel operation. Flexible combination jacks permit balanced/unbalanced line-level inputs. Carrier frequencies are controlled by the microprocessor and a frequency synthesizer for rock-solid frequency control.

## **Applications:**

• Churches • Schools • Auditoriums • Conference Rooms • Theaters

#### MOD 232 Modulator:

Size, Weight: 8.5" W x 8.2" D x 1.7" H (21.5 cm x 20.8 cm x 4.4 cm), 3.1 lbs (1.5 kg)

Color: Black epoxy paint with white legends

1/2 rack space wide, 1 rack space high, one or two modulators may be mounted in a Rack Mount:

single IEC rack space with RPK 005 (single) or RPK 006 (double) Rack Mount Kits

Power Supply: Wall Transformer, 24 VAC, 50-60 Hz, 15VA

North America: TFP 016, UL/CSA

Europe: TFP 027-01, 2-pin Schuko plug, CE UK: TFP 027-02, 3-pin UK plug, CE

Modulation: FM Wideband, +50 kHz deviation, 50 uS pre-emphasis

Carrier Frequency: Channel A: Selectable, 2.3/2.8/3.3/3.8 MHz, Channel B: Selectable, 2.3/2.8/3.3/3.8 MHz

Signal-to-Noise Ratio: More than 60dB

30 to 16,000 Hz, +1 dB, -3 dB, electrical response Frequency Response:

**Total Harmonic Distortion:** Less than 2%, electrical response

Audio Processing: Compression (slope) adjustable from 1:1 to 4:1

Switchable compression gain: Moderate: 16dB. Max: 33dB Auto Carrier Shut-Off: 15-minute timer shuts off carrier when no audio is present (can be disabled)

### **MOD 232 Front Panel:**

Carrier LEDs:

Two Channel Infrared System Modulator

Power Switch: Two-position push button, ON/OFF

Power Indicator: Green LED

Audio Level Controls: CHA and CHB Input Level, rotary knobs **Audio Indicators:** CHA and CHB Audio Level, 10-segment LED's

4 green LED carrier "on" indicators per channel (indicates frequency, malfunctions)

Compress Control: 1:1 to 4:1

Input Mix LED: Indicates inputs A and B audio are mixed and transmitted by CHA and CHB off

Indicates stereo mode Stereo LED:

Phones Switch: Selects CH1 or CH2 for phones when not in stereo mode

1/4" TRS headphone jack. Accepts stereo, mono and any impedance phones. **Phones Output:** 

Infrared Test LED: IR LED for receiver testing, monitoring and audio signal testing.

















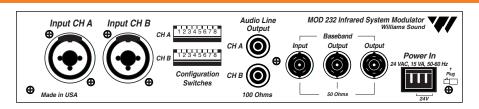








## **MOD 232 Rear Panel:**



Power Input: Audio Input Jack:

Mic Level:

Line Level:

Audio Line Output Jacks:

Configuration Switches:

Baseband Input Jack:

Baseband Output Jack:

Approvals:

Operating Requirements:

Warranty:

3-Pin Molex, 24 VAC, 50-60 Hz, 15 VA

CHA and CHB combination XLR/TRS jack

Balanced, Lo-Z, 100  $\mu$ V min. to 90 mV max., 1 mV nominal, 3k $\Omega$  input impedance, supplies switchable simplex power per DIN 45596 for condenser mics

Balanced or unbalanced, 21 mV min. to 10V max., 212 mV nominal, 100 k $\Omega$ 

RCA Jack, CHA and CHB, 500 mV, unbalanced, 100  $\Omega$  source impedance, load impedance must be greater than1  $k\Omega$ 

CHA and CHB 8-position DIP switch, selects Mic/Line input, compressor gain, simplex power, discrete or mixed inputs, carrier frequency, channel disable, auto shut-off timer BNC, allows mixing with additional MOD 232 Modulator (4CH operation), 100 mV, 50  $\Omega$  input impedance, use with MOD 232 or MOD 112 (111), BNC, RG-58 Cable

Two BNC jacks carry baseband signal, 100 mV/channel, 50  $\Omega$  source impedance, for use with WIR TX9 or MOD 232 only

CE, FCC, RoHS, WEEE

0-50° C ambient temperature, non-condensing, non-corrosive atmosphere

5 years on modulator\*

\*90 days on accessories.

























# **Bid Specs:**

The infrared system shall consist of separate modulator and emitter units, with portable receivers. The modulator unit shall be a half-rack style, metal enclosure. A rack panel shall be available to mount one or two modulator units within a single EIA rack space. An adjustable floor stand and mounting bracket shall be available to mount the modulator and emitter together for portable operation.

The modulator shall provide two channels of selectable FM carrier signals, 2.3/2.8/3.3/3.8 MHz, so that a single modulator can be used to simultaneously transmit up to two channels, and two modulators can be ganged together to transmit up to four channels simultaneously. The carrier signals shall use 50 kHz deviation and 50 µS pre-emphasis. The carrier signals (baseband) shall be transmitted to one or more emitters by 50 ohm RG58 coaxial cable with BNC-type connectors. A BNC-type baseband input jack and baseband output jack shall be provided on the modulator. The modulator shall be powered by an external 24 VAC, 10 VA, 50-60 Hz power supply, connected via a three-pin Molex power connector.

It shall have a rocker-type power switch, power LED indicator, four carrier indicator LEDs and two bar graph-type LED audio indicators. The modulator shall have a modulated IR LED on the front panel for testing purposes, and a headphone jack that accommodates mono and stereo 1/4" headphones, and channel monitoring switch. The modulator shall have two rotary audio input level controls, and a screwdriver adjustable control for varying the input compression from 1:1 to 4:1. The modulator shall have two timers that automatically shut off the carriers when there is no audio signal present for 15 minutes. The modulator shall have two combination input jacks that accept 3-pin XLR plugs for balanced microphone input or 1/4" TRS plugs for balanced or unbalanced line-level inputs. The XLR inputs shall be low impedance, accept signal levels from 100 µV to 90 mV and supply 15 V simplex power per DIN45596. The TRS jacks shall accept balanced or unbalanced audio signal levels from 21 mV to 10 V. The modulator shall have CE, FCC, RoHS, and WEEE approval and carry a five-year parts and labor warranty.\*

The modulator shall be the Williams Sound Corp. model MOD 232.

\*90 days on accessories.























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