



Model DSP-223 Tone Remote Adapter Panel

- Police and Fire Departments
- Utility and Energy Companies
- Railroads and Airline Industries
- US Forestry and BLM Agencies

The Vega DSP-223 tone-remote adapter provides a reliable means of remotely controlling two-way-radio base stations. The adapter can be used in conjunction with all Vega consoles, or other manufacturers' (such as Motorola and GE) remote consoles that use the industry-standard sequential tone-keying format.

The DSP-223 is interconnected to the distant remote control console(s) by any voice-grade transmission medium such as a microwave link, a leased telephone line, or a twisted-pair 600-ohm line.

All DSP-223s are capable of decoding the PTT (push-to-talk/transmitter-on) tone sequence and the voice-plus-tone signals during transmission.

All models are prepared for jumper-plug conversion from two-wire-line operation to four-wire-line operation. In the four-wire mode, the panels are full-duplex capable

The DSP-223 provides the following features:

Front Panel:

- PTT, Monitor, and Power LED indications
- RS-232C port on front panel for configuration via Windows application
- Front panel test points and level set potentiometers
- Local handset port for intercom back to console operator or PTT of the radio
- 99-digit display

Rear Panel:

- DB25 Connector to the radio provides 6 digital outputs for channel selection, completely programmable per function tone or external relay control board
- RJ-45 connector to the telephone line (2-wire or 4-wire) jumper selectable

System:

- Two PTT modes and three monitor modes
- PTT& Monitor Relays
- Single Function tone recognition (16 function tones)
- Dual function tone recognition (100 function tones)
- Relays can be placed in any of four groups for separation of function
- Loop back tone for line level test and alignment
- CTCSS generation (64 frequencies)
- F1 and F2 Relays (programmable to any function tone or Revert to F1)
- Ability to pass-through to a second tone adapter with 400ms built in delay line (RF Link) control
- Morse Code Encoder for Automatic station identification



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Specifications

Operating Temperature Range: -20 to 70°C for full specifications

Power Requirements: +12 to +16 Vdc, semi-regulated, 500ma.

Relay Contact Ratings: 1A at 125Vac

Non-Relay Outputs: Open collector, active low, 200mA maximum, 40V collector to emitter voltage

Line to TX Output Gain: -10dB to +25dB, user settable

Line Output Level: -40 to +10dBm, adjustable

Line Input/Output Impedance: 600Ω nominal, or 10kΩ receive

Line Connector: RJ-45

Radio Interface: ±45 Vdc withstand rating

Radio Input Level: 100mVrms to 16Vrms, adjustable

Radio Output Level: 10mVp-p to 9Vp-p for mic level or -40 to +10dBm into 600Ω load, adjustable

Radio Output Impedance: 600Ω for balanced mode, 200Ω for single ended mode

Frequency Response: ±1.5 dB, 300 to 3000 Hz, except at 2175 Hz notch frequency

Audio Distortion: 2% THD maximum

Sensitivity: Ultimate sensitivity, -25dBm PTT tone

PTT Tone Detect Bandwidth: ± 20 Hz around 2175Hz

Notch Frequency Rejection: 45 dB minimum

Notch Frequency Bandwidth: 50 Hz at -3dB points. ±1Hz at -40dB.

Function-Tone Detection Bandwidth: ± 20 Hz around center of frequency

Frequency-Select Function Tone Decoder Tuning Range: Not tunable by field personnel, only by software change

DTMF Detection Bandwidth: ± 25 Hz around center of frequency

MON timer: 10ms to 65seconds, adjustable

Morse Code Transmitter: 20 wpm, 400-2000Hz carrier selectable, 50 chars max, -40 to 0 dB or range relative to max radio level output.

Dimensions: 8 ½ Wide, 7 1/8" Deep, by 1 5/8" High

Front panel operations

- 99 DIGIT DISPLAY
- ACCESS TO TEST POINTS
- LEVEL ADJUSTMENT POTENTIOMETERS
- INTERCOM BUTTON
- HANDSET CONNECTOR
- RS232 INPUT
- LED INDICATORS, PTT, MONITOR AND POWER

Options:

- Programming Kit (includes cable and 3 ½ diskette)
- Relay board for frequency control or paired modes
- 19 inch rack mount kit, can accommodate 2 DSP-223 adapters

Warranty (Limited)

All Vega signaling products are guaranteed against malfunction due to defects in materials and workmanship for three years, beginning at the date of original purchase. If such a malfunction occurs, the product will be repaired or replaced (at our option) without charge during the three-year period, if delivered to the Telex factory. Warranty does not extend to damage due to improper repairs, finish or appearance items, or malfunction due to abuse or operation under other than the specified conditions, nor does it extend to incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives the customer specific legal rights, and there may be other rights which vary from state to state.

Claims

No liability will be accepted for damages directly or indirectly arising from the use of our materials or from any other causes. Our liability shall be expressly limited to replacement or repair of defective materials.