

MODEL AF810 SERIES PUBLIC SERVICE MONITOR

GENERAL:

A special receiver for the Public Service Band (148 to 175 MHz). This receiver is designed to meet professional monitoring and EAS equipment input requirements.

The receiver is PLL (phase lock loop) controlled. The frequency of operation is selected using internal BCD switches. A continuous receiver LINE audio output is provided. A second output (SPKR) is also provided.

Model **AF812**: the SPKR output audio and relay are controlled by a CTCSS (sub-audible tone detector).

Model **AF814**: the SPKR output audio and relay are controlled by a dual sequential tone detector circuit.

Model **AF816**: the SPKR output and relay are controlled by either or both the CTCSS and dual tone detectors.

There is also a TEST switch and a RESET switch for activating the SPKR audio and TONE DETECT ("alert") light manually. The receiver circuit board has 10 VDC automotive style regulators. Input power is derived from wall mounted power converters (115 VAC to 12 DC) or other 12 VDC sources. The receiver is housed in a metal case or configured as one receiver in the AFC3 multiple receiver rack mount chassis.



AF810 in standard chassis

SPECIFICATIONS:

Frequency of Operation: 148 to 175 MHz
 Frequency Increments: 5 KHz

With modulation of 1 KHz at 5 KHz deviation:

SENSITIVITY:
 12dB SINAD 0.25uV
 20 dB S/N 0.50uV
 30 dB S/N 1.20uV

Adjacent Channel Selectivity: 60 dB
 Intermodulation Rejection: 65 dB
 Image Rejection: 50 dB
 Spurious Response Rejection: >60 dB

LINE Output: 1.0V RMS
 (open circuit R out is 600Ohms)

SPKR Output: 0.3 Watts, 8 Ohm
 (Adjustable, Volume Control)

Power: 12VDC, 300 mA
 115 VAC to 12 VDC converter (provided)
 Metal Case Size: 6.0" W x 8" D x 1-3/4" H
 Weight: 1.5 lbs

When ordering, select from the following:

- AF810** Standard Chassis Receiver
- AF812** Standard Chassis Receiver with CTCSS
- AF814** Standard Chassis Receiver with Dual Tone detector
- AF816** Standard Chassis Receiver with both CTCSS and Dual Tone detector
- AF810C3** For use in the AFC3 chassis

OPTIONS:

Option- **MF** Individual 19 inch rack mount (1 3/4"),
 Option- **B** Balanced Line output, (DIN connector),

Options B is standard in AF810C3 for AFC3 chassis.

DAYTON INDUSTRIAL CORPORATION

2237 Industrial Blvd
 Sarasota, Florida 34234

TEL:(941) 351 4454 FAX: (941) 351 6081

Visit our website at: www.daytonindustrial.com

AF812: A special monitor receiver for Public Service Band (148 to 175MHz). This receiver is designed to meet professional monitoring and EAS equipment input requirements.

The receiver is PLL (phase lock loop) controlled. The frequency of operation is selected using internal BCD switches. A receiver LINE audio output (adjustable) is provided. A speaker output (SPKR) is also provided. The SPKR output is adjustable by rear panel volume control (VOL). The audio outputs will be available continuously or controlled by the CTCSS (Continuous Tone Controlled Sub-audible Squelch) tone decoder. The tone decoder output indicates the desired sub-audible tone (as set by internal switches) has been received. An internal relay is also provided that is controlled by the CTCSS tone decoder.

Front panel indicators (LED's) are provided for Power, Carrier, Modulation, and Tone Detector Operation.

The receiver circuit board has 10 VDC automotive style regulators. Input power is derived from wall mounted power converters (115 VAC to 12 DC) or other 12 VDC sources, vehicular or battery. The receiver is housed in a metal case or configured as one receiver in the AFC3 multiple receiver rack mount chassis.

SPECIFICATIONS: See AF810 for basic receiver specifications
CTCSS: Standard 39 Tone Decoder
 1% Bandwidth



AF812 Front/Rear

AF814: A special monitor receiver for Public Service Band (148 to 175MHz). This receiver is designed to meet professional monitoring and EAS equipment input requirements. The receiver is PLL (phase lock loop) controlled. The frequency of operation is selected using internal BCD switches. A receiver LINE audio output (adjustable) is provided. A speaker output (SPKR) is also provided. The SPKR output is adjustable by rear panel volume control (VOL). The audio outputs will be available continuously or controlled by the Dual Sequential Tone detector. The tone detector output indicates the desired sequential tones have been received. An internal relay is also provided that is controlled by the sequential tone detector circuit.

Front panel indicators (LED's) are provided for Power, Carrier, Modulation, and Tone Detector Operation. The receiver circuit board has 10 VDC automotive style regulators. Input power is derived from wall mounted power converters (115 VAC to 12 DC) or other 12 VDC sources, vehicular or battery. The receiver is housed in a metal case or configured as one receiver in the AFC3 multiple receiver rack mount chassis.

Front panel indicators (LED's) are provided for Power, Carrier, Modulation, and Tone Detector Operation.

The receiver circuit board has 10 VDC automotive style regulators. Input power is derived from wall mounted power converters (115 VAC to 12 DC) or other 12 VDC sources, vehicular or battery. The receiver is housed in a metal case or configured as one receiver in the AFC3 multiple receiver rack mount chassis.

SPECIFICATIONS: See AF810 for basic receiver specifications
TONE DETECTOR:

Dual Sequential Tone Detector:
 Alert Tone Range: Motorola, Reach & GE
 Alert Response Time: 2 Seconds after 2n Tone
 Alert Tone Detection: 0.4 sec
 Bandwidth: +/- 5 Hz



AF814 Front/Rear

AF816: A special monitor receiver for the Public Service Band (148 to 175MHz). This receiver is designed to meet professional monitoring and EAS equipment input requirements. The receiver is PLL (phase lock loop) controlled. The frequency of operation is selected using internal BCD switches. A receiver LINE audio output (adjustable) is provided. A speaker output (SPKR) is also provided. The SPKR output is adjustable by rear panel volume control (VOL). The audio outputs will be available continuously or controlled by either or both the CTCSS (Continuous Tone Controlled Sub-audible Squelch) tone decoder and/or the Dual Sequential Tone detector.

The CTCSS tone decoder output indicates the desired sub-audible tone (as set by internal switches) has been received.

The Dual Sequential Tone detector indicates the desired sequential tones have been received. An internal relay is also provided that is controlled by the CTCSS tone decoder and/or sequential tone detector circuit.

Front panel indicators (LED's) are provided for Power, Carrier, Modulation, and Tone Detector Operation.

The receiver circuit board has 10 VDC automotive style regulators. Input power is derived from wall mounted power converters (115 VAC to 12 DC) or other 12 VDC sources, vehicular or battery. The receiver is housed in a metal case or configured as one receiver in the AFC3 multiple receiver rack mount chassis.



AF816 Front/Rear

SPECIFICATIONS: See the AF810 for basic receiver specifications.

CTCSS: Standard 39 Tone Decoder
1% Bandwidth

TONE DETECTOR:

Dual Sequential Tone Detector:
Alert Tone Range: Motorola, Reach & GE
Alert Response Time: 2 Seconds after 2n Tone
Alert Tone Detection: 0.4 sec
Bandwidth: +/- 5 Hz

CONTROLS AND INDICATORS:

Front Panel Controls:

TONE TEST/RESET Switch: Selects continuous monitoring, CTCSS tone controlled squelch and/or Dual Sequential Tone detector controlled squelch depending on Model.

Front Panel Indicators:

POWER: Red LED indicates power applied.
CARRIER: Green LED indicates received carrier exceeds the set Carrier SQUELCH setting and the correct Tone or Tone sequence has been detected.
MODULATION: Yellow LED intensity varies with carrier modulation level.
TONE DETECT: Red LED indicates desired sub-audible CTCSS tone and/or Dual Sequential Tone has been received

Rear Panel Connectors/Controls:

RF IN: "F" connector
POWER: 2mm, center positive
LINE: RCA
SPKR: RCA
VOL: Potentiometer
BAL OUT(optional)/RELAY: 5 pin DIN

Internal Controls:

FREQUENCY: BCD switch arrangement
SQL: (RV2) Squelch setting potentiometer
LINE LEVEL: (RV3) Line level adjustment
RELAY: Relay output controlled by CTCSS and/or Dual Sequential Tone detector circuits
CTCSS: Frequency select by DIP switch
Dual Sequential Tone Detector: Potentiometers (2)