

MODEL AF850 SERIES PUBLIC SERVICE MONITOR

GENERAL:

A special receiver for the Public Service Band (30 to 50MHz). 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 **AF852**: the SPKR output audio and relay are controlled by a CTCSS (sub-audible tone detector).
 Model **AF854**: the SPKR output audio and relay are controlled by a dual sequential tone detector circuit.
 Model **AF856**: the SPKR output and relay are controlled by either or both the CTCSS and dual tone detectors.



AF850 in standard chassis Front/Rear

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.

SPECIFICATIONS:

Frequency of Operation:	30 to 50 MHz	Power:	12VDC, 300 mA
RF Input Impedance:	75 Ohm		115 VAC to 12 VDC converter (provided)
Frequency Increments:	5 KHz	Metal Case Size:	6.0" W x 8" D x 1-3/4" H
		Weight:	1.5 lbs
With modulation of 1 KHz at 5 KHz deviation:			
SENSITIVITY:		When ordering, select from the following:	
12dB SINAD	0.25uV	AF850	Standard Chassis Receiver
20 dB S/N	0.50uV	AF852	Standard Chassis Receiver with CTCSS
30 dB S/N	1.20uV	AF854	Standard Chassis Receiver with Dual Tone detector
		AF856	Standard Chassis Receiver with both CTCSS and Dual Tone detector
Adjacent Channel Selectivity:	60 dB	AF850C3	For use in the AFC3 chassis
Intermodulation Rejection:	65 dB	OPTIONS:	
Image Rejection:	50 dB	Option- MF	Individual 19 inch rack mount (1 3/4"),
Spurious Response Rejection:	>60 dB	Option - B	Balanced Line output, (DIN connector),
LINE Output:	1.0V RMS (adj)		
	(open circuit R out is 600Ohms)	Options B is standard in AF810C3 for AFC3 chassis.	
SPKR Output:	0.3 Watts, 8 Ohm		
	(Adjustable, Volume Control)		

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AF852: A special monitor receiver for Public Service Band (30 to 50MHz). 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.



AF852 Front/Rear

SPECIFICATIONS: See AF850 for basic receiver specifications
CTCSS: Standard 39 Tone Decoder
 1% Bandwidth

AF854: A special monitor receiver for Public Service Band (30 to 50MHz). 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.

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.



AF854 Front/Rear

SPECIFICATIONS: See AF850 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

AF856: A special monitor receiver for the Public Service Band (30 to 50MHz). 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.



AF856 Front/Rear

SPECIFICATIONS: See the AF850 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)