

# AF750 SCA DE-MODULATOR OPERATION MANUAL

## INTRODUCTION:

The AF750 SCA De-modulator accepts composite audio (20 to 120KHz) input from a receiver or other device. The composite audio is applied to two different signal paths within the AF750. One path takes the composite audio, filters out the sub-carriers and provides an adjustable level "Main" output. The other path filters out the main stereo signal in the composite audio and de-modulates the sub-carrier (67 or 92KHz selectable) and provides an adjustable level "SCA output."



## GENERAL SPECIFICATIONS:

### COMPOSITE SIGNAL:

Input Frequency Range:	20-120KHz
Input Level:	-20 to +10dBm
Input Impedance:	600 Ohms
Input Connector:	BNC
Main Output	
Frequency Range:	20Hz to 54KHz
Output Level:	-10 to +6dBm
Spurious:	45dB down or better
SCA Sub-carrier Rejection:	55dB or better
Output Impedance:	600 Ohms
Output Connector:	BNC

### SCA SIGNAL:

Demodulators (selectable):	67 or 92KHz
De-modulator Bandwidth:	20 kHz
Audio Bandwidth:	4.2 kHz
De-emphasis: (selectable)	150 or 220 microsec
Output Level:	-10dBm to +6dBm,
Cross-talk from Main:	50dB down or better*
57 kHz beat rejection:	50dB
Output Impedance:	600 ohms
Output Connector:	RCA or BNC

### CONTROLS/INDICATORS:

SCA Mute Level Control  
Composite Output Level Control  
SCA Output Level Control  
Power Input LED  
SCA Carrier Presence LED

### POWER:

Input Power:	12 VDC, 100mA max, +12 VDC derived from a wall converter (supplied)
Input Power Connector:	2.1mm, center positive

### SIZE/WEIGHT:

Size:	3 3/4(L) x 4 3/4(W) x 1 1/5 (H) inch
Weight:	12 Oz
Construction:	Cast Aluminum Case Iridite finish

## DAYTON INDUSTRIAL CORPORATION

2237 Industrial Blvd, Sarasota FL 35234  
(941) 351 4454 FAX: (941) 351 6081 www.daytonindustrial.com

## **OPERATING CONTROLS:**

The AF750 is housed in a cast metal case, and all operating gain adjustments or selections are internal. First remove the (4) four cover screws.

**Main Level:** Marked on the circuit board as Main Level and as RV1. Small screwdriver adjustment.

**SCA Level:** Marked as SCA Level and RV3 on the circuit board. Small screwdriver adjustment.

**67kHz/92kHz Selector:** Jumper selection, marked J4, 67, 92 on the circuit board.

**150/220 microsecond De-emphasis Selector:** Jumper selection, marked J7, 150, 220 on the circuit board.

**SCA Mute:** Marked on the circuit board as SCA Mute and RV2. This is a screwdriver adjustment. With the desired SCA input signal, adjust this control for an audio output. The SCA yellow LED should light. Remove the SCA input and the SCA yellow LED should go out and the SCA audio output should be muted.

There are no other operator adjustments for this device.

## **DEVICE OPERATION:**

Operation is straight forward.

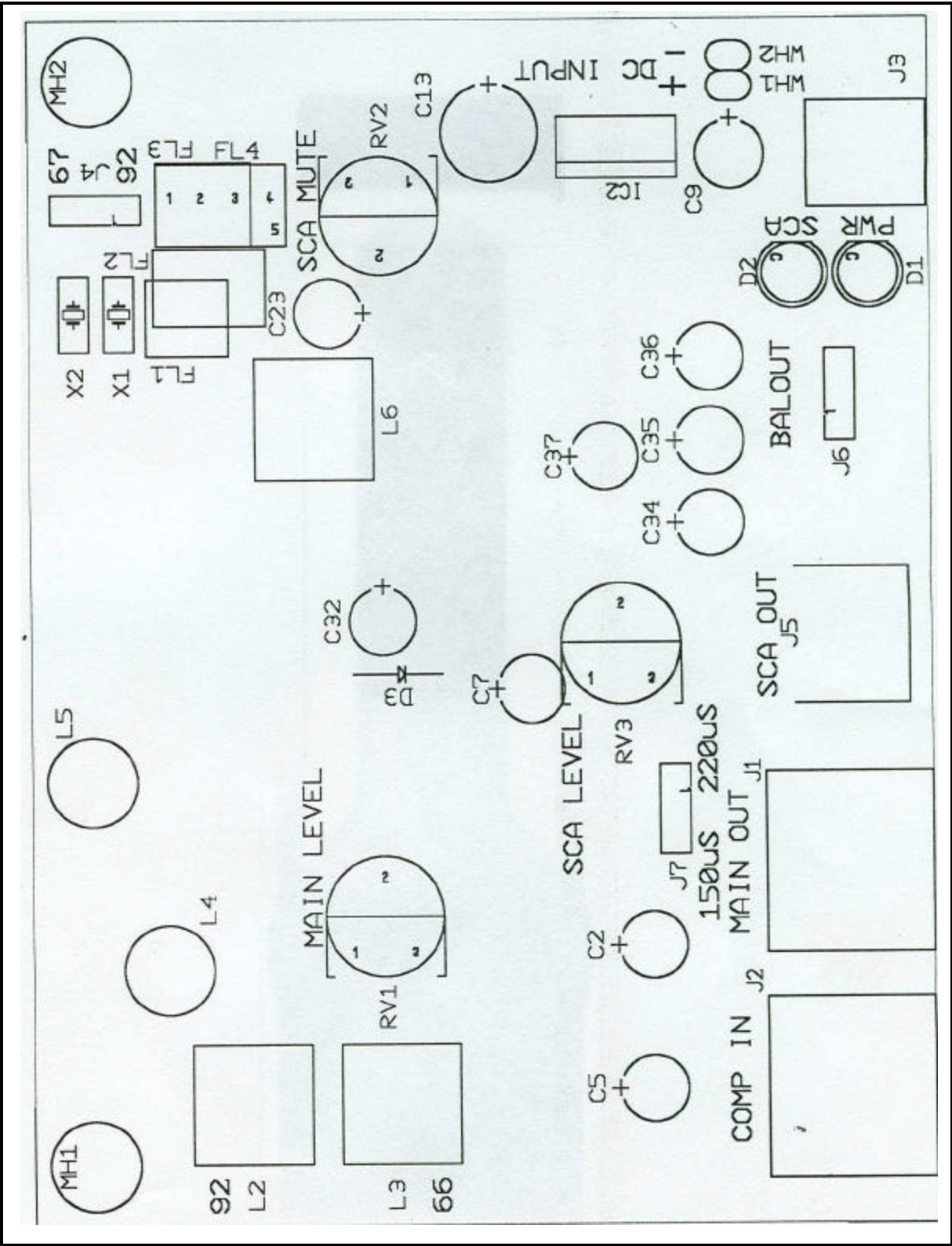
A power source is connected to the Power Input connector (12Vdc, 100mA minimum). The power indicator (red LED) will light. A wall mount 12Vdc, 300mA converter is supplied with the AF750.

A source is connected to the Composite In (BNC) connector. If an SCA carrier is present, the SCA light (yellow LED) will light.

The Main signal is then available at the Main Out (BNC) connector, and the selected SCA de-modulated signal is available at the SCA Out (BNC) connector. No other operation should be required.

The units are normally shipped from the factory with 67 kHz de-modulator active.

**PROBLEMS/QUESTIONS:** Contact the factory (941) 351 4454



PRINTED CIRCUIT AF750 TOP COMPONENT LAYOUT