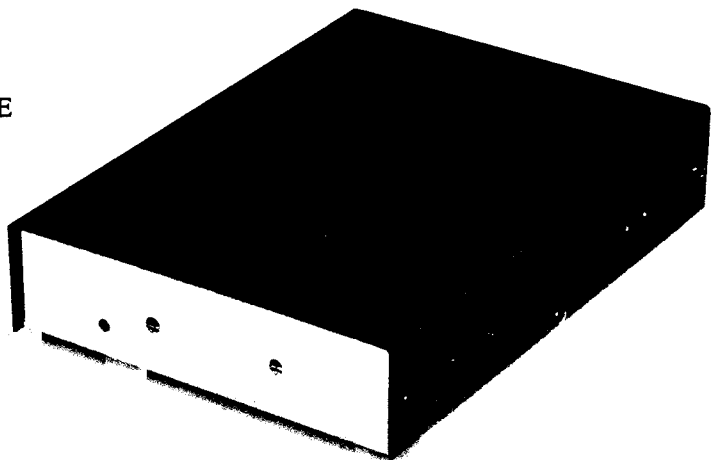


A GENERAL PURPOSE (VOICE OR MUSIC) FM/SCA PROFESSIONAL STYLE RECEIVER. THIS RECEIVER HAS WIDE APPLICATION IN THE BACKGROUND MUSIC, EAS, EDUCATIONAL, AND STATION USE MARKETS. OPTIONS ARE AVAILABLE THAT INCLUDE MULTIPLE CHANNELS AND FSK DATA DETECTION.

THE GENERAL SPECIFICATIONS ARE

The receiver is phase lock loop (P.L.L.) controlled (88 to 108 MHz), with a 67 or 92KHz (selectable) SCA demodulator. Power is provided by an external 115VAC to 12Vdc converter (provided). The receiver is housed in a metal case and designed for professional installations.



MAIN CHANNEL

- Frequency of operation 88 to 108 MHz
(in 100 KHz steps)
With modulation of 1 KHz
at 75 KHz deviation.
- Sensitivity (mono) 1.5uV (12dB SINAD)
Limiting @ 3uV
- Sensitivity (stereo - option only) 3.0uV
- Alternate Channel Rejection 40dB
- AGC Range min. of 60dB
- Total Harmonic Distortion Less than 1%

SCA MODULATION

With SCA modulation of 400 Hz at 7.5KHz deviation, 150uS de-emphasis, main channel modulated with 100% L-R; 10% injection.

- 67 KHz Sensitivity 7uV (30dB S/S+N+D)
- 92 KHz Sensitivity 10uV (30dB S/S+N+D)
- Main to SCA crosstalk > 50 dB
- Maximum S/N Ratio 55 dB
- Total Harmonic Distortion 1.5%
- Line Out 1.0VRM (+2.2 dB);
open circuit R out is
600 Ohms
- Audio Level Output Adjustable from 0 to
3 VRMS;
approx 1 Watt into 8 Ohm

- SCA Channel Frequency Response measured without de-emphasis is -3dB at 6 KHz
Complies with FCC Rules Part 15 Subpart C in effect at the date of manufacture.

POWER

115VAC to 12Vdc, 300mA Power Converter

SIZE

6 1/2" W x 8 1/2" D x 1 3/4" H

WEIGHT

1-1/2 lbs. (w/o converter)

CONTROLS/FEATURES

- Frequency of operation set by DIP switch (Internal)
- External Antenna (Type F) Connector
- SCA/Main Selector
- 67 KHz / 92 KHz SCA Selector
- Line Out (RCA)
- Audio Out (RCA)
- Audio Volume Control (Internal)
- SCA Carrier Mute Level Control (Internal)

DAYTON INDUSTRIAL CORPORATION

2237 Industrial Blvd., Sarasota, Florida 34234 U.S.A.

Tel: (941) 351-4454 Fax: (941) 351-6081 Website: www.scaradio.com

1.0 INTRODUCTION:

The Dayton Industrial Corporation Model AF200 SCA Receiver is a specially designed F.M. receiver with additional circuitry to detect and demodulate 67 or 92 KHz SCA signals.

The Model AF200 is a Phase Locked Loop (PLL) design that covers the main F.M. band of 88 to 108 MHz in 100 KHz steps.

2.0 OPERATION:

When received from the factory, the receiver is ready to operate. You must however set the 12 position D.I.P. switch to the desired operating frequency and also set several jumpers on the board to select the mode of operation.

The basic Model AF200 has a single receive channel and the audio output can be selected between the Main audio, the 67 KHz SCA audio, or the 92 KHz SCA audio. The basic model is presented in this MANUAL. If you have a model with options installed, such as a second audio channel or a data decoder you should have received a manual for that model.

2.1 Operating frequency: The switch positions for **SW50** vs. operating frequency are provided in **Table 1**. Set the switch positions for the desired operating frequency as indicated in Table 1.

2.2 67 KHz or 92 KHz Operation: The jumper **P20** is used to select either 67 KHz or 92 KHz depending on position.

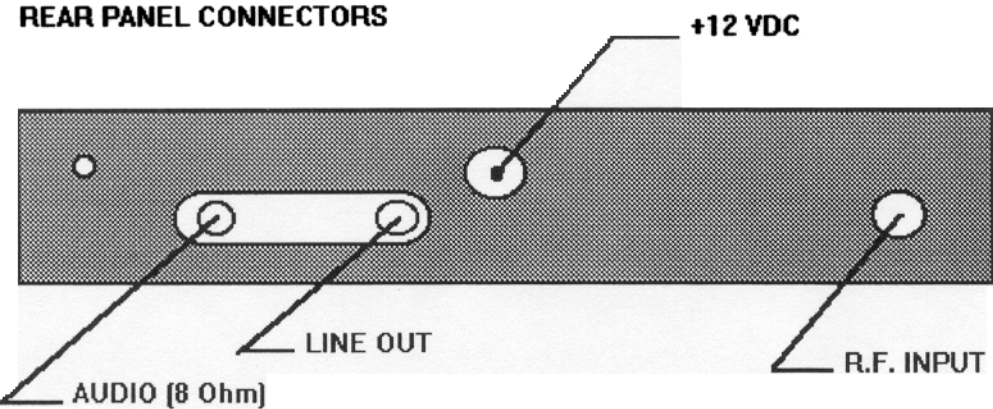
2.3 MAIN or SCA Operation: The jumper **P41** is used to select either the main channel audio or the SCA audio selected in 2.2 above.

2.4 Other settings:

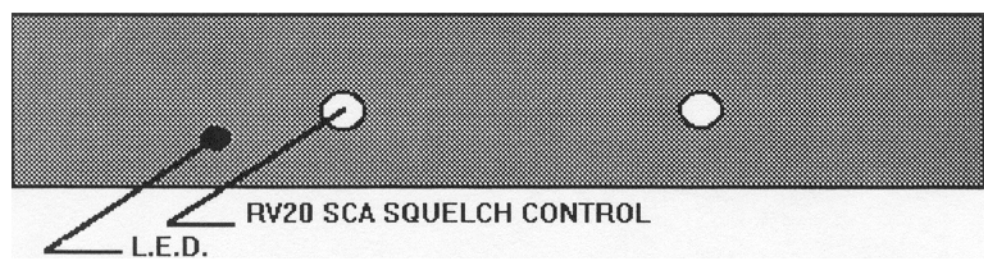
The jumper at **P42** (Line Out) should be set to Position

2. The jumper at **P43** (AF or Data) should be in the AF position.
3. The SCA Mute level (**SCA 1 mute level, RV20**) control and Audio output level, (**AF 1 level, RV40**) should be in midrange positions.

REAR PANEL CONNECTORS



FRONT PANEL SCA SQUELCH ADJUST



2.5 Connections: The following cable connections are then made:

- 1 The antenna cable is connected to the "F" connector (**SK 10**), located on the rear panel of the receiver.
2. The audio LINE OUTPUT (1 volt p.p.) is connected to the RCA jack (**SK 43**), located on the rear panel of the receiver.
3. An 8 Ohm, 1 Watt audio SPEAKER output is available at **SK 41**, located on the rear panel of the receiver. This audio output is controlled by the AF1 audio level control.

2.6 POWER:

Power is supplied by a 115VAC to 12VDC wall style converter. The converter output is applied to the receiver at the Power input jack on the rear panel of the receiver. When power is applied, the L.E.D. indicator on the front panel will light.

With these switch selections and connections made, the receiver should be working properly.

PLEASE DO NOT MAKE ANY ADJUSTMENTS TO THE TUNING CAPACITORS OR INDUCTORS ON THE CIRCUIT BOARD. IF THE RECEIVER IS NOT WORKING PROPERLY . . . THEN . . . PLEASE CALL US AT (941) 351-4454.

TABLE 1 SW50 SWITCH SETTINGS FOR EACH OPERATING FREQUENCY

FREQ (MHz)	SW50 "ON"	FREQ (MHz)	SW50 "ON"
88.1	2,3,7,12	98.1	2,3,4,5,6,7,9,10,11
88.3	2,7,12	98.3	2,4,5,6,7,9,10,11
88.5	2,3,4,5,6,12	98.5	2,3,5,6,7,9,10,11
88.7	2,4,5,6,12	98.7	2,5,6,7,9,10,11
88.9	2,3,5,6,12	98.9	2,3,4,6,7,9,10,11
89.1	2,5,6,12	99.1	2,4,6,7,9,10,11
89.3	2,3,4,6,12	99.3	2,3,6,7,9,10,11
89.5	2,4,6,12	99.5	2,6,7,9,10,11
89.7	2,3,6,12	99.7	2,3,4,5,7,9,10,11
89.9	2,6,12	99.9	2,4,5,7,9,10,11
90.1	2,3,4,5,12	100.1	2,3,5,7,9,10,11
90.3	2,4,5,12	100.3	2,5,7,9,10,11
90.5	2,3,5,12	100.5	2,3,4,7,9,10,11
90.7	2,5,12	100.7	2,4,7,9,10,11
90.9	2,3,4,12	100.9	2,3,7,9,10,11
91.1	2,4,12	101.1	2,7,9,10,11
91.3	2,3,12	101.3	2,3,4,5,6,9,10,11
91.5	2,12	101.5	2,4,5,6,9,10,11
91.7	2,3,4,5,6,7,8,9,10,11	101.7	2,3,5,6,9,10,11
91.9	2,4,5,6,7,8,9,10,11	101.9	2,5,6,9,10,11
92.1	2,3,5,6,7,8,9,10,11	102.1	2,3,4,6,9,10,11
92.3	2,5,6,7,8,9,10,11	102.3	2,4,6,9,10,11
92.5	2,3,4,6,7,8,9,10,11	102.5	2,3,6,9,10,11
92.7	2,4,6,7,8,9,10,11	102.7	2,6,9,10,11
92.9	2,3,6,7,8,9,10,11	102.9	2,3,4,5,9,10,11
93.1	2,6,7,8,9,10,11	103.1	2,4,5,9,10,11
93.3	2,3,4,5,7,8,9,10,11	103.3	2,3,5,9,10,11
93.5	2,4,5,7,8,9,10,11	103.5	2,5,9,10,11
93.7	2,3,5,7,8,9,10,11	103.7	2,3,4,9,10,11
93.9	2,5,7,8,9,10,11	103.9	2,4,9,10,11
94.1	2,3,4,7,8,9,10,11	104.1	2,3,9,10,11
94.3	2,4,7,8,9,10,11	104.3	2,9,10,11
94.5	2,3,7,8,9,10,11	104.5	2,3,4,5,6,7,8,10,11
94.7	2,7,8,9,10,11	104.7	2,4,5,6,7,8,10,11
94.9	2,3,4,5,6,8,9,10,11	104.9	2,3,5,6,7,8,10,11
95.1	2,4,5,6,8,9,10,11	105.1	2,5,6,7,8,10,11
95.3	2,3,5,6,8,9,10,11	105.3	2,3,4,6,7,8,10,11
95.5	2,5,6,8,9,10,11	105.5	2,4,6,7,8,10,11
95.7	2,3,4,6,8,9,10,11	105.7	2,3,6,7,8,10,11
95.9	2,4,6,8,9,10,11	105.9	2,6,7,8,10,11
96.1	2,3,6,8,9,10,11	106.1	2,3,4,5,7,8,10,11
96.3	2,6,8,9,10,11	106.3	2,4,5,7,8,10,11
96.5	2,3,4,5,8,9,10,11	106.5	2,3,5,7,8,10,11
96.7	2,4,5,8,9,10,11	106.7	2,5,7,8,10,11
96.9	2,3,5,8,9,10,11	106.9	2,3,4,7,8,10,11
97.1	2,5,8,9,10,11	107.1	2,4,7,8,10,11
97.3	2,3,4,8,9,10,11	107.3	2,3,7,8,10,11
97.5	2,4,8,9,10,11	107.5	2,7,8,10,11
97.7	2,3,8,9,10,11	107.7	2,3,4,5,6,8,10,11
97.9	2,8,9,10,11	107.9	2,4,5,6,8,10,11

3.0 TROUBLESHOOTING:

If you are experiencing difficulties with the receiver, there are several things you can try before returning the unit to us for repair.

3.1 OUT OF THE BOX DIFFICULTIES:

Even though we test and retest the receiver before it is sent to you, sometimes the shipping conditions or other things may cause a problem. If that happens, please let us know and we will do our best to get a replacement to you as soon as practical. There are a few things you can try before calling:

1. Is the power applied properly, that is, is the front panel RED L.E.D. lighted. If not, maybe the power socket is not proper or a wall switch not turned on. If still no power, it must be the transformer/converter or the receiver. Is there 12VDC at the receiver input?

2. Are the frequency set switch settings (SW50) all correct.

Set the MAIN/SCA 1 jumper (P41) to MAIN and listen to the audio out at SK42 with a small speaker. Set the volume control to midrange.

If there is still no audio on the selected station, try setting the SW50 switches for another station known to be in the area.

3. Do you have the MAIN channel audio. If so, check the jumper settings as shown below to make sure they are set to receive the SCA audio desired.

JUMPER SETTINGS

P20 Selects either 67KHz or 92KHz SCA operation

P21 Selects either the 150 or 225 microsecond deemphasis

P41 Selects either the SCA audio or the Main audio

4. Do you have the SCA audio, but it cuts in and out. Check the SCA Mute control (RV20) and set it fully clockwise

5. Still having problems, there may be something wrong with the receiver, or if you want help over the phone . . . please call us at (941) 351-4454 or by Fax at (941) 351-6081.

If you want to return the unit for repair, please send it to:

DAYTON INDUSTRIAL CORPORATION
2237 Industrial Boulevard
Sarasota, Florida 34234

