

KWM-380 TRANSCEIVER (622-5093-001, -101)  
HF-380 TRANSCEIVER (622-3580-001, -101)

**SERVICE BULLETIN NO 11****ADD RCV AUDIO LOW-PASS FILTER**

This service bulletin applies to the following:

<b>EQUIPMENT</b>	<b>APPLIES TO SERIAL NUMBERS</b>	<b>PRODUCTION CUT-IN SERIAL NUMBER</b>
KWM-380 622-5093-001, -101	2099 and below	2100
HF-380 622-3580-001, -101	259 and below	260

The change made by this service bulletin is a product improvement. The audio response of the receiver is improved by adding an electronic low-pass filter with a 3-kHz cutoff point to reduce high frequency hiss. The filter is an active 5-pole elliptic function low-pass filter placed just before the rcv audio gain control. The filter has no effect on the 300- to 3000-Hz passband but rolls off very rapidly above 3000 Hz.

Estimated time required is 1.0 man-hour.

The modification kit, Collins part number 651-7476-001, is itemized in the material information paragraph. For additional information concerning parts, contact Collins Telecommunications Products Division/Rockwell International, Service Parts Department, Cedar Rapids, Iowa 52498. Reference KWM/HF-380 Service Bulletin No 11 in all correspondence.

No special tools or equipment are required.

**MODIFICATION PROCEDURE**

- A. Turn off all power to the transceiver and remove the power cord.**
- B. Remove the dust cover by removing the four screws adjacent to the four feet on the bottom of the transceiver.**
- C. Place the unit on a work bench with the bottom up.**

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- D. Install filter circuit card A15 (646-5802-001) onto mounting bracket (647-2929-001) using two hex nuts (333-1299-000). Refer to figure 2.

NOTE: Refer to figures 1, 2, and 3 while performing steps E through M. Refer to figure 4 for a schematic diagram of the new filter card A15. Refer to figure 5 for schematic diagram changes to receiver-exciter card A3. Refer to figure 6 for interconnect diagram changes.

- E. Remove spacer as shown in figure 1.
- F. Install mounting bracket and circuit card A15 (step D) into transceiver using screw where spacer was removed and one additional screw (343-0167-000) in an existing hole in chassis.
- G. Inspect receiver-exciter card A3 to determine if W3 is connected from R713 to E5 as shown in figure 3. If this wire has been installed, proceed to step N. If W3 is not present, perform steps H through M.
- H. Lift the left-hand lead of 180- $\Omega$  resistor R713 and install a square pin (372-2601-045) from the top of the card into the hole vacated by the lead. Solder the square pin.
- I. Reconnect the R713 lead to the square pin.

NOTE: It may be easier to replace R713 with a new 180- $\Omega$  resistor (745-0722-000).

- J. Remove and discard 100- $\Omega$  resistor R629.
- K. Insert a square pin (372-2601-045) from the top of the card at E5 (right end of R629) and solder.
- L. Connect one end of W3 (421-0023-000) to the square pin at E5. Insulate this wire with sleeving (152-2643-000).
- M. Connect the other end of W3 to the square pin at R713.
- N. Disconnect the leads from A3J31, A3J32, and A3J33. Connect the white lead to A15J31, brown lead to A15J32, and black lead to A15J33. This connects the front panel audio gain pot to the low-pass filter card A15.
- O. Connect A15P31 (white lead) to A3J31, A15P32 (brown lead) to A3J32, and A15P33 (black lead) to A3J33. This connects the low-pass filter card A15 to receiver-exciter card A3.
- P. Connect A15P1 (red lead) to A3E5.
- Q. Reinstall the receiver dust cover.
- R. Mark SB 11 on the service bulletin information chart. If the unit does not have an information chart (280-3778-010), order one and attach it near the nameplate.

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## MATERIAL INFORMATION

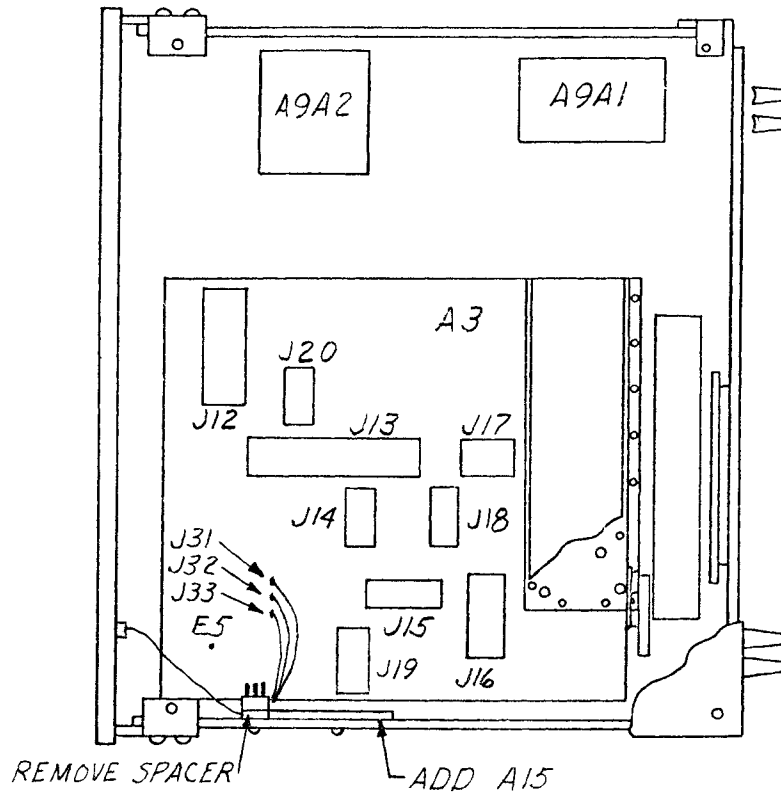
The modification kit, CPN 651-7476-001, is itemized below and is required to modify one KWM-380 or one HF-380.

<u>COLLINS PART NUMBER</u>	<u>QTY</u>	<u>UNIT PRICE</u>	<u>DESCRIPTION</u>
343-0167-000	1		Screw, 0.138-32 x 0.250
647-2924-001	1		Bracket, mounting, audio board
333-1299-000	2		Nut, hex, 0.112-40
646-5802-001	1		Circuit card assembly, A15
745-0722-000	1		Resistor, 180 $\Omega$ , R713
372-2601-045	2		Square pin
421-0023-000	150 mm (6 in)		Wire, #30 AWG, W3
152-2643-000	150 mm (6 in)		Sleeving, insulation
*280-3778-010	1		Chart, information

\*The information chart is not part of the modification kit. The chart should be ordered separately if needed.

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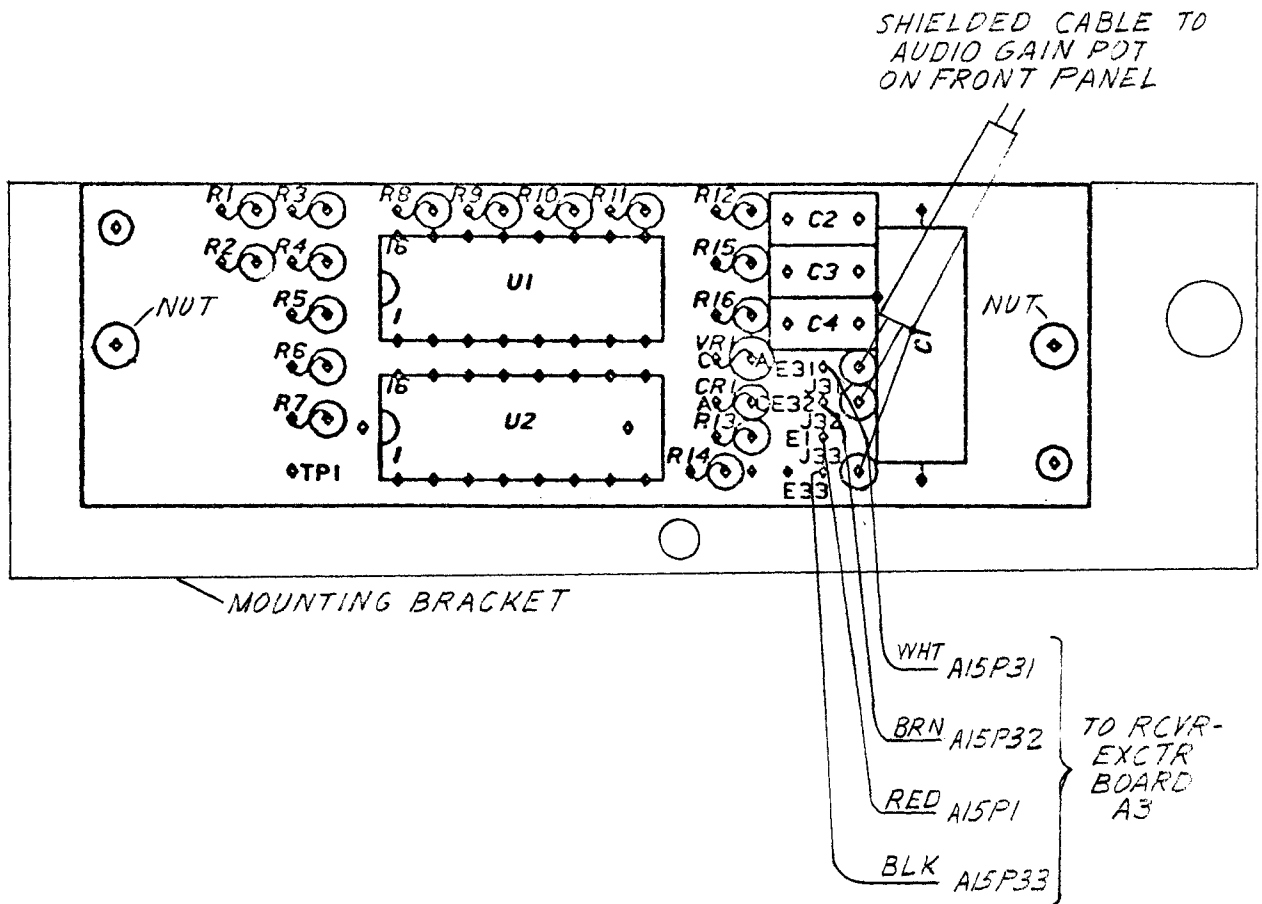
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Transceiver, Bottom View  
Figure 1

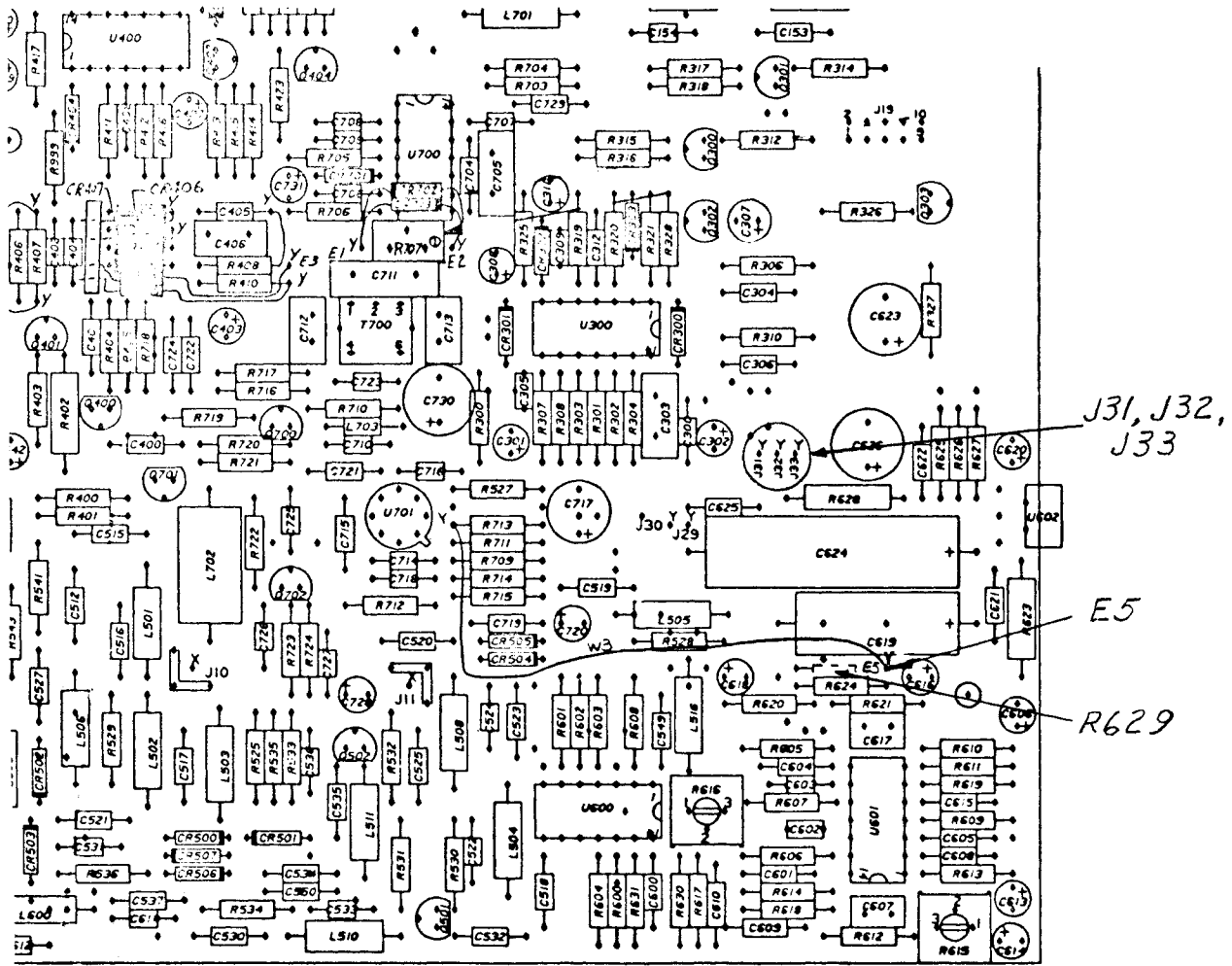
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Low-Pass Filter Card A15

Figure 2



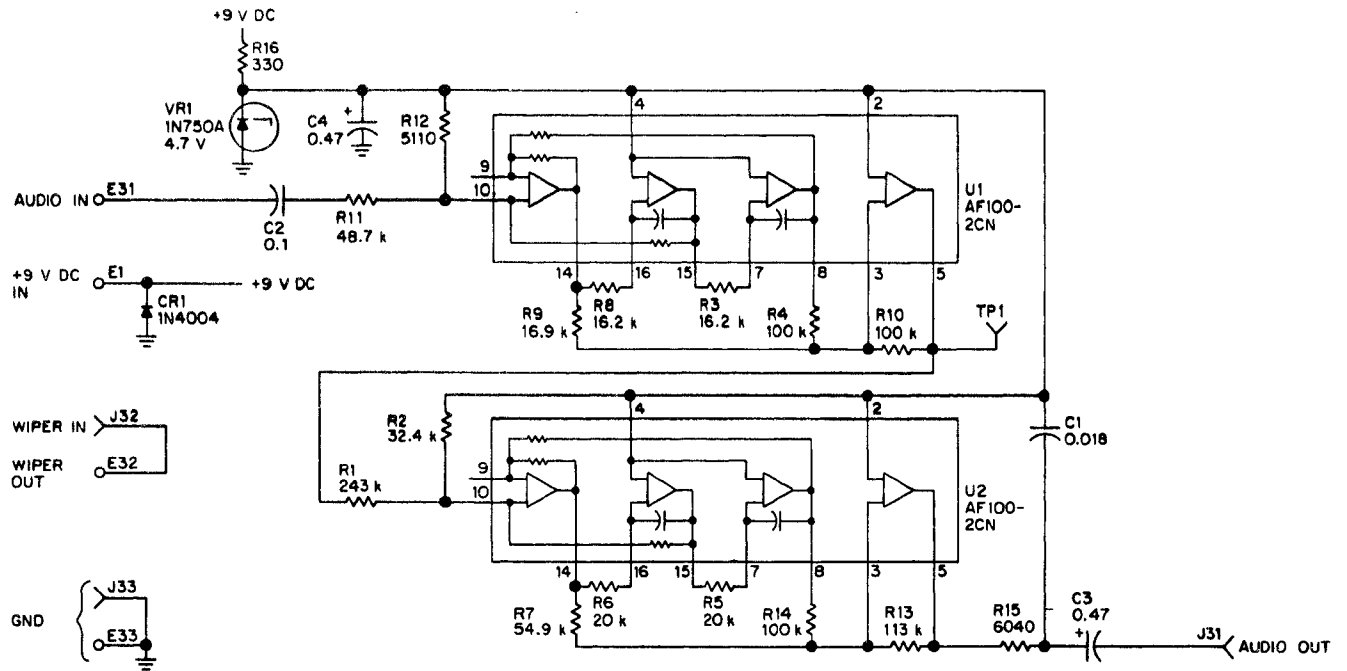
FRONT OF TRANSCEIVER

NOTE:  
"Y" INDICATES LOCATION  
OF SQUARE PIN

P/O Receiver-Exciter Card A3  
Figure 3

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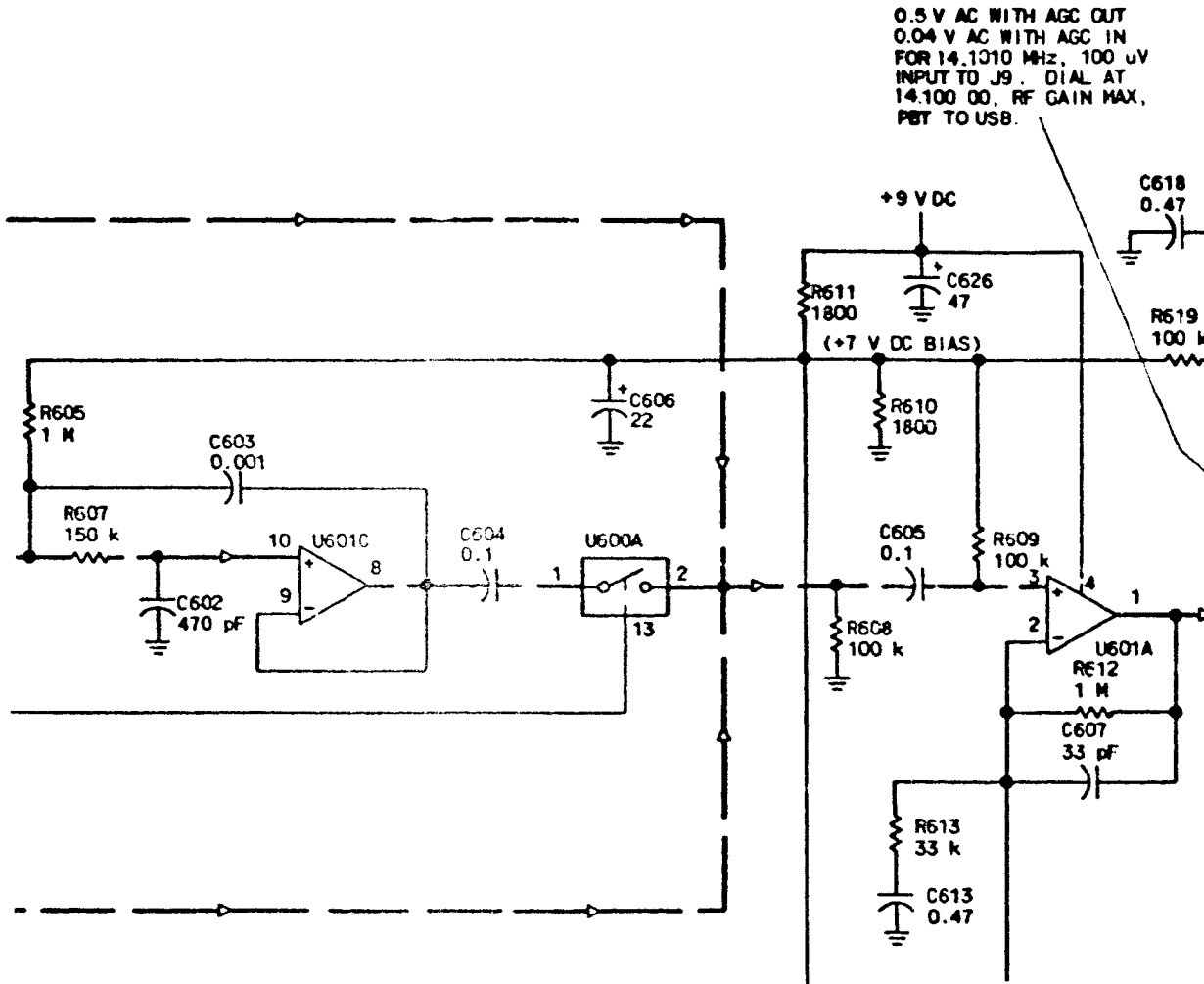
- NOTES:
- ① UNLESS OTHERWISE SPECIFIED; RESISTANCE VALUES ARE IN OHMS AND CAPACITANCE VALUES ARE IN MICROFARADS.
  - ② ON U1 AND U2, PIN 6 IS +9 V DC AND PIN 1 IS GROUND.

651-4969

Audio Low-Pass Filter Assembly A15, Schematic Diagram  
Figure 4

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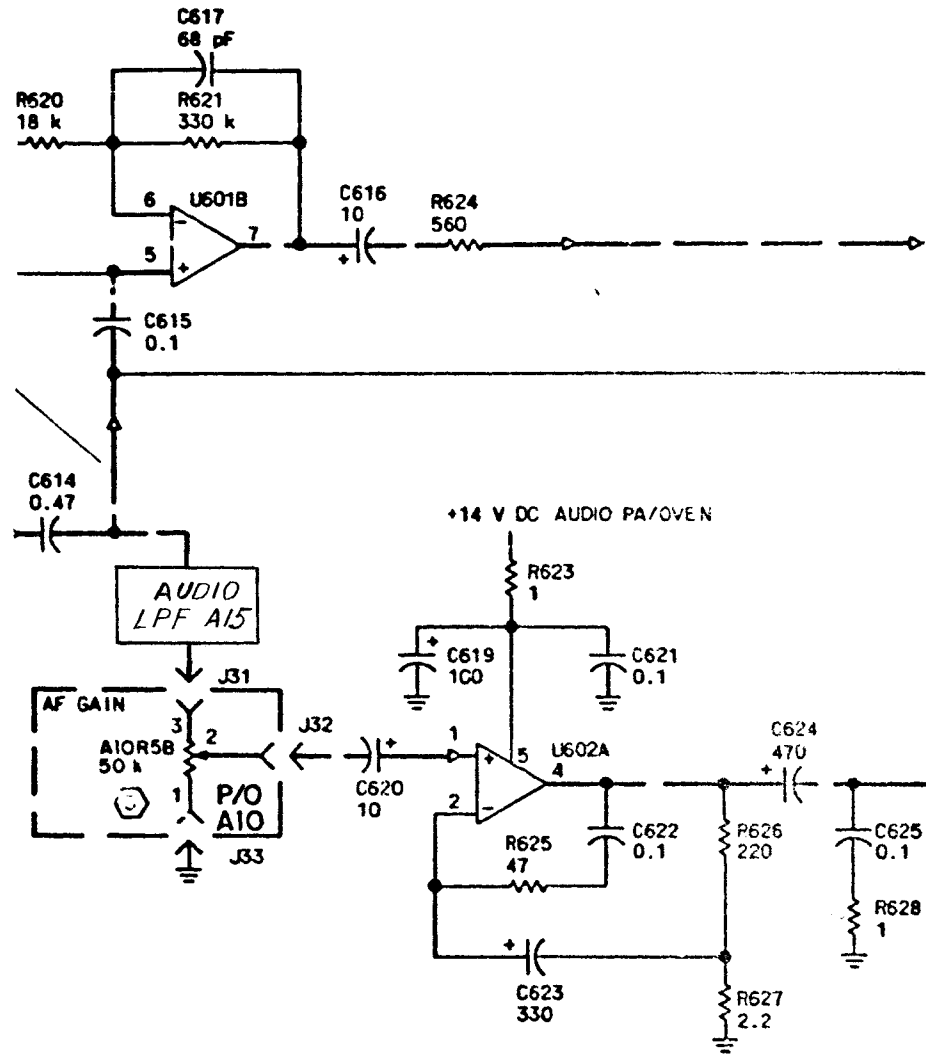


P/O Receiver-Exciter Card A3, Schematic Diagram  
Figure 5 (Sheet 1 of 2)



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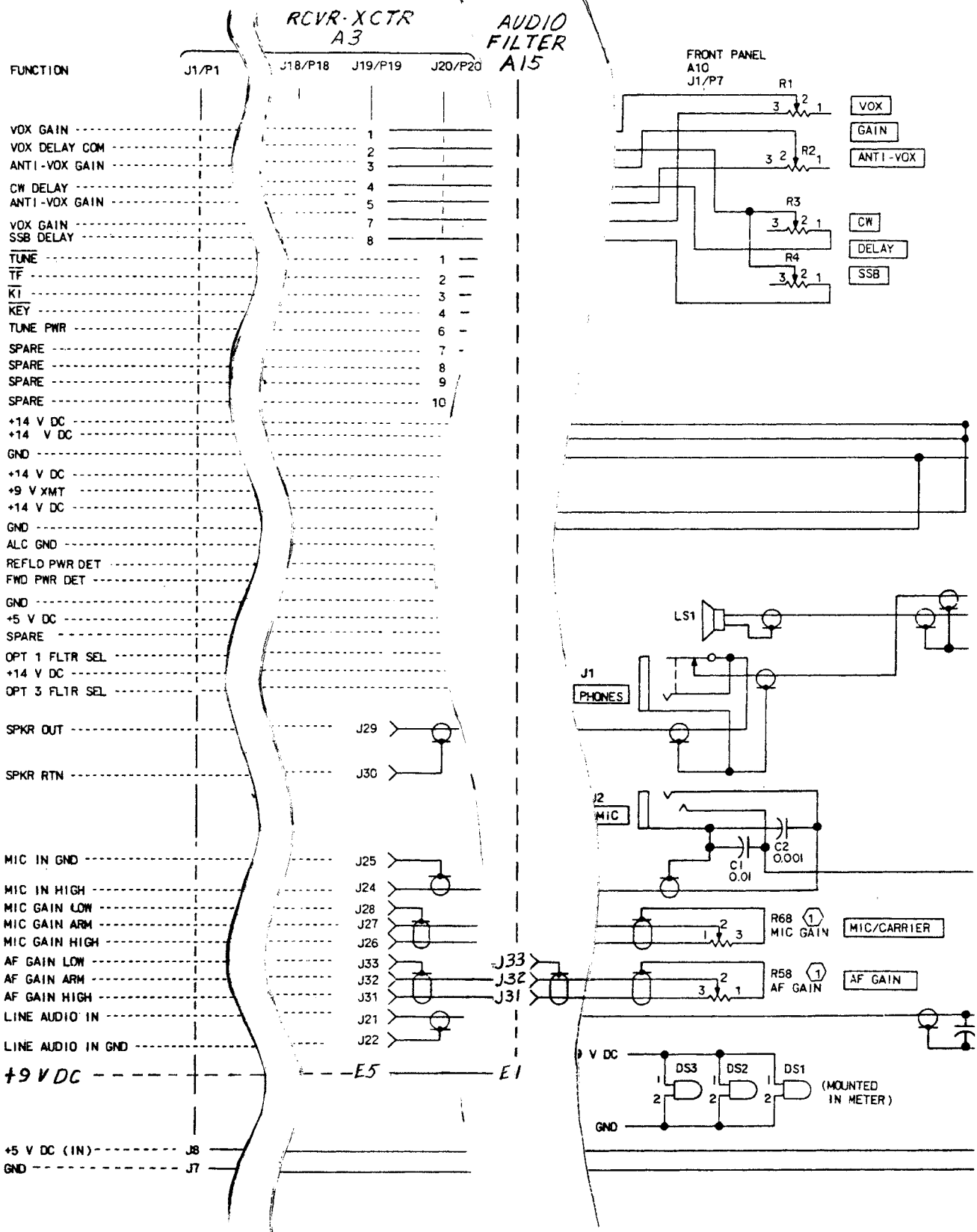
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P/O Receiver-Exciter Card A3, Schematic Diagram  
Figure 5 (Sheet 2)

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P/O Interconnect Diagram  
Figure 6