

MK-121-2(A) MEDALLION "C" MODIFICATION

The MK-121-2 and MK-121-2A interface is an intermediate enclosure style in the MK-121 series. This interface, a 55 cm x 14 cm x 12.5 cm box, was manufactured for many years, and therefore the user should expect some variations in internal details.

The following modification instructions assume that the user is able to identify electrical components and is fairly competent with a soldering iron. Read through the entire instructions before beginning. Modify only one interface at a time so that the other interface may be used as a reference. Refer to Figure One to help identify parts and wire locations.

1. De-solder all the wires connected to the printed circuit board. Clean up excess solder. Remove the hex-head screw and two thumbscrews and lift out the printed circuit board.
2. Look at the components on the printed circuit board. If there are five high-voltage diodes (small black oblong), no modification to the bias supply is necessary. If there are only two high-voltage diodes, then the bias supply must also be modified. Some interfaces may already have the bias supply modification. These may be identified by a miniature printed circuit board (with five high-voltage diodes) soldered to the main board. NOTE: If the interface needs bias supply modification, perform steps #A-L after performing step #21.
3. De-solder the remaining wire connections (4 places) on the low frequency transformer. This is the largest of the three transformers. Remove the transformer (six screws).
4. Transfer to the new low frequency transformer the four metal mounting clips on the feet and the two threaded metal stand-offs. Make sure to install the hardware in the same

orientation as the original transformer by noting the relative locations of the colored wires.

5. De-solder ~~the~~ remaining wire connections (2 places) on the high frequency transformer. This is the second largest of the three transformers. Remove the transformer (4 screws).
6. Transfer to the new high frequency transformer the four metal mounting clips on the feet.
7. Locate the capacitor(s) associated with the High Frequency Balance control. These capacitor(s) may be mounted directly on the control, or mounted on an adjacent terminal strip. In any case, de-solder and remove the capacitor(s), including the terminal strip, if present.
8. De-solder and remove both ends of the heavy buss wire attached to the end terminal of the audio fuseholder and to terminal #1 of the High Frequency Balance control.
9. De-solder the remaining wire attached to terminal #1 of the High Frequency Balance control. In some later units this wire may be a very heavy Monster Cable.
10. If the capacitors removed in step #7 were mounted on a terminal strip, proceed to step #12. Otherwise, drill two 4 mm holes, as shown in Figure Two, from the outside of the chassis.
11. Mount the new resistor/capacitor assembly to the chassis, using 6-32 hardware in the newly drilled holes. Note that this horizontal mounting is different than the vertical mounting shown in Figure One, but the wiring is the same. Proceed to step #13.
12. Mount the new resistor/capacitor assembly to the screw studs, in the same position as the original terminal strip. See Figure One.

13. Solder one of the black wires from the resistor/capacitor assembly to terminal #3 of the High Frequency Balance control.
14. Attach, but do not solder, the other black wire from the resistor/capacitor assembly to the black binding post.
15. Solder one of the red wires from the resistor/capacitor assembly to terminal #2 of the High Frequency Balance control.
16. Attach, but do not solder, the other red wire from the resistor/capacitor assembly to the end terminal of the audio fuseholder.
17. Locate the wire that was removed in step #9. This wire should be attached at one end to the Low Frequency Tap. Solder the free end to the end terminal of the audio fuseholder. If this wire is Monster Cable, it may help to wrap some 22 gauge buss wire around the connection before soldering.
18. Install the high frequency transformer (4 screws) and the low frequency transformer (6 screws) in the same manner as the original parts. Install all the screws before tightening to insure proper alignment.
19. Solder the red wire from the high frequency transformer to terminal #1 of the High Frequency Balance control.
20. Solder the black wire from the high frequency transformer to the black binding post.
21. Solder the four low frequency transformer primary wires (yellow, orange, red, and brown) to the lower small holes on the low frequency tap terminal strip. See the inset in Figure One for the exact locations marked with an "X". *NOTE: For Models 6 and 8, the low frequency primary wires have different colors as follows:

<u>NORMAL</u>		<u>"6 & 8"</u>
Red	-	Green
Orange	-	Blue
Yellow	-	Gray
Brown	-	Brown

NOTE: If performing the bias supply modification, stop here and refer to the separate instructions. Otherwise, proceed to step #22.

22. De-solder and remove the two large .01 uF/6KV capacitors on the printed circuit board.
23. Install and solder the two new .01uF capacitors in the same position as the original parts.
24. Place the printed circuit board in its original position on top of the stand-offs. Replace the hex-head screw with lock-washer at the rear of the board and replace the two thumb-screws with lockwashers at the front of the board.
25. The primary wiring is now complete. Check all solder connections and route the wires close to the chassis. Make sure that no wires are touching the body of the High Frequency Balance control, the resistor on the resistor/capacitor assembly, or the resistor attached to the back of the Low Frequency terminal strip. (These parts get hot!) Also make sure that the capacitor leads on the terminal strip are not touching adjacent terminals.
26. Solder the secondary wires from the low frequency transformer to the printed circuit board as follows:
 - a. Yellow wire to pad "LF Y"
 - b. Blue wire to pad "LF B"
 - c. White wire to the rear center ground pad. (Next to hex-head screw.)

27. Solder the secondary wires from the high frequency transformer to the printed circuit board as follows:
 - a. Yellow wire to pad "HF Y"
 - b. Blue wire to pad "HF B"
 - c. White wire to the rear center ground pad.

28. Solder the secondary wires from the bias transformer (the smallest of the three transformers) to the printed circuit board as follows:
 - a. Red wire to pad "R"
 - b. White wire to the rear center ground pad.

NOTE: If there is no white wire, solder a length to the frame of the transformer. Scrape the enamel coating on the metal to insure a good solder connection.

29. Locate the green ground wire from the AC line cord and solder to the rear center ground pad of the printed circuit board.

30. Replace any wire ties removed during modification.

31. Attach the Medallion Transformer label to the rear outside surface of the chassis in the lower right hand corner.

32. Repeat steps #1-31 for the other interface.

NOTE: For proper bass response, the Low Frequency Tap must be set according to the number of electrostatic panels in the speaker:

2 Panels	-	Red Tap	
3 Panels	-	Orange Tap	
4 Panels	-	Yellow Tap	
6 Panels	-	Blue Tap	} Models 6 & 8 Only
8 Panels	-	Gray Tap	

PARTS INCLUDED

(For a pair of interfaces)

<u>QTY</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
2	XH121	High Frequency Transformer
2	XL121	Low Frequency Transformer (or XL128 for Models 6 & 8)
2		Resistor/Capacitor Assembly
2	DL018	Medallion Transformer Label (Red)
12"	WB004	22 Gauge Buss Wire
24"	WB008	18 Gauge White Wire
4	HB064	6-32 x 1/2" Allen Button Head Screw
4	HN061	6-32 Keps Nut
4	CP001	.01uF/6KV Capacitor

*Models 6 & 8 have two pairs of interfaces, therefore two modification kits are required.

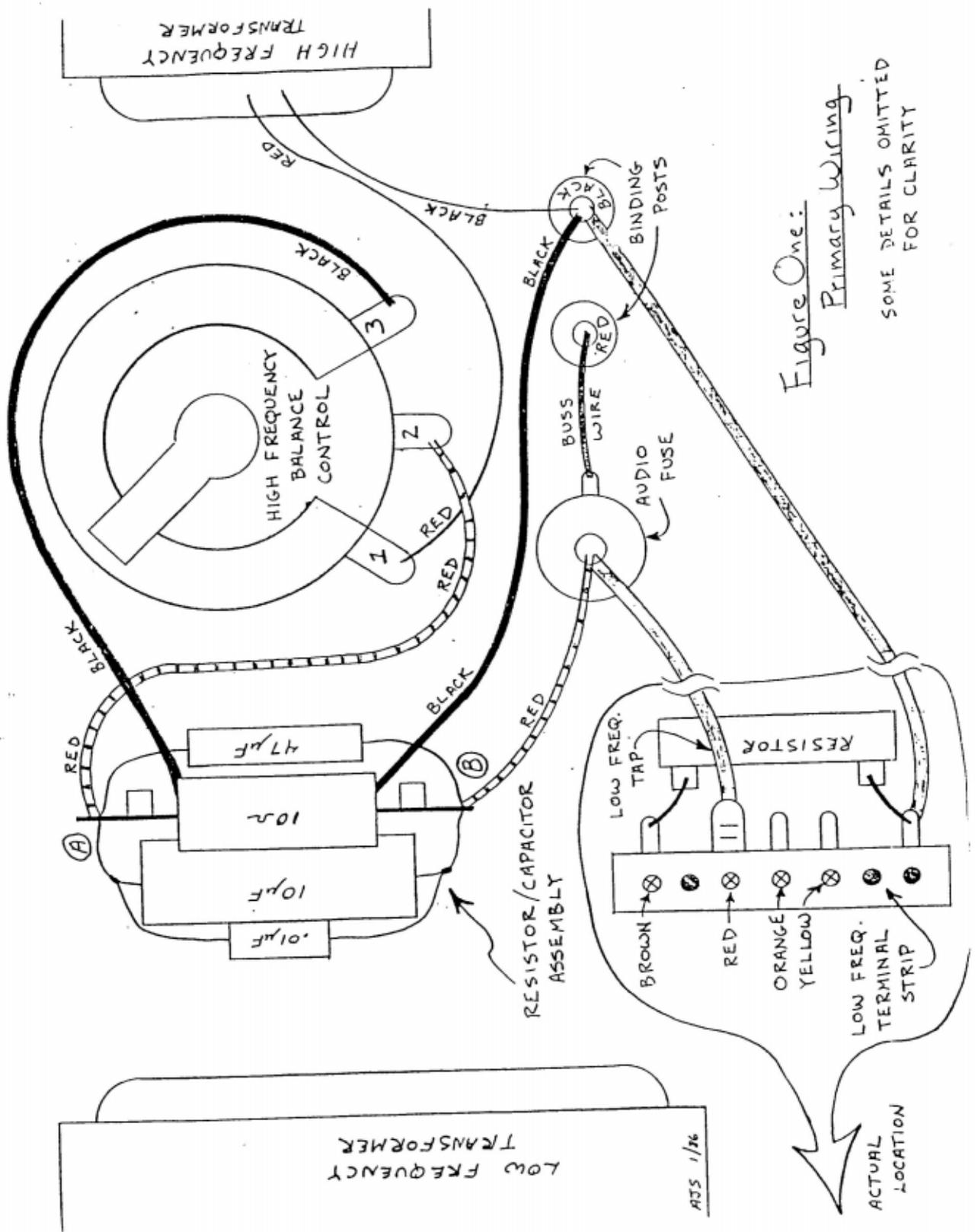


Figure One:
 Primary Wiring
 SOME DETAILS OMITTED
 FOR CLARITY

ATS 1/26

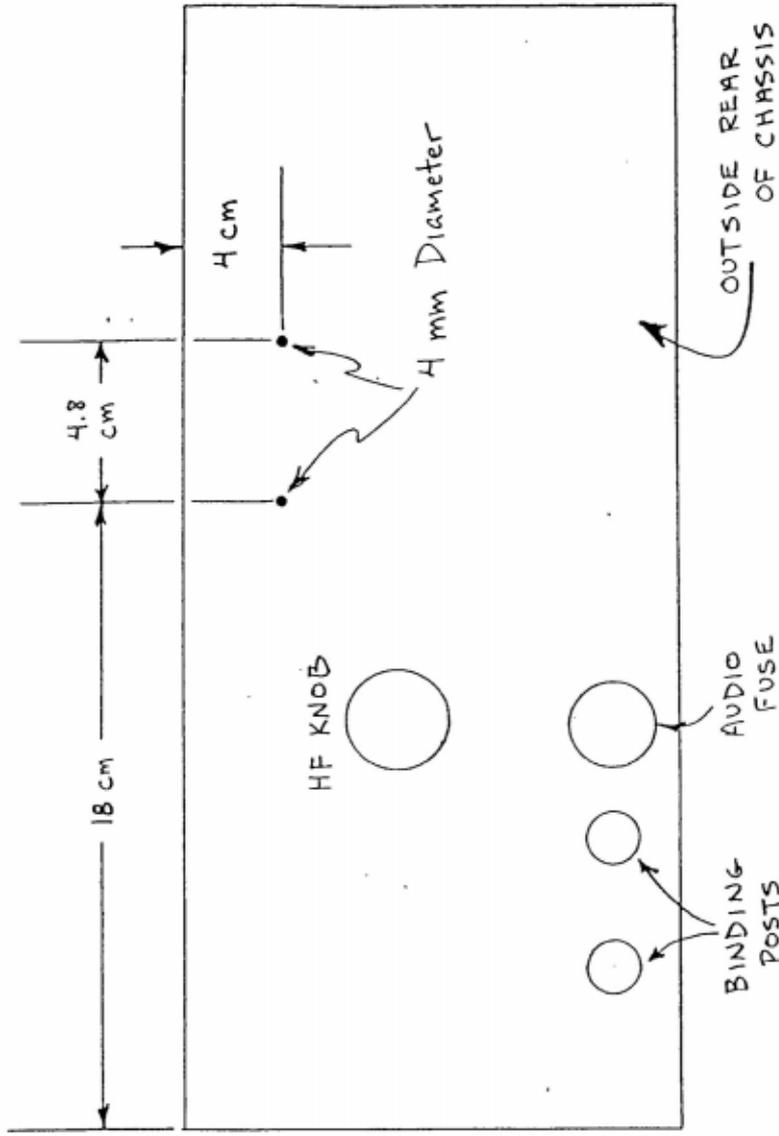
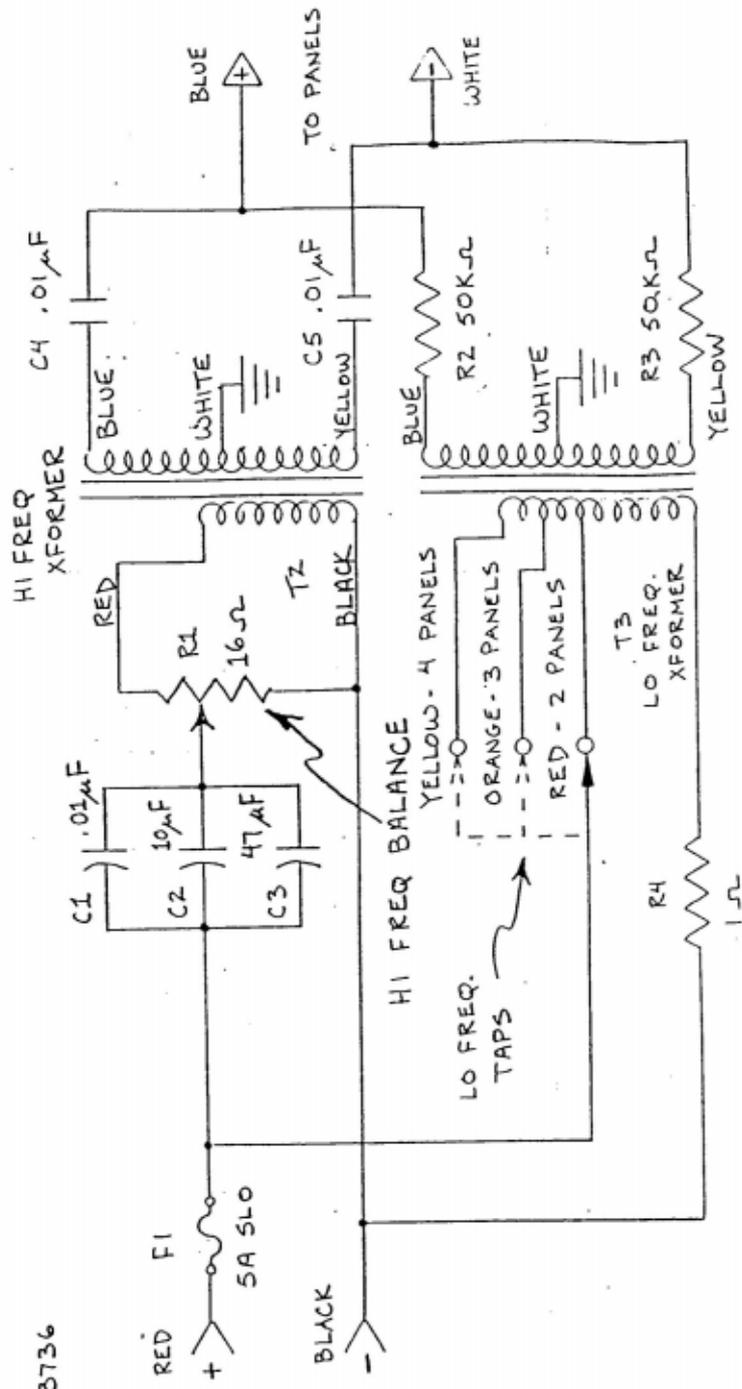


Figure Two: Location Of Holes For Step #10

- NOT TO SCALE -

U.S. PAT. # 4323736



AUDIO INPUT
 BLACK
 RED +
 5A SLO
 F1
 C1 .01µF
 C2 10µF
 C3 47µF
 R1 16Ω
 HI FREQ. BALANCE
 YELLOW - 4 PANELS
 ORANGE - 3 PANELS
 RED - 2 PANELS
 T2
 BLACK
 HI FREQ. XFORMER
 BLUE
 WHITE
 YELLOW
 C4 .01µF
 C5 .01µF
 R2 50KΩ
 R3 50KΩ
 WHITE
 BLUE
 TO PANELS
 WHITE
 YELLOW
 R4 1Ω
 T3
 LO FREQ. XFORMER
 YELLOW - 4 PANELS
 ORANGE - 3 PANELS
 RED - 2 PANELS
 F2 1/4 A SLO
 F3 1/4 A SLO
 17 VAC
 BLACK
 BLACK
 BLACK
 WHITE
 RED
 750 VAC
 T1 BIAS XFORMER
 C6
 C7
 C8
 C9
 C10
 D1
 D2
 D3
 D4
 D5
 R5 500MΩ 2W
 BIAS +5 KV
 RED
 C6-C10 = 3300 pF
 D1-D5 = 25G10 (FORWARD CONDUCTION NOT MEASURABLE W/OHMMETER)

MK-121C
 MAGNE-KINETIC
 INTERFACE AND
 BIAS SUPPLY

CORP 01 ROCKFORD CORPORATION BRANCH 05 ACOUSTAT DIVISION PAGE 1 FOR ASSEMBLY:

AS-OF-DATE: 06/23/89 COMPONENT SELECTION OPTIONS: OWNER () STOCK ()
 PRINT OPTIONS: COMMENTS(Y) REF-DESIG(N) EFFECTIVITY(N) COST?(N) LEAD-TIME?(N)

ASSY. PART NO. REV DESCRIPTION QUANTITY UM M/B DRAWING NO. ECN USER
 FG-21MK MK121-2A MODIFICATION KT 1.00 EA M LAST C

LEVEL	COMPONENT NO.	QUANTITY	UM DESCRIPTION	COMP REV	OPER W/C NO	M/B	ECN	SCRA	DWG SEQ
.01	CCA-114	2.000 QTY EXT: Y	EA 8 LUG 2 & 7 GROUND K-STM	000	000	B		.000	
.01	CE-476B	2.000 QTY EXT: Y	EA 47 UF 50 V AXIAL	000	000	B		.000	
.01	CPA-001	4.000 QTY EXT: Y	EA .01 UF 6000 V	000	000	B		.000	
.01	CPA-002	2.000 QTY EXT: Y	EA 10 UF 100V	000	000	B		.000	
.01	CSA-005	2.000 QTY EXT: Y	EA .01 UF 160V 20%	000	000	B		.000	
.01	HWA-064	4.000 QTY EXT: Y	EA 6-32 X 1/2 ALLEN BUTTON	000	000	B		.000	
.01	HWA-N061	4.000 QTY EXT: Y	EA 6-32 KEPS NUT	000	000	B		.000	
.01	PMA-L-018	2.000 QTY EXT: Y	EA MEDALLION LABEL RED	000	000	B		.000	
.01	PMA-P-001	2.000 QTY EXT: Y	EA 5" X 7" PARTS BAG	000	000	B		.000	
.01	TT-121H RM20-100	2.000 QTY EXT: Y	EA 10 OHM 25 WATT	000	000	B		.000	
.01	TT-121H	2.000 QTY EXT: Y	EA MK121 HIGH TRANSFORMER	000	000	B		.000	
.01	TT-121L	2.000 QTY EXT: Y	EA MK121 LOW TRANSFORMER	000	000	B		.000	
.01	WWA-0148L	3.500 QTY EXT: Y	FT 14 GA STRANDED BLACK	000	000	B		.000	
.01	WWA-014R	3.500 QTY EXT: Y	EA 14 GA STRANDED RED	000	000	B		.000	

FIGURE TWO - MOUNTING RESISTOR ON
TERMINAL STRIP

NOTE: CAPACITORS (MOUNTED TO TERMINALS 1 & 8)
ARE NOT SHOWN FOR CLARITY
SEE FIGURE ONE FOR TOP VIEW

