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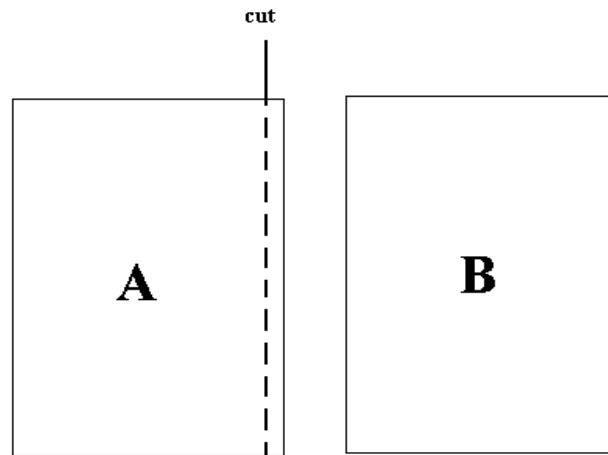
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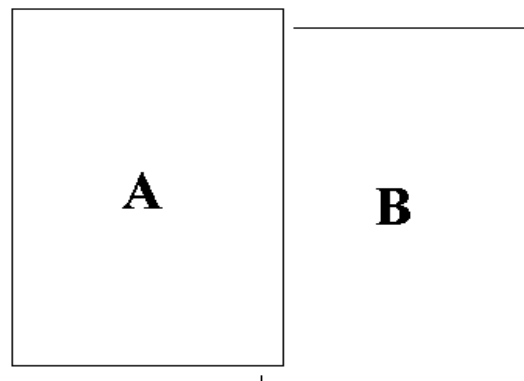
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Two Sheet Pasteup Guide

11x17" paper size



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Only one trim cut is needed, then overlay as shown and tape.

ECHO-TECH
UNIVOX

EM200

by **UNIVOX**®

Service Schematic

INSTALLATION PROCEDURE FOR EM200 ECHO-TECH MAGNETIC RECORDING DISC

IMPORTANT NOTE: The following procedure should be done with several IMPORTANT FACTS in mind.

- A) A CLEAN, dust-free area.
- B) Proper fitting Phillips type screw-driver (1 medium tip, 1 fine tip).
- C) A small container (such as small box, or jar), to hold assembly screws and parts.
- D) Make certain power (AC) cable is disconnected from wall outlet.
- E) Work slowly and carefully, THINK! You are working with a high quality recording device.

1. Removing Chassis from Case

- a) Turn carrying case on its side and remove four (4) rubber bumper/screw units from case bottom (Fig. 1).
- b) *Carefully* slide chassis from cabinet (unit removes from front of case) making certain AC line cord does not "catch" within cabinet.
- c) When you have removed chassis, place it with front panel facing you, down on work table. Position shown in Fig. 2.

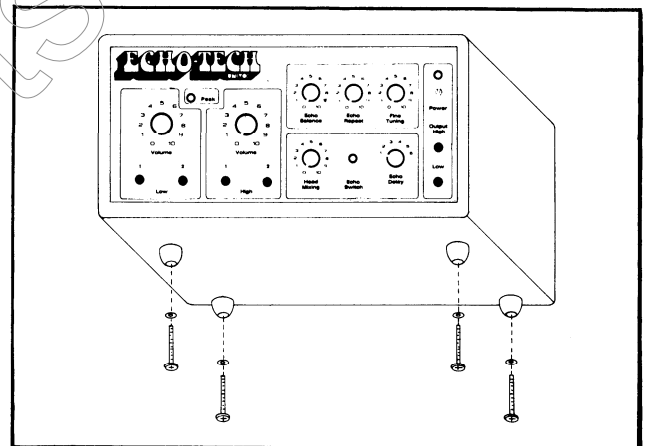


Figure 1 Case Bottom

2. Removing Dust Cover - Make certain area around dust-cover is clean and free from dirt and dust, before removal.

- a) Remove six (6) mounting screws. *Make certain you do not damage screw heads, for this will cause a problem in re-assembly.* Place parts in container (small box or jar) to prevent loss.
- b) Carefully lift dust-cover from mount. Rubber gasket may stay in place, it is not necessary that gasket be removed. Simply realign on re-assembly. Wipe inside and outside with dust-free cloth and place cover on clean surface.

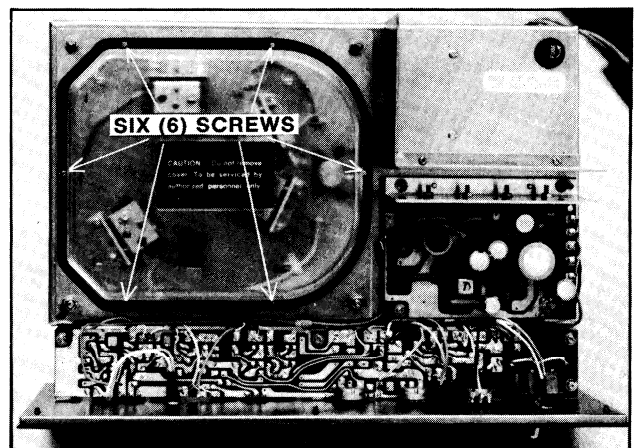


Figure 2

3. Removal of Tape Head Plate Assembly.

- a) Remove four (4) screws (Fig. 3) from plate assembly.
- b) Carefully lift plate assembly and lay it over on its side (Fig. 4). *Make certain that the wires attached to assembly are not strained at anytime!*
- c) Remove eight (8) screws (shown in Fig. 4), from flywheel. When recording disc is removed wipe flywheel surface with dust-free cloth.

4. Re-Assembly

- a) Unpack new disc from carton and make certain all surfaces are **CLEAN** and **DUST-FREE!**
- b) Following illustration (Fig. 5) install your new disc. Both sides of disc should have "shiny" sides facing out.
- c) Install all screws by following sequence shown in Fig. 4. Allow screws to "touch" metal edge of disc. Repeat the sequence several times, evenly stretching disc over surface of flywheel (similar to installing drum-head on drum or tire wheel on your auto). Surface must be free of "bumps" or "warps" for proper operation.
- d) The last part of reassembly is the reverse procedure of Fig. 1, 2, 3.

To eliminate audible "Thump" from new disc during operation; carefully de-magnetize the new disc with a bulk tape eraser, after disc assembly is complete.

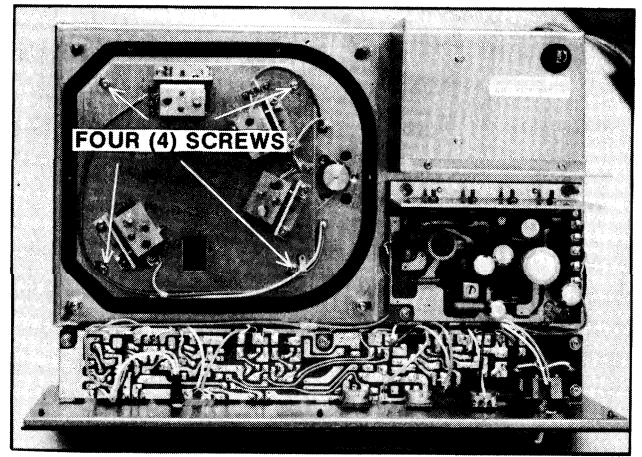


Figure 3

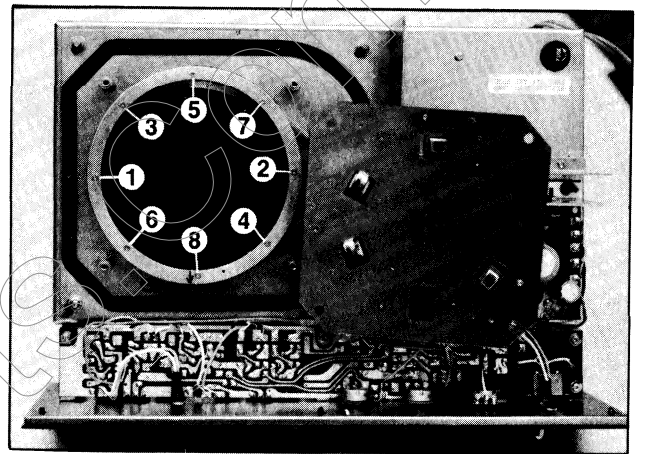


Figure 4

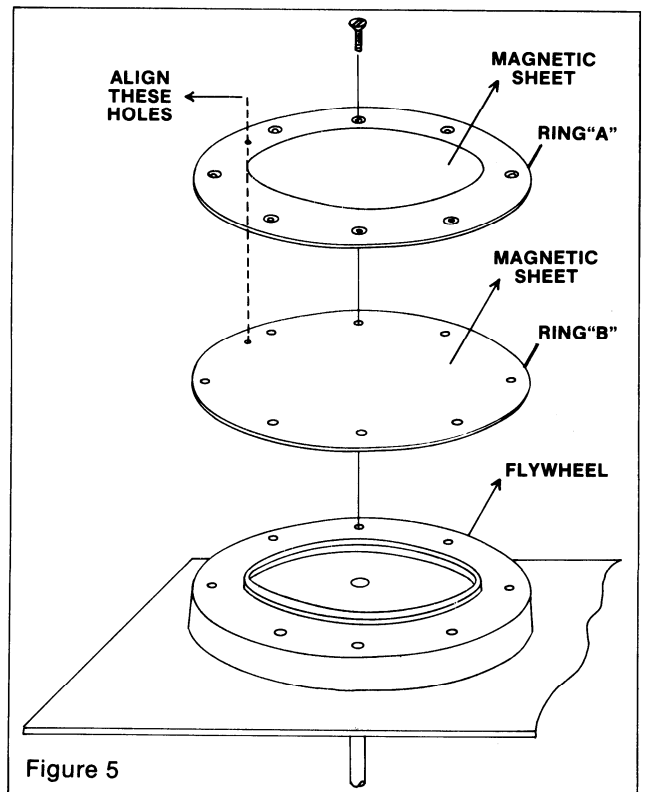
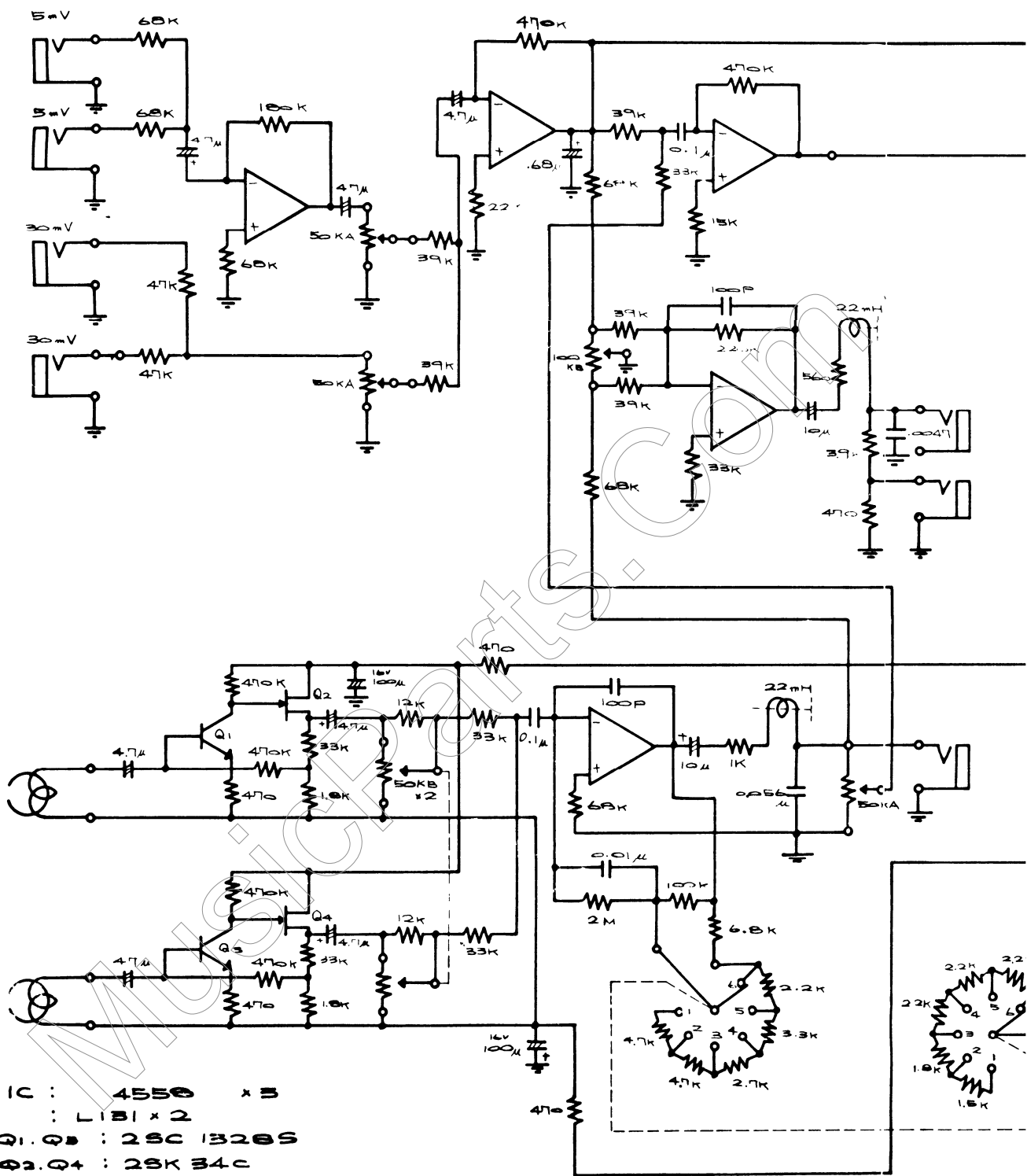


Figure 5



- IC : 4550 x 3
- : 1181 x 2
- Q1, Q3 : 2SC 1320S
- Q2, Q4 : 2SK 34C
- Q5 : 2SC 920P
- Q6 : 2SC 1304Q
- Q7 : 2SA 604Q
- Q8, Q9 : 2SC 1867Q

- D1 ~ D4 : MD 234
- D5, D6 : WO 1M



