



Factory Service Bulletin

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SUBJECT: MEMORYMOOGS BELOW BULLETIN: 835
SPONTANEOUS POTENTIOMETER EDITING

DATE: November 22, 1983 (Supersedes earlier versions)

SYMPTOMS: The alpha-numeric display indicates potentiometer values even though no front panel control has been turned and/or the instrument will immediately indicate potentiometer values when powered up.

CAUSES: Digital to analog ground loop and no +15 volt power supply to U3 on RIGHT SIDE CONTROL board. High frequency HASH on MUX BUSS on DMUX board.

SOLUTION: EDITS ON POWER UP (BELOW S/N 1795)
On an AS REQUIRED BASIS ONLY, add an insulated jumper ON THE TOP (COMPONENT) SIDE of the RIGHT SIDE CONTROL between C14 (side nearest U3) to the jumper over R22 (closest to the edge of board).

NOTE: If this modification is inadvertently soldered to C8 instead of C14, it will cause constant editing and burn out R22, the PW1 pot. THIS JUMPER WIRE MUST BE ON THE COMPONENT SIDE OF THE BOARD.

SPONTANEOUS POTENTIOMETER EDITING (BELOW S/N 2531)
Modify the RIGHT SIDE CONTROL board on the bottom side with the board mounted in place. Cut the trace between C21 and the jumper connected to U6 pin 7. Follow the diagram provided. This is necessary because the digital ground was inadvertently tied to the analog ground, resulting in a ground loop.

Also cut the trace between C14 and the jumper connected to U3 pin 8 at the "1" of the screened information "SYNC 2 TO 1". "Tack-solder" a 1.8" (46mm) insulated jumper between the ground side (mounting tab) of R22 and the C14 side of the trace cut at the "SYNC 2 TO 1" location - follow the diagram provided.

NOTE: ALL FLUX MUST BE REMOVED FROM THE BOARD BY THE JUMPER WIRE, OR THE EDITING PROBLEM WILL WORSEN FROM FLUX LEAKAGE. The solder (back) side of the board should also be checked for flux that may have "run" through the board by the top jumper and C14 and removed if present.

SPONTANEOUS POTENTIOMETER EDITING (BELOW S/N 3000)
On the top (component) side of DMUX board #5 carefully tack-solder a .001uf (any style) capacitor from the left side of R19 (1K, located immediately to the right of U6, Pin 6), to the large (analog) ground trace labeled "U5". Use insulated sleeving or silicone rubber (i.e. RTV) to prevent the capacitor leads from shorting to top traces. CHECK FOR AND REMOVE ANY FLUX.

NOTE: Previous versions of this bulletin incorrectly stated that the capacitor be tack-soldered from the left side of R18 (10K, located 1/2" (13mm) behind and to the right of U6), to the front (keyboard) side of C89 (DIGITAL



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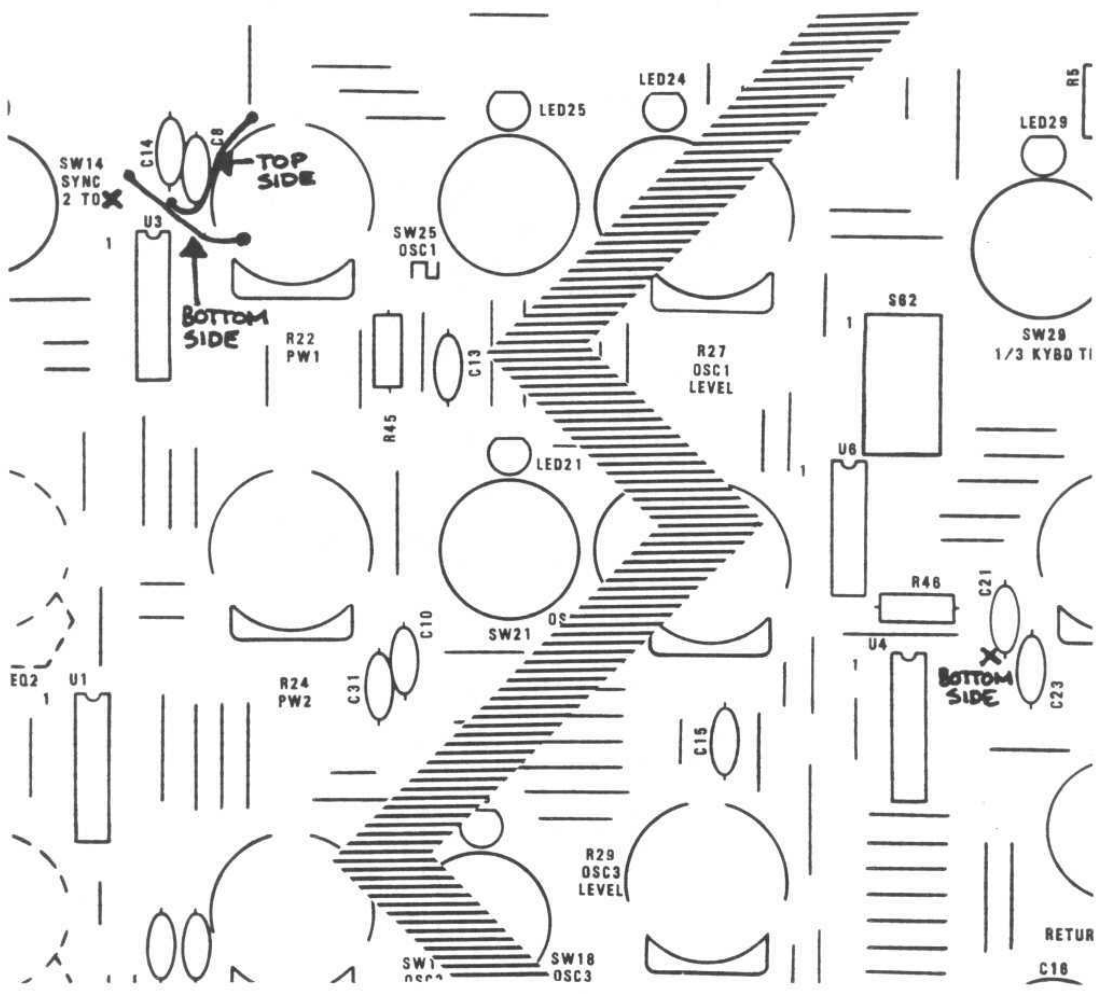
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ground). Therefore, if it is present, cut it out with diagonal cutters (DO NOT unsolder it) and add a new .001uf capacitor as above. THIS MAY CAUSE editing due to normal digital ground noise being AC coupled into the MUX BUSS by the capacitor.

DOCUMENTATION: Update the customer's L.S.C. #7 schematic by changing the ground on U6 pin 7 from an analog ground to digital ground symbol and draw in a .001uf cap from Pin 3 of U6B to analog ground on the DMUX #5 schematic.

LABOR: These modifications (except EDIT ON POWER UP) should be installed on ALL units returned for service and is estimated to take 20 minutes. Moog will reimburse at a flat rate of \$15.00 per instrument. The modification is covered under warranty regardless of the warranty expiration date to the original owner.



R.S.C. PRINTED CIRCUIT BOARD SCHEMATIC (BOARD NO. 6)