MATINEE ORGAN UPDATE

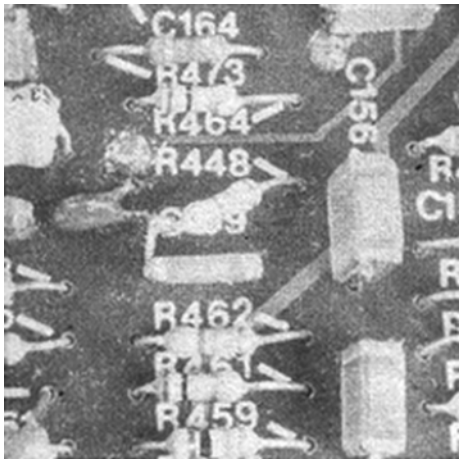

Figure 1. Connecting capacitor in series with R448. See note 5.

The Matinee help-line has been found very useful by constructors and at the same time we have been able to keep closely in touch with the kinds of problems experienced by constructors. If you are suffering from any of the following problems then here are the cures suggested by ourselves and other constructors.

1 If the delayed vibrato preset RV29 range is not very useful, change C126 to a 33µF 16V to give more control over the useful range.

2 If you are suffering from a click when S36 is operated, then fit a 0.1 µF polyester capacitor between pins 1 and 2 of PL6.

3 If the overall volume of the flute draw bars is too

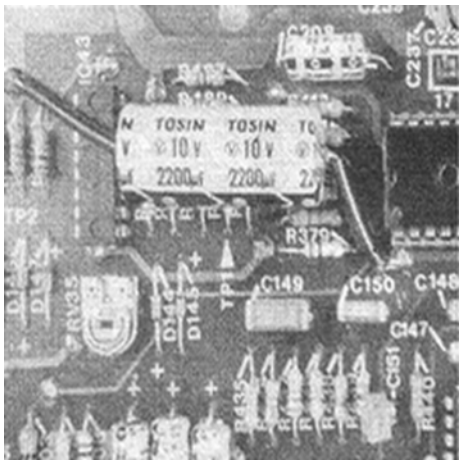

Figure 2. Decoupling power rail. See note 6.

low then change R486 to 12K Resistor

4 Some constructors feel that the cello sound is enhanced by making C159 a 12nF carbonate capacitor.

5 The setting of RV36 is sometimes affected by the position of the cello draw bar. If you have this problem, connect a 1µF 35V tantalum capacitor in series with R448. Lift the left-hand end of the resistor and connect the negative of the capacitor to it with the positive of the capacitor connected to the PCB as shown in Figure 1.

6 If background hum is noticeable, add a 2200µF, 10V axial with the positive end connected to the track pin near the legend “C213" and the

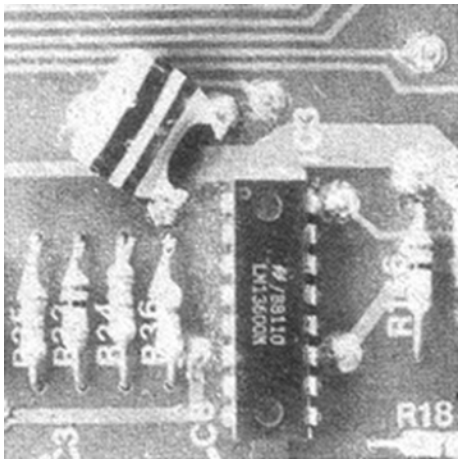

Figure 3. Reduction of interference from sampling clock on pedal wires. See note 8.

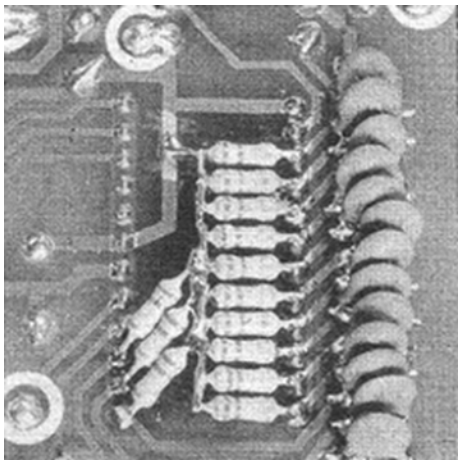

Figure 4. Decoupling the inputs to IC1. See notes 9 & 10.

negative end connected to the track pin near pin 1 of IC44 as shown in Figure 2.

7 If the harpsichord is too loud in relation to other preset stops then change R554 to a Resistor 4K7.

8 If you notice a background whistle when the pedals are pressed then connect a 0.1µF polyester capacitor to the track pin at the top of R36 and the track pin next above it to the right. See Figure 3.

9 If you hear an odd discordant rasping sound occasionally whilst playing the pedals then fit 13 Resistors 220K to pins 3 through 15 of IC1 and join the other ends of the resistors together and connect them to the track going to pin 19 of IC1 by carefully scratching off the solder resist. See Figure 4.

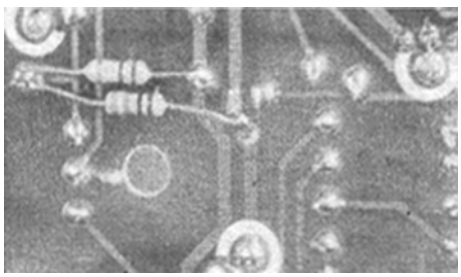

Figure 5. Providing a discharge path for C11. See note 11.

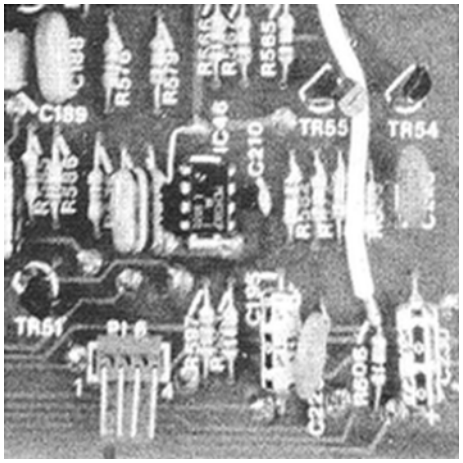

Figure 6. Decoupling sampling clock. See note 16.

10 If the pedal notes occasionally cut-off suddenly during sustain time, this is due to mains interference being picked up on the ribbon cable. To eliminate the problem, connect 13 mini-disc capacitors 0.01µF to PL1 from pins 3 through 15, to the track nearest the edge of the PCB by carefully scratching off the solder resist coating. See Figure 4.

11 If there is a residual rumble after the last note played when bass guitar operated then fit a Resistor 100K across C11 under the PCB and a Resistor 1M under the PCB, from the positive end of C11 to the track going to RV13 by carefully scratching off the solder resist. See Figure 5.

12 To increase the bass response of the organ change C31 to a 1µF 35V tantalum capacitor with the positive end connected to the end where the line is marked to the legend "C31".

Figure 7. Reduction of mains hum. See note 18.

13 If the green LED is not as bright as the red, make R163 a Resistor 150R.

14 If a faint clicking is heard when the rhythms are running, but the rhythm volume is off then change C206 to an axial 2200µF 10V.

15 If the bass drum is too loud make R285 a Min Res 120K. If the high bongo is too loud make R330 a Resistor 180K.

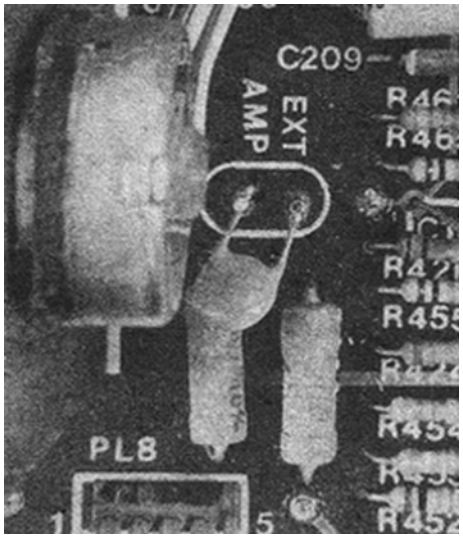

Figure 8. Reduction of illegal AM CB interference. See note 21.

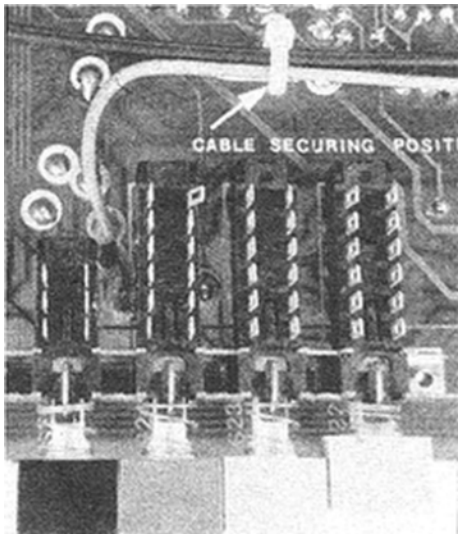

Figure 10. Underside of part of the PCB shown in Figure 9. See note 22.

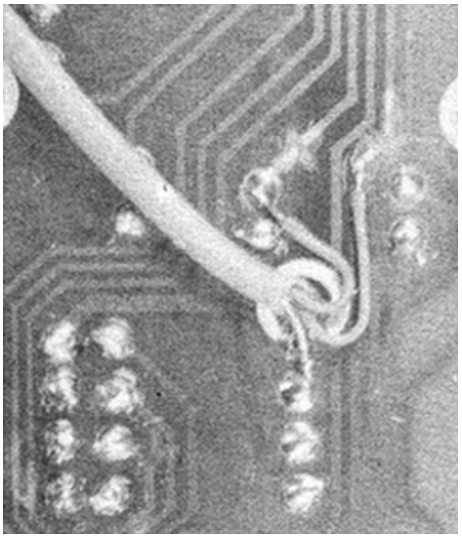

Figure 12. IC4 end of cable run. See note 22.

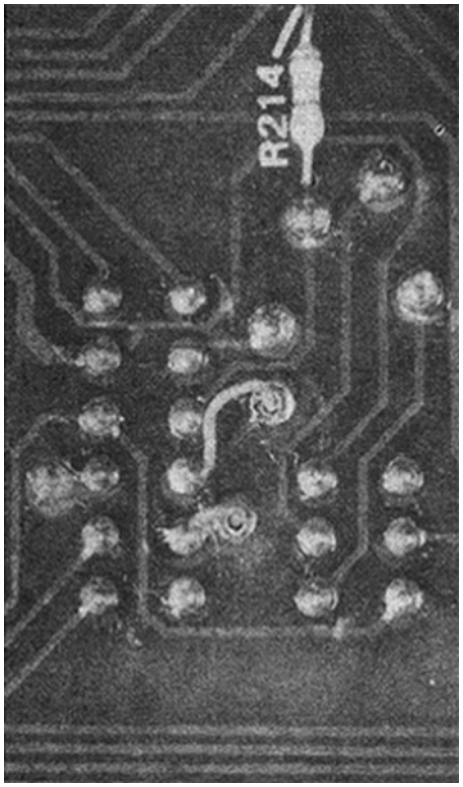

Figure 9. Connections to S24b. See note 22.

16 If a very high frequency whistle is apparent at all times then connect a 0.1µF polyester capacitor between the track pin near pin 1 of IC46 and the track pin near pin 4 of IC46. See Figure 6.

17 If the pedals are too loud in relation to the rest of the organ change R572 to a Resistor 470K.

18 If after making change described in note 16 there is a noticeable mains hum, connect a piece of wire between the end of R606 farthest from edge of PCB and the track pin close to the right-hand front corner of RV44. See Figure 7.

19 If distortion is heard on peak signals through the reverb then change C225 to a 0.047µF polyester capacitor.

20 If you feel the rotor sound needs improvement at high frequency then change C69 to a 10nF ceramic capacitor.

21 If you are suffering from interference from illegal AM CB connect a 470pF ceramic capacitor across the pins marked “Ext. Amp". See Figure 8.

22 If a high frequency whistle increases in volume when rhythm draw bar is advanced and S24 (auto accompaniment) pressed then proceed as follows. First remove the two track pins which connect to pins 2 and 3 of S24b, and enlarge the holes if necessary so that you can pass through from the underside the two unstripped centre wires of a 1 metre length of screened wire as shown in Figure 9. Connect the red wire to pin 2 and the blue wire to pin 3 of S24b. On the underside of the PCB cut back the screen and insulate it. See Figure 10. Run the cable as shown in Figure 11. At the other end cut the track by scratching it away with a small screwdriver or sharp point close to the point where D83 and D84 are joined. Also cut the track which leads to pin 33 of IC4. Connect the red wire to the end of D83 or D84 closest to the cut track and the blue wire to the track between the cut and pin 33 of IC4 after carefully scratching off the solder resist. Connect the screen to the track pin marked by the white circle near D83 and D84. See Figure 12.

23 If you wish to run the Matinee into an external amp, Hi-Fi system or tape recorder then proceed as follows. Connect a Resistor 4K7 at the headphone socket to the wire coming from pin 1 on SK9 and a Resistor 47K to the wire coming from pin 2 on SK9; Connect the other ends of the resistors together, then connect the centre conductor of a piece of screened cable to the point where the two resistors join and the screen to the other end of the 4K7 resistor. Connect the other end of the cable to the radio, tape or aux input of a Hi-Fi amp. If the signal is too loud, reduce the value of the 4K7 and if too soft, increase the value.

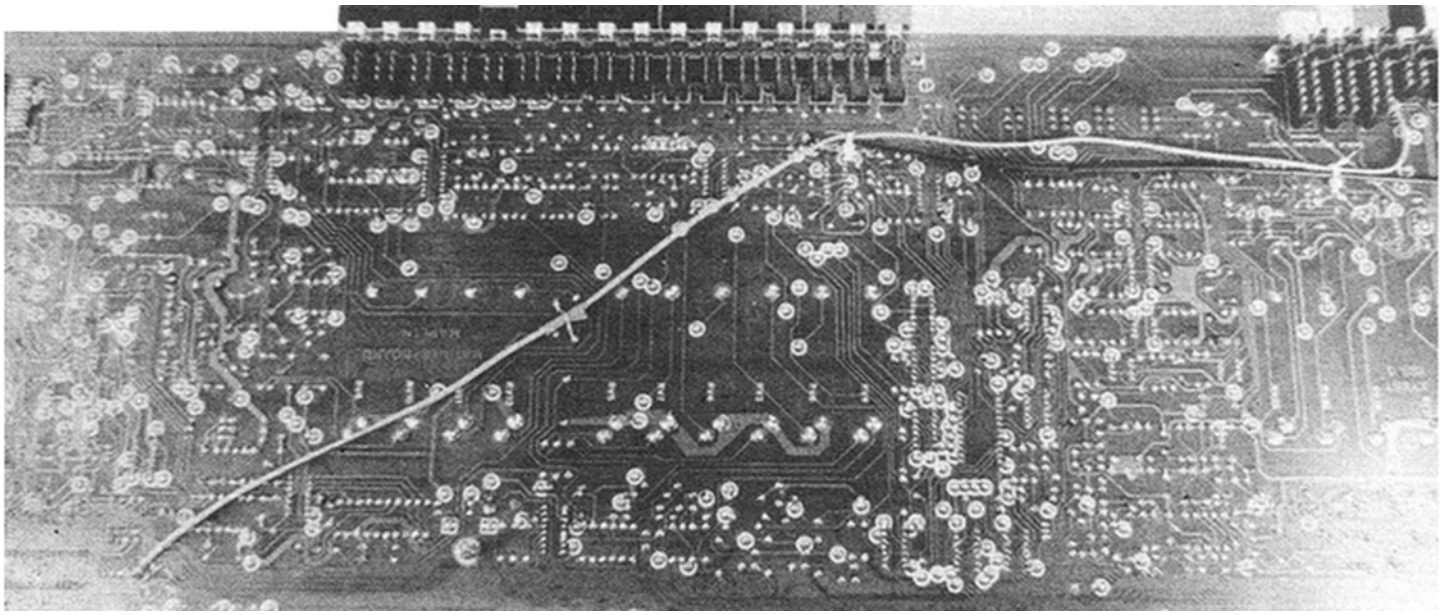

Figure 11. Cable run. See note 22.