

LK1 Cross-talk Check & Repair Procedure

Important – Anti-static precautions must be taken when carrying out the following upgrade – the LK1 circuitry contains many static sensitive devices, which are easily damaged by tiny static discharges from your body (that you will not be aware of). Use an anti-static earthing mat and wrist strap when working on an LK1 with its sleeve removed or when handling any of the circuit boards or spare parts.

Estimated time for completion of this task: 1 hour

Symptoms

One or more inputs of the LK1 will cross-talk to other inputs. A loud crackling / buzzing / distortion sound may also be heard intermittently.

Units affected

This problem can potentially affect all LK1's.

Equipment Required

No1 Posidrive (Supadrive) Screwdriver
Soldering Iron, temperature controlled 25 watt with fine tip
Voltmeter
Solder Sucker
Fine solder
Fine Pliers
Soft cloth

Parts Required (if fault is confirmed)

Green display LED – Linn part no: MISS 004 - Quantity depends on how many LEDs fail.

Procedure

Take anti-static precautions!

1. Disconnect LK1 from everything and especially the mains
2. Remove sleeve
3. Power up the LK1 and press Mute so that all green display LEDs are off.
4. Take the voltmeter and connect the black (-) probe to the square pad of C51 on the main board (one of the large capacitors) or the leg that connects to this pad.
5. With the red probe, measure at the test points indicated in the table below (all points are located on the main board – all should measure +15V +/- 1V. If all these points measure 15V +/- 1V then the LEDs are not the cause of the problem. If, however, one of these test points measures less than the stated voltage, then the LED is faulty – which LED to change is indicated (all LEDs are located on CONTROL BOARD)



Test Point	LED being tested	LED function
U2 pin 1 or 16	D9/D11	MC/MM green LED
U3 pin 1 or 16	D4	TP2 green LED
U4 pin 1 or 16	D3	TP1 green LED
U5 pin 1 or 16	D2	AUX green LED
U6 pin 1 or 16	D1	TUN green LED

To replace faulty LED(s),

6. **Unplug LK1 from the mains & disconnect the ribbon cable (connecting control board to main board) from P1 main board.**
7. Remove the control board from the fascia: -
 - a. Take the soft cloth and spread it on the bench to protect the fascia
 - b. Unscrew the 4 screws holding the fascia to the tray and carefully lift the fascia away from the tray. Be very careful as the fascia will still be attached to the tray by the wires going to the mains switch – do not tug the wires.
 - c. Lay the fascia face down on the cloth & also use the cloth to protect the edge of the fascia from being scratched by the edge of the tray.
 - d. Remove the 5 screws that hold the control board on to the fascia.
 - e. Lift the board out of the fascia.
 - f. If there is a red wire running from the control board to the main board, you must leave it attached. If however, you find it awkward to work with this wire attached, then you can de-solder it from the main board but **FIRSTLY**, mark its position and remember to re-attach it later.
8. Locate faulty LED (as table above) and unsolder LED from the board, being very careful not to damage the board/tracks/other components etc. Clear the solder from both holes with a solder sucker.
9. Fit new LED, ensuring correct orientation – one leg of LED has a small flag – this leg goes to the square pad on the board. If unsure, check the other LEDs and fit the same way.
10. Re-assemble the LK1 (opposite of dis-assembly)
11. Recheck the voltages at the test points as per the table above – all voltages should be +15V +/- 1V. If this is not the case, try replacing the LED(s) again – it is not unknown that a brand new LED is faulty in this way.
12. Replace sleeve & check fully – ensure that the cross-talk is now cleared and the LK1 is working correctly.

