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LA100 Application Note 11:
Modifying the LA101 for 40Ω Output Impedance

The standard LA100 has 10Ω output impedance at the rear XLR sockets and 75Ω or 600Ω (switchable) at the front jack sockets. Some users prefer 40Ω impedance in place of 75Ω impedance and new units can be ordered with 40Ω impedance using an order of LA100/40ohm (separates) or LA100R/40ohm (rack mount). The user can modify existing units very easily as follows:

This modification requires:

Four 27Ω 1% resistors (0.25W)
An LA101/40ohm software EPROM with the serial number of the unit

The LA101/40ohm software EPROM should be obtained from Lindos to make the unit display 40Ω in place of 75Ω and also to generate a different ZC level when the 40Ω output is selected (+0.56dB instead of +1.02dB with a 600Ω load). Please quote the serial number of the LA101 when requesting software EPROMs so that the correct error correction data for the unit can be programmed into the EPROM from our computer calibration system.

1. Remove the top and bottom covers of the LA101 and unscrew the bottom board. Carefully unplug the three ribbon cables and remove the bottom board.
2. Locate RN11 and solder a 27Ω resistor across each side of the following pairs of pins, on the underside of the board (not the component side);

   9 and 10 (L channel “live”)
   13 and 14 (L channel “return”)
   15 and 16 (R channel “line”)
   19 and 20 (R channel “return”)

Ensure that these resistors do not touch the PCB or the chassis.

3. See section 10.1 of the 5th edition manual (page 157) for the details on installing the new software EPROM. Ensure that the serial number on the new EPROM matches the serial number on the chassis (above the keyboard) and do not use the EPROM if it is different.
4. Replace the bottom board and covers. Turn the unit on and connect it to the LA102 via jack leads. Select 600Ω input impedance on the LA102, and check that the measured level reads the same as the oscillator level with the LA101 set to 40Ω ZC and 600Ω ZC (press *2 if ZC is not displayed).

The LA101 can be configured to select 40Ω output impedance whenever it is turned on or reset by setting configuration Z to 2 (see section 1.6 page 12). Note that the configuration editor will still show 75Ω in v4.6 software and this should be ignored. Later software shows 40Ω when Z2 is set.

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