LINDOS ELECTRONICS

Tel: +44 (0)1394 380307
Fax: +44 (0)1394 385156
email: info@lindos.co.uk

Saddlemakers Lane, Melton, Woodbridge, Suffolk IP12 1PP U.K.

MS10 Application Note 2 – Upgrading the MS10 to the MS20.

This kit is to be fitted by competent engineering personnel. If you have any queries, contact Lindos for advice.

While fitting the kit, static electricity precautions should be observed.

Check kit contents:-

1 x MS20 Panel
1 x Ribbon ferrite

Fitting the upgrade:-

- Disconnect the MiniSonic from the mains supply and remove the battery.
- Remove the main plastic cover and retain the four screws.
- Unscrew the front panel at each end and retain the two screws and washers.
- Carefully disconnect the FFC (flat flexible cable) from SK9 and place the MS10 panel to one side. If this is not required please return to Lindos in the pre-paid envelope provided.
- Place the ferrite over the end of FFC and bend the end of the FFC (upto the end of the blue tab) to 90°.
- With the front of the new MS20 panel facing towards the rear of the chassis and using your left thumb and middle finger guide the end of FFC into place in SK9 (see figure 1 below).
- Straighten the ribbon cable and slide the ferrite upto the FFC conector.
- Replace the battery with the cover still removed.
- Your MS20 is now ready to test, switch the toggle switch to the 'on' position and the display should turn on. If the display does not turn on check the FFC cable connection and the battery voltage using a multimeter. Use a mains power supply if necessary. If the display still doesn't turn on contact Lindos for advise.
- Remove the battery.
- Push the panel into place over the arms of the chassis and screw into place (remember to use the washers).
- Replace the main cover and battery.

Fig. 1 – Fitting the MS20 Panel

Recalibrating the MS20:-

The MS10 has potentiometers for calibrating the basic measurement gain located underneath the chiplid, but the MS20 makes the correction in software using two correction factors (one for each channel), stored in non-volatile memory. These factors would normally

be set by us at manufacture, but since you already have the hardware, the panel suppied contains only default settings. It is therefore necessary to recalibrate the measuring side of the MS20 against the MS20's oscillator. A special calibration mode is provided for the purpose.

Connect the oscillator to the measuring side using the XLR leads. Press **LEVEL** to put the unit into *level* mode and set the oscillator to 0dBu, 1kHz. Press **MENU**, while holding down the ✱ and **PAGE** keys to put the unit into calibration mode (fig. 1.1). The values to the left of the screen display the level trim for each channel in 256^{ths} of a dB, centred on 128 a calibration range of ±0.5dB is available. Use the **<** and **>** keys to adjust the trim on each channel in turn until the

Fig. 1.1 – Calibration Mode

measured levels read 0.00dB (±0.01). To select the right channel press **NORM**, press **PAGE** to return to the left channel. Press any of the main function keys (**LEVEL** – **SEQ**) to save the calibration coefficients and exit the screen.
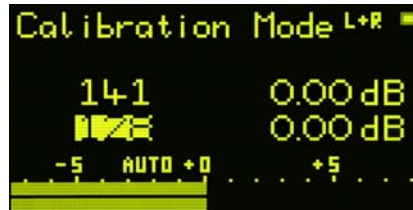
You are now ready to explore the various new features available in the MS20. To familiarise yourself with basic functions please read section 1.1 'Getting Started' in the MS20 manual. Please contact Lindos if you have any questions or comments.

CMS 21.11.2006