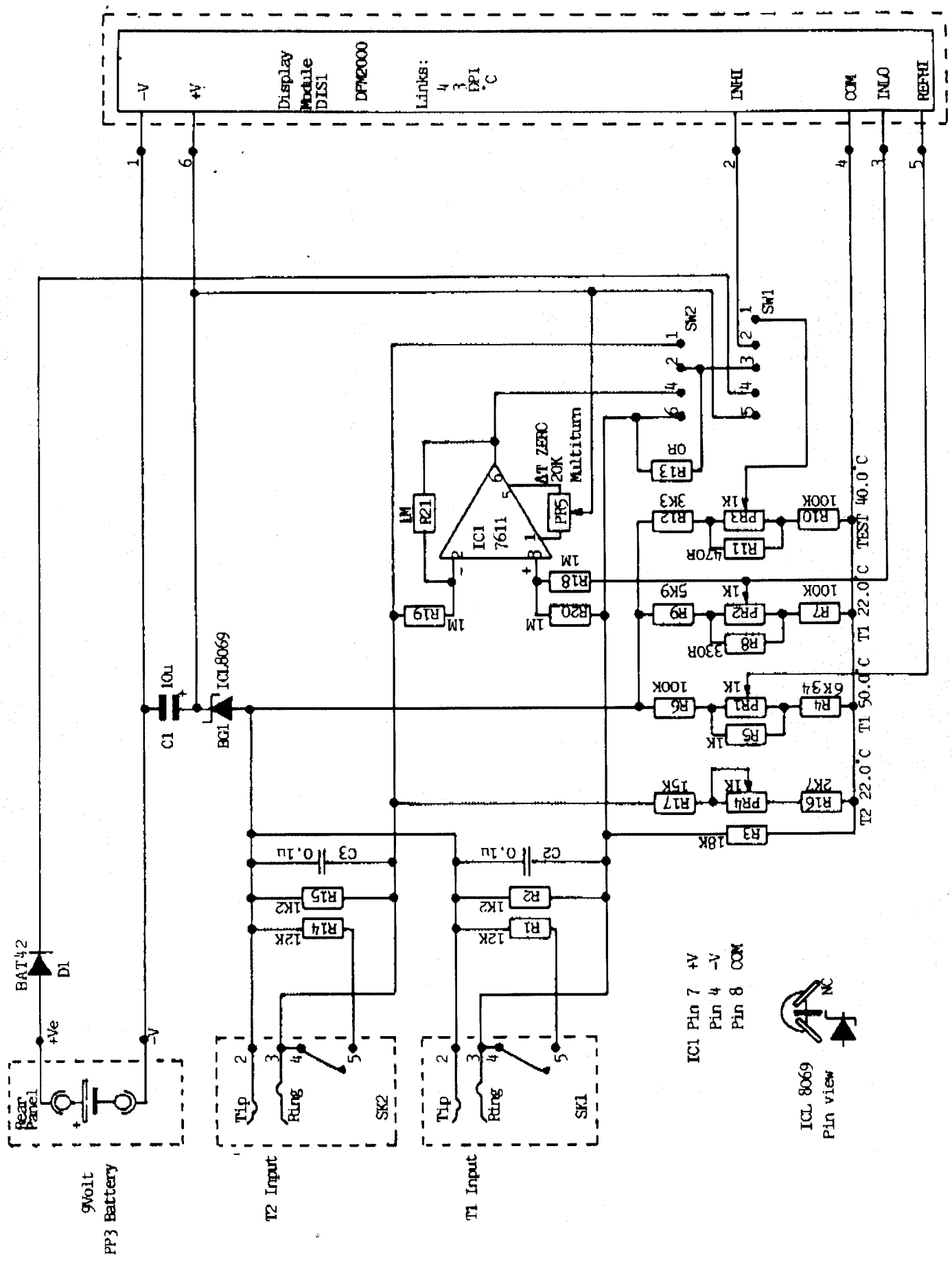
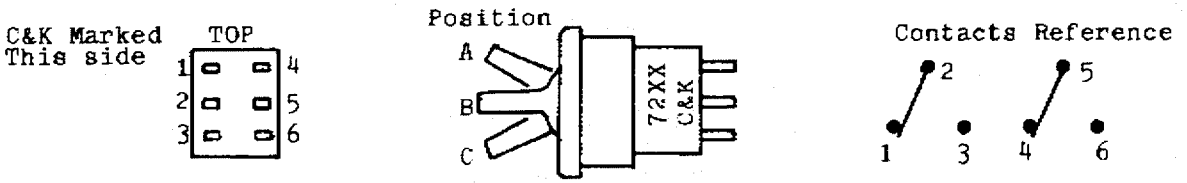

ET401 & ET402 CIRCUIT DIAGRAM
-V
+V
Display Module DIS1
DPM2000
Links: 4 3 DP1 °C
INHI
COM
INLO
REFHI
SW1
SW2
IC1 7611
ICL8069
C1
10u
D1
BAT42
+Ve
-V
9Volt PP3 Battery
Rear Panel
T2 Input
T1 Input
SK2
SK1
Tip
Ring
C3 0.1u
C2 0.1u
R15 1K2
R14 12K
R2 1K2
R1 12K
R3 18K
R4 6K94
R5 1K
R6 100K
R7 100K
R8 330R
R9 5K9
R10 100K
R11 470R
R12 3K3
R13 OR
R16 2K7
R17 15K
R18 1M
R19 1M
R20 1M
R21 1M
PR1 1K
PR2 1K
PR3 1K
PR4 1K
PR5 20K Multiturn
AT ZERO
IC1 Pin 7 +V
Pin 4 -V
Pin 8 COM
ICL 8069 Pin view
NC
T2 22.0°C
T1 50.0°C
T1 22.0°C
TEST 40.0°C

SW1 & SW2 SWITCHING DETAILS



Terminal Nos are not marked on the switch but are used here for reference only

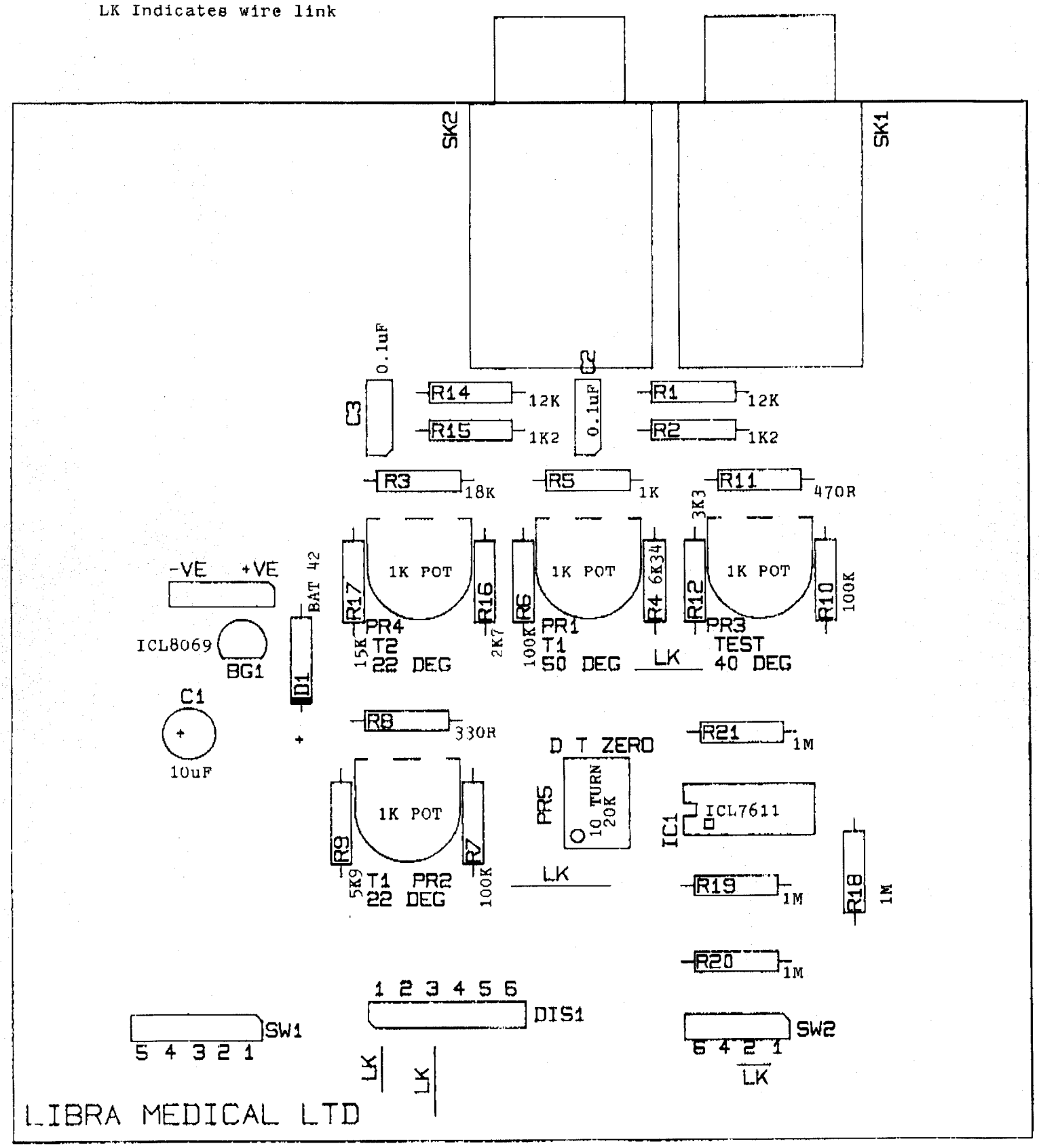
SW1 ON-OFF-TEST	Position A	Position B	Position C
SELECTED FUNCTION	OFF	ON	TEST 40°C
CONNECTED TERMINALS	2-3, 5-6	2-3, 5-4	2-1, 5-4
SW2 T1-ΔT-T2			
SELECTED FUNCTION	T1	ΔT	T2
CONNECTED TERMINALS*	2-6	2-4	2-1

*TERMINALS 3 & 5 ARE LINKED ON THE REAR OF SW2. THEREFORE ULTIMATE CONNECTIONS ARE DETAILED

ET402

COMPONENT LOCATION & VALUE DETAILS

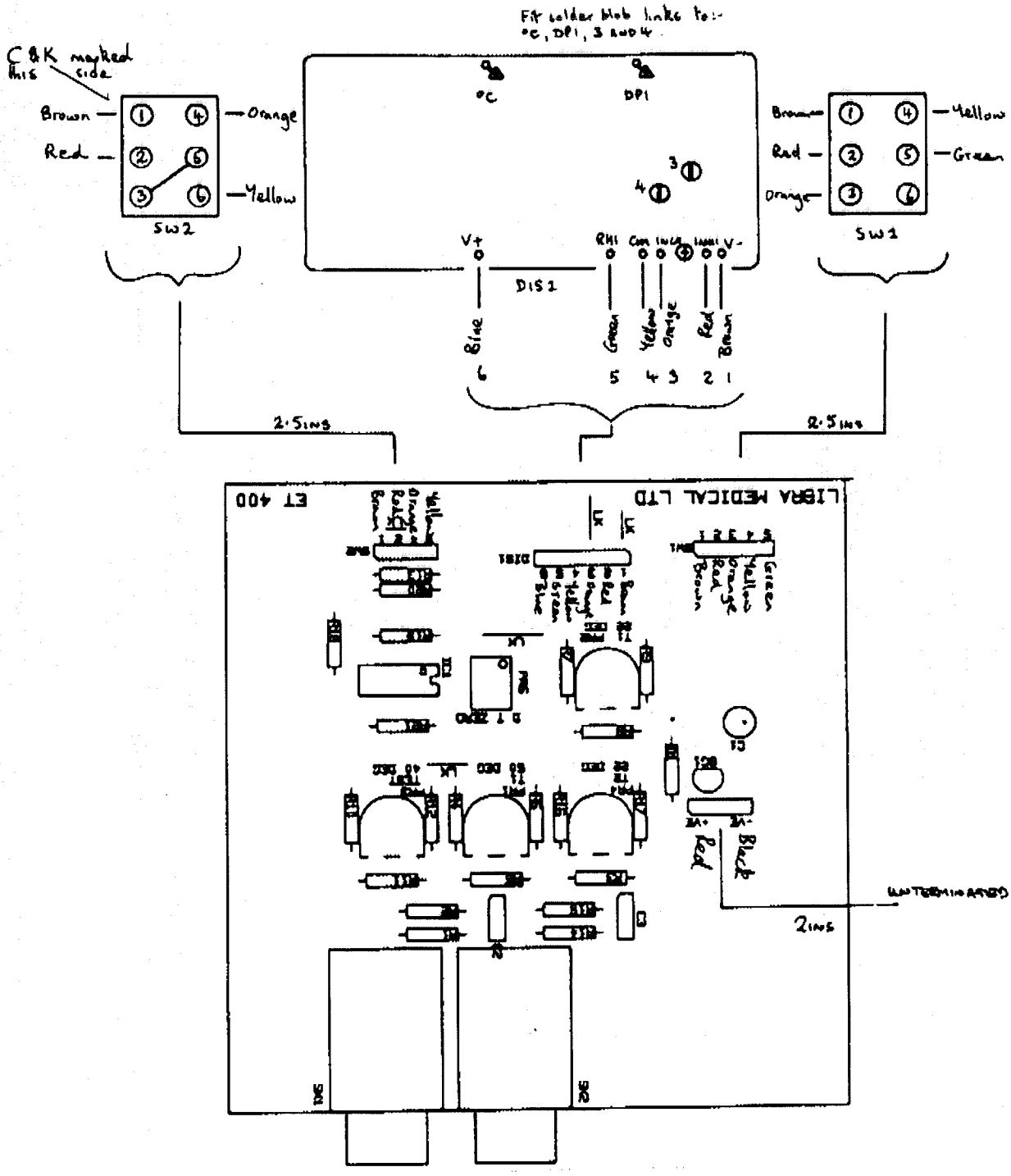
LK Indicates wire link



ET402

FRONT PANEL WIRING DETAILS

VIEWED FROM REAR



CALIBRATION PROCEDURE

Equipment Required:
Digital Voltmeter 0.1V resolution
Temperature Probe simulator Model TC100 (Two for Model ET402)

Access to the internal components of the units is by removing the 2 screws on the base and removing the top cover.

DISPALY MODULE CALIBRATION

The Display Module has Two adjustments and both have been preset during manufacture. Adjustments A to E below need only be carried out if the display module has been replaced.

A Connect the TC100 to the Probe Input (T1 on the ET402) and set the TC100 to 50°C.
B Adjust Presets PR1 and PR2 to mid position..
C Turn the unit to I (ON), (and T1 for ET402). Adjust the Display Module CAL preset for a reading of 50°C on the display.
D Replace the battery with the DC Power Supply set to 9V.
E Slowly reduce the output from the Power Supply and note the point at which LOW BATT is displayed. This should be between 7Volts and 7.5Volts. Adjust the Dispaly Module BAT preset to achieve this.
F Follow TEMPERATURE CALIBRATION steps below

TEMPERATURE SECTION CALIBRATION

1 Connect the Temperature simulator(s) TC100 to the probe input connector(s)
2 Turn the unit to I (ON) and T1 (ET402)
3 Adjust PR2 (T1 22DEG) and PR1 (T1 50DEG) to mid position
4 Set the simulator to 50°C. (T1 simulator on Model ET402)
5 Adjust PR1 (T1 50DEG) for 50.0°C ±0.1°C on the monitor display
6 Set the simulator to 22°C. (T1 simulator on Model ET402)
7 Adjust PR2 (T1 22DEG) for 22.0°C ±0.1°C on the monitor display
8 Repeat steps 4 to 7 until no further adjustment is needed
9 Select TEST 40°C on the Power switch and hold in position
10 Adjust PR3 (TEST 40) to 40.0°C ±0.1°C on the display

No further adjustments are needed to the Model ET401. Continue with steps 11 to 14 for the Model ET402.

11 Select T2 and set the simulator connected to the T2 input to 22°C
12 Adjust PR4 (T2 22DEG) for 22.0°C ±0.1°C on the monitor display
13 Select ΔT and set both simulators to 50°C
14 Adjust PR5 (DT ZERO) for 0.0°C in the display

Calibration is now complete

15 Perform the steps detailed under MONITOR TESTING to verify correct operation of the monitor