

CONTHERM *Scientific* *Limited*

TECHNICAL MEMORANDUM
No : 0078

PRODUCT :PLCS4 / 5 DISPLAY

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FROM : Contherm Scientific Ltd

DATE : 13 July 2001

TO : ALL AGENTS

SUBJECT: PLCS4 – 5 Keyboard Problem

Pressed and Held:

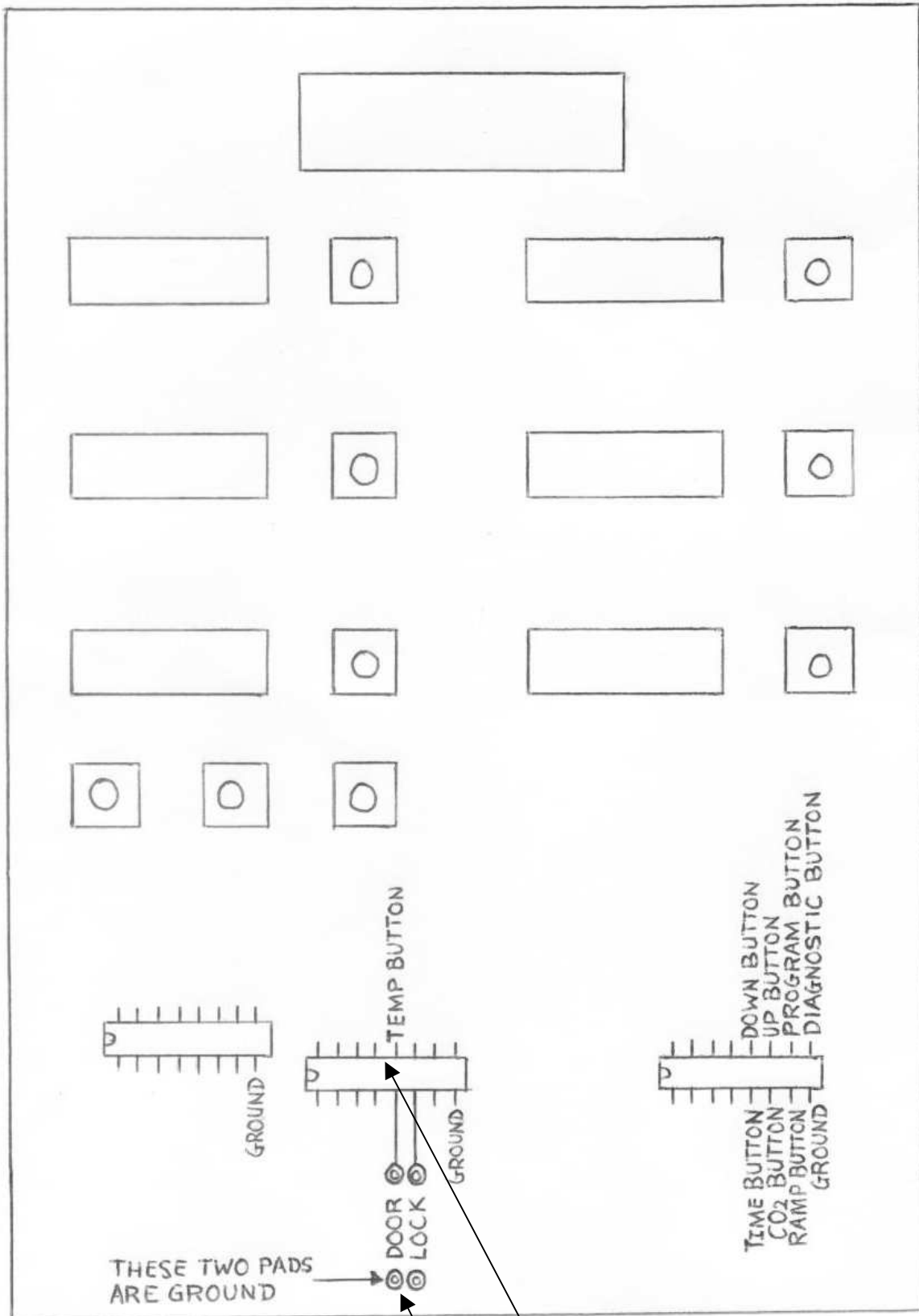
- | | | | |
|----|----------------|---|--|
| 1) | 'Up' Button | - | No other buttons function when pressed |
| 2) | 'Down' Button | - | No other buttons function when pressed |
| 3) | 'Prog' Button | - | No other buttons function when pressed |
| 4) | 'Diag' Button | - | No other buttons function when pressed |
| 5) | 'Temp' Button | - | No other buttons function when pressed |
| 6) | 'RH' Button | - | No other buttons function when pressed |
| 7) | 'Time' Button | - | No other buttons function when pressed |
| 8) | 'Light' Button | - | No other buttons function when pressed |
| 9) | 'CO2' Button | - | No other buttons function when pressed |

These buttons were individually pressed and held after power had been applied to the PCB. In all cases no other button functioned when pressed and a beep from the buzzer was not heard. Both the LCD Display and LED Displays continued to function normally.

Pressing and holding button and then applying power to the PCB:

- 1) Temp, RH, Time and CO2 Buttons:
Appropriate indicator LED glowed and LED display showed value to be changed as board powered up. Bottom line of LCD display did not appear and all the LED displays showed '0'.
- 2) Diagnostic Button:
LED indicator glowed. All other LED displays showed '0'.
LCD operation normal. No response from other buttons.
- 3) Program Button:
LCD and LED's power up as normal. No LED indicators glow.
All other buttons do not function.
- 4) Ramp Button:
LED display or LED indicator do not function for this button. LCD display and all other LED displays function normally although no buttons function.
- 5) Up/Down Buttons:
If held when power is applied will stop all other buttons from functioning. LCD and LED displays will function as normal.

PRECISION PLCS4 – 5 DISPLAY PCB LAYOUT DIAGRAM



- A) Disconnect the cabinet from all power
- B) Remove cover from Door Control Panel (two small allen key screws at bottom)
- C) Using a standard Multimeter on the 'OHM' scale, check for a short to ground from each of the IC pins indicated –
I.E: Put one Multimeter probe on the two pads at the bottom of the 'Door' 'Lock' connections – this is Ground
Put the other probe to the 'Temp Button' pin on the middle IC (pin 12) – it should not be shorted, then press the 'Temp' button. The Meter should now show a 'Short to Ground'
Repeat until all buttons have been checked.
When the 'sticking' or failed button is found – either free it or replace it.
Just removing it may allow the panel to function until it can be replaced.