

15 Helpsheet



*World Leaders in Computer Controlled Testing
Systems for Geotechnical Engineers and Geologists*

Hardware

Advanced Controller

Setting Gain of Pressure Measurement – Mark III

1. Introduction

Sometimes the range of pressure measurement may change owing to movement of the gain setting potentiometer caused by thermal effects or vibration during transportation, or by ageing of the electronic components. This effect is rare but when it occurs it is necessary to reset the gain against a standard pressure i.e. to recalibrate.

2. Recalibration

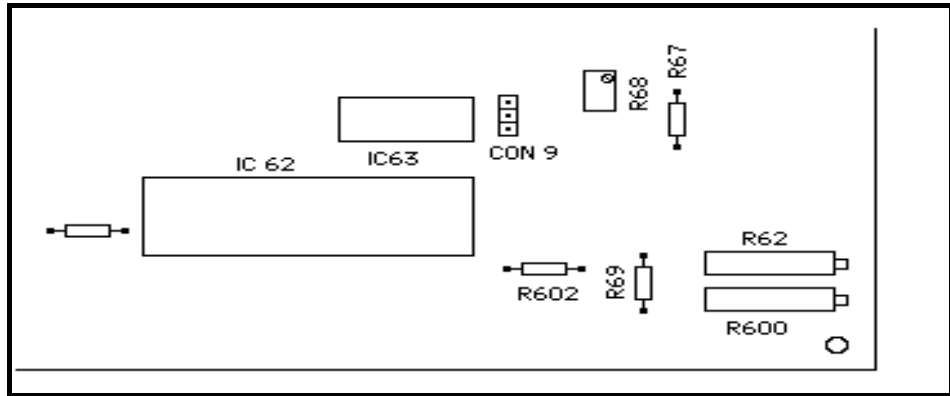
To set the gain on a MKIII controller the following procedure should be followed:

1. Ensure that the controller has been on continuously for a period of 24 hours.
2. Remove the soft zero offset by using the keystroke sequence RESET, ZERO, EIGHT
3. Remove the eight screws holding on the top-plate and with the assistance of a colleague gently lift the front edge of the top-plate by about 150mm so that access can be gained to R62, R600, R68 and CON9, on the main board directly beneath the control panel.

WARNING: Do NOT touch the POWER SUPPLY to the right of the main PCB.

4. Using a calibrated voltmeter check that the reference voltage across the two pins, toward the top of the PCB, shown hashed on CON9 is exactly 10.000 volts. If it is not it can be adjusted with potentiometer R68.
5. Connect the pressure outlet to a zero reference pressure* and use the potentiometer R600 to set the pressure reading to zero.
6. Connect the pressure outlet to a reference pressure* of 2000 kPa and use the potentiometer R62 to adjust the pressure reading to 2000 kPa.
7. Replace the top plate.

* ***The pressure reference could be a GDS digital controller that has also been powered on for at least 24 hours.***



Layout of components at bottom right of MKIII circuit board