

# **Bio-fermenter Control Unit Control Unit**

## **Additional Notes on Power Supply**

The Bio-fermenter Control Unit has been designed to operate with a 13 -15V **smoothed** DC power supply. If you operate with an unsmoothed supply then it is possible that your control unit will not operate correctly. You will know that it is not operating correctly because the red Power LED will go off after a short time. The automatic thermal protection shuts down the electronics to keep the unit safe.

### **What do I do ?**

If the power LED on the Bio-fermenter Control Unit goes off after a short time then switch off the power supply and reduce the supply voltage to 8-9V DC.

If all the power supplies in your department are the same then you may wish to change the legend on the front panel of the unit from 13-15V DC to 8-9V DC.

### **The Best Solution**

The best solution is to use a good quality smoothed DC supply capable of delivering 3A at 13V DC.

### **Technical**

The output of some DC power supplies is a half rectified sine wave. Some supplies when set at 13V produce a peak of 20V. The smoothing capacitor in the Control Unit then smooths this voltage to approximately 20V. This large voltage then causes thermal shutdown of the regulator under load conditions.