User Manual

- ## Specifications

Supply Voltage (Vcc)	6.7V – 10V (currently programmed for 9.2V)
DAC output voltage range	0 – 5V
Output Current	0 – 3A
Error	< 3.33% of Full Scale Range
Max Load Resistance	50Ω
Compliance Voltage (Voltage output)	5V
Precision	100 mA
Settling Time	< 1s

- ## Terminologies

  RC – Required Current – The current seen by the user upon varying the rotary encoder which will be set after pressing it.
  SC – Set Current – The current limit set by the user.
  AC – Actual Current – The actual current flowing through the load.
  CC – Constant Current mode
  CV – Constant Voltage mode

- ## Instructions to use

  1. Plug the DC power supply to power the device.
  2. Attach the load to the load terminals.
  3. Set the current using either a rotary encoder or from a laptop using UART.

4. For the rotary encoder, turn the rotary encoder till RC displays the maximum current required, then press the rotary encoder to set the current.
5. Observe the current on the LCD.

- **Additional Instructions:**
    1. The rotary encoder is circularly encoded, which means that if you turn left from 0 A, you can easily reach 3A.
    2. Always use power resistances, not the normal resistances available in the lab. Keep the load rating below the value specified; otherwise, voltage readings will get distorted because of low current.
    3. This is specifically designed for high power loads, implying a high current and a low resistance.
    4. The equipment is safe for the use of any load below the specified limit, implying it is robust to short circuits also.
    5. It is not heat tested as of now, which means that do not allow high currents to flow for more than 6-7 hours.