



# LS LINE DRIVER USER MANUAL

## **Construction**

This line driver has the following connections.

- a) 25 way D-connector either male or female.
- b) Two fibre optic connections. One for transmit (TX) and one for receive (RX).  
The connectors can be either SMA or ST type. SMA are screw fitting and ST are bayonet fitting.

## **Operation**

Line drivers must be used in pairs, one at each end of a duplex fibre optic link. The 25 way D-connector with the RS232port of the equipment or lead attached to the equipment and a duplex fibre joins the two line drivers.

When connected to the equipment and powered to the line driver TX diode will output light of 830 nm wavelength. Data from the equipment will modulate the light which will be detected at the other end of the fibre by the RX diode of the second line driver.

The second line driver communicates in the opposite direction in a similar manner.

The light will be on when no data is passing across the link.  
This is for ease of testing the link and for use in security applications.

## **Installation**

Before installation it is necessary to determine whether the equipment to which the line driver is being connected is a Data Terminal Equipment (DTE) or Data Communications Equipment (DCE) device. This can easily be determined by measuring the voltages between pins 2 & 7 and pins 3 & 7 on the D-connector of the equipment. If an extension cable is being used then the measurement should be at the connector to which the line driver will mate.

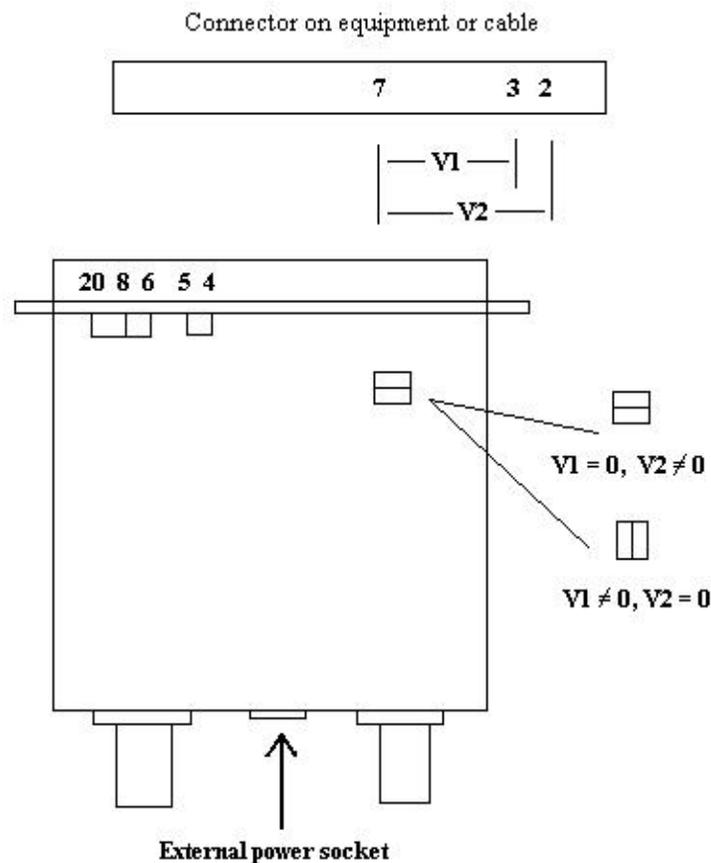
- a) If 2-7 is a non zero voltage then the equipment is DTE.
- b) If 3-7 is a non zero voltage then the equipment is DCE.

The measured voltage should be greater than 5.5 volts unless an external power source such as the PC1 power cube is being used.

Having determined the type of the equipment the line drivers can now be set up.

### Setting up the line driver for DTE/DCE

- 1) If the equipment to which the line driver is being attached is DTE, then the line driver should be set for DCE. Conversely DCE equipment needs a DTE line driver.
- 2) Remove the single screw which holds the top cover in place.
- 3) Set the pair of jumpers to DTE or DCE as required. (The markings on the cover will act as a reminder to the setting).
- 4) Replace the cover.



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