



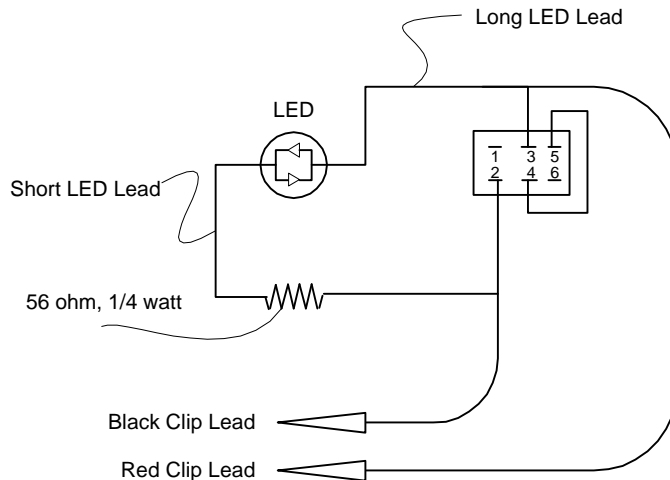
TECH TIP

VICON TECHNICAL SERVICES GROUP

Subject: Data QuickTester
Product: RS422 Data
Number: 1400-0001-24-00
Date: 07/03/01

Data QuickTester

The item shown below in schematic form is a quick means of testing for RS422 or RS485 data in the field. This tester is not a substitute for an oscilloscope; it is intended to give the field technician a quick means to determine the absence or presence of control data at data distribution units, keypads, receivers, or any device in a system operating via RS422 or RS485.



BiColor LED: Radio Shack 276-012

Clip Leads are part of 14" Jumper Lead Set,
Radio Shack 278-1156C

Connector: Cinch-Jones P-306-CCT

This unit is assembled in a 6-pin Cinch™ plug (the same connector plug used for V1200X-DL Data Distribution Unit) for ease in checking outputs at J1 – J10. The test leads allow its use in other areas, such as a keypad or receiver input or output. The test leads cannot be used while the unit is plugged into a –DL. If a Cinch™ plug is not available, the resistor/LED combination can be used with the test leads alone. The Radio Shack™ LED specified has one lead longer than the other to be used in identifying polarity.

Plugged into, or connected to, an operational –DL by itself, the LED should be predominately green (it actually flashes at the data rate but is difficult to see) with the center flashing red at the same rate. If the Command Pos and Neg signals were reversed, the LED would be red with a flashing green center.

If the tester is used with the clip leads, connect the red lead to the Command or Response Pos and the black lead to Command or Response Neg. With either Command or Response connected, the LED indications should be the same as above.

For RS422, steady green or red means no data present, only a continuous voltage level. Absence of color means no data or voltage, possibly an open circuit or a wire shorted to ground. For RS485, the only indications will be when data is actually present. In a no data condition, both sides of an RS485 line are at approximately the same potential which will not light the LED. Knowing the communications type will greatly ease troubleshooting.

The flashing should increase as data is generated by system switching or joystick operation.

Please note that the presence of a significant amount of data on the line may make the red indicator appear to be the dominant color and give a false indication that the polarity may be reversed. This is an area where familiarity with the *QuickTester* operation will be of value.