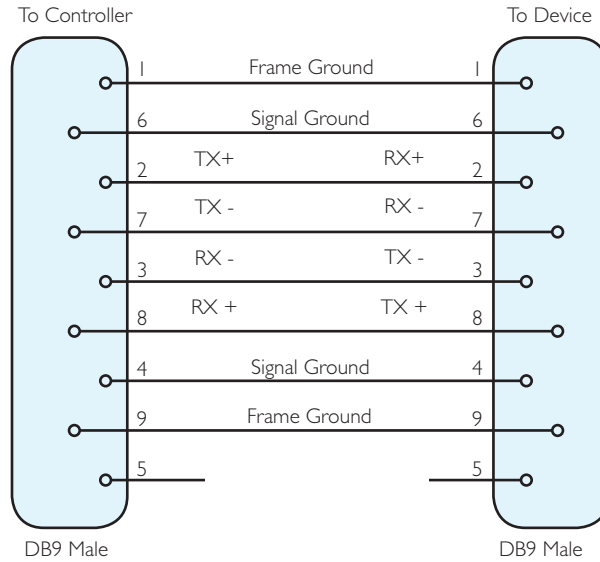


# RS 422 Tester – Instructions

## RS-422 Cable

RS-422 uses a 4 wire balanced point to point data connection between pieces of equipment, one designated controller and another designated as device. It allows fast control of equipment such as VTR's, Graphics, routing switchers and video servers.



RS422 Cable  
Figure 1

Figure 1 shows the wire connections used in a RS-422 cable, male DB9 plugs are used on the end of the cable. The transmitter (TX) from the controller uses a balanced pair of cables to send to the receiver (RX) on the device and the TX from the device uses a balanced pair of wires to send to the controller. There is also a signal ground associated with the data pairs.

## RS-422 Tester

The RS-422 tester uses two pairs of LEDs to indicate that the connection between controller and device is working correctly. One Green/Red LED pair tests the link from controller to device TX/RX is working, the other Green/Red LED pair tests that the link from device to controller TX/RX is working.

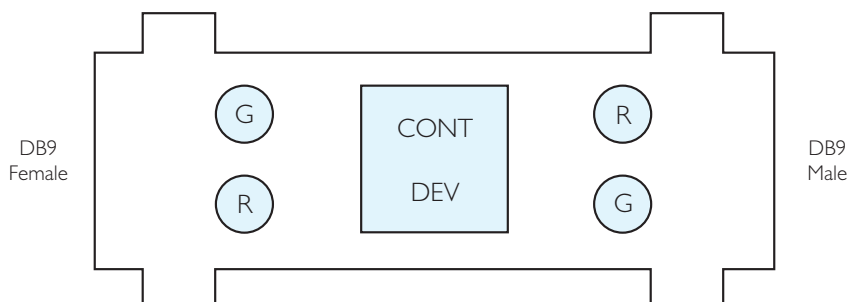


Fig 1 Outline of RS-422 Tester

### **Testing Controller Port**

First ensure that the controller RS-422 port is configured and enabled using the software manual for the controller. Then plug the RS-422 tester into the controller female DB9 port. The controller green LED should light; any other condition shows a controller fault.

### **Testing Device Port**

As with the controller, ensure the device RS-422 port is configured and enabled using the software manual for the device. Then plug the RS-422 tester into the device female DB9 port. The device green LED should light, any other condition shows a device fault.

### **Testing between Controller and Device**

With the RS-422 tester plugged in the device, plug a RS-422 cable from the controller into the other end of the RS-422 tester. Both Green LEDs should now be lit. When data is sent between the two units, the red LED should also flash. Depending upon the baud rate of the data the flashes may be of short duration.

### **Testing RS-422 Cable**

Confirm the RS-422 ports on the device and controller are functioning correctly as noted above. Plug the cable into the device and the tester into the end of the cable. The device green LED should light. If the device red LED is lit then the device TX+/TX- wires are swapped. If the controller LEDs are lit, then the device TX+/TX- pairs are swapped.

Repeat the test with cable connected to the controller port and tester connected to the cable. Now the Green controller LED should light. If the Red controller LED lights the controller TX+/TX- wires are swapped. If the device LEDs are lit, then the controller TX+/TX- pairs are swapped.

Finally, connect the device and controller together with the tester connected inline, only the Green controller LED and Green device LED should be lit. The Red LEDs will flash when data is passed between equipment.

No LEDs lit means a cable fault. Red LEDs permanently on means TX+/RX- swapped.

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