

Q: How Do I Connect Two RS-422 Devices Together?

A1: The connections for two devices with Receive and Transmit RS-422 signals is shown in Figure 1. This represents the RS-422 connections of a device, card or converter. This is a "4-wire" connection, one pair of twisted wires is used for Receive, the other for Transmit. Signal Ground is used as a Common reference.

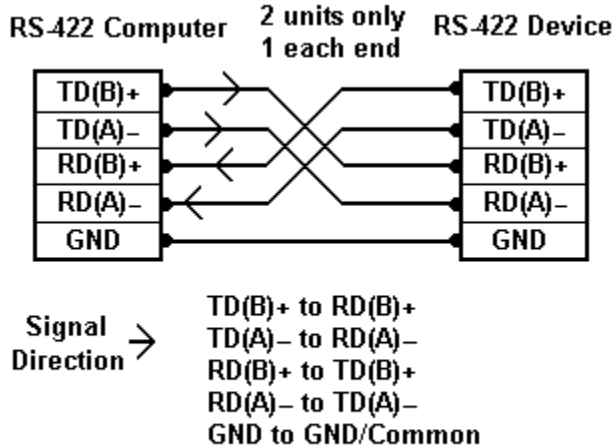
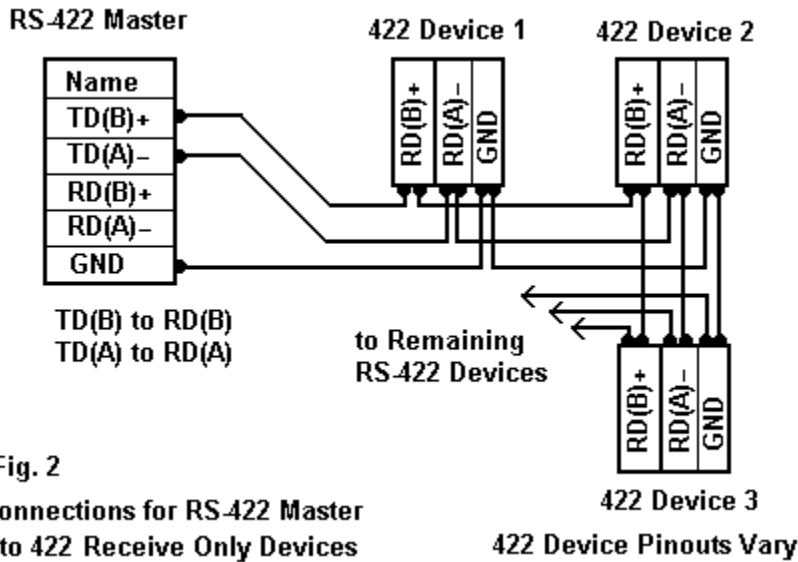


Fig. 1 4-Wire RS-422 Connections

A2: There are many conditions that use a "2-wire" RS-422, where a signal master uses one wire pair and ground to talk to multiple devices that receive only (no Transmit). RS-422 is used to go the distance and to multi-drop to connect multiple listeners. This connection is commonly used for Security/Surveillance Video Cameras to control the Pan/Tilt/Zoom (available from Pelco or others), or to connect displays for signage indoors or outdoors, clock displays, etc. Depending on the device receiver type, up to 32 (12K impedance nodes) or 11 RS-422 receivers can be connected without a repeater.



**Fig. 2
 Connections for RS-422 Master
 to 422 Receive Only Devices**