

Cable and Connectors for the Monitor-and-Control Bus
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The monitor-and-control bus requires two balanced pairs of connectors: one for command signals from the computer to the interface units, and the other for monitor signals from the interface units to the computer. A cable containing two twisted pairs within a single outer shield will be installed in a daisy-chain arrangement from the computer to the units to be connected to the bus. The connectors for use with this cable are the 9-pin D-type with RFI shielded hoods. Since the cable contains signals going in both directions, there is no logical reason to assign a particular sex to any connector. For simplicity the following arbitrary choice has been made: connectors mounted on the cable will be plugs (male) and connectors mounted on the racks or other units will be sockets (female). There will be two sockets wired in parallel at each point where the bus connects with equipment, to allow the cable to be connected and then run on to the next piece of equipment in the chain. At the last unit the command lines of bus will be terminated by a plug containing 100-ohm resistive loads.

Following are the recommended part numbers and the pin numbers to be used.

Cable: Belden 9842

| | | | |
|--------------|---------------------|-------|-----------|
| Pin Numbers: | command signals | red | pin no. 1 |
| | command signals | black | pin no. 2 |
| | readback signals | white | pin no. 8 |
| | readback signals | black | pin no. 9 |
| | drain wire (ground) | | pin no. 5 |

Shield for Cable-Mounting Connector: Amp 745171-5

Crimp Ferrules for Braid Connection: Amp 1-745129-7 (inner)
1-745130-0 (outer)

RFI Gasket for Panel Mounting Connector: Amp 747024-3

9-pin D Connector. For good grounding should have tin-plated steel shell and grounding indents on plug. Units of this type with solder-pot contacts are:

| | |
|----------------------|------------------|
| Amphenol 17-12090-00 | (socket, female) |
| Amphenol 17-22090-00 | (plug, male) |

(Similar connectors with different wire contacts (e.g. crimp pins) could be used if preferred.)