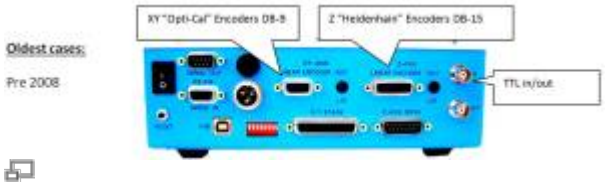
Detailed Pictorial MS-2000 Cable Connection Instructions

This procedure gives pictorial instructions on how to connect nearly all of the cables to your MS-2000 controller. (The USB and Serial-Out cables are not covered here.) Please note that, depending upon what options you have selected when purchasing your unit, some of the connections mentioned may not be available on the unit that you received.

Figure 1. Back of MS-2000 controller with all options available

MS2000 and RM2000 Case Variations



Oldest case: Pre 2008 ; Click to Enlarge

Encoder Rev Cases; Click to Enlarge

Latest Cases; Click to Enlarge

Zeiss Build Case; Click to Enlarge

RM2000: Rack Mount Controller; Click to Enlarge

Connecting XY Stage Cables: Figures 2 through 8:

Figure 2. XY Stage connectors on stage

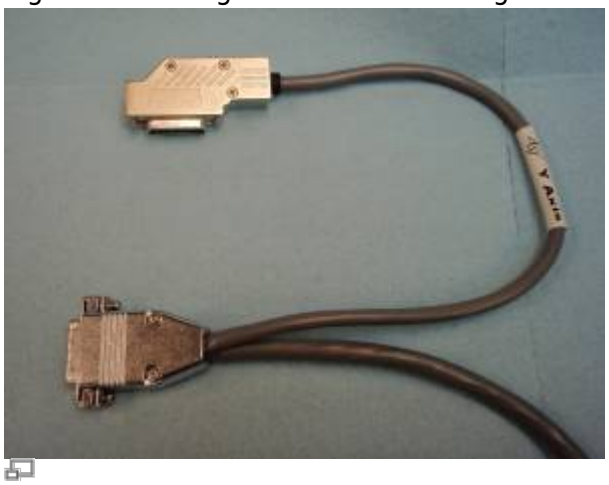


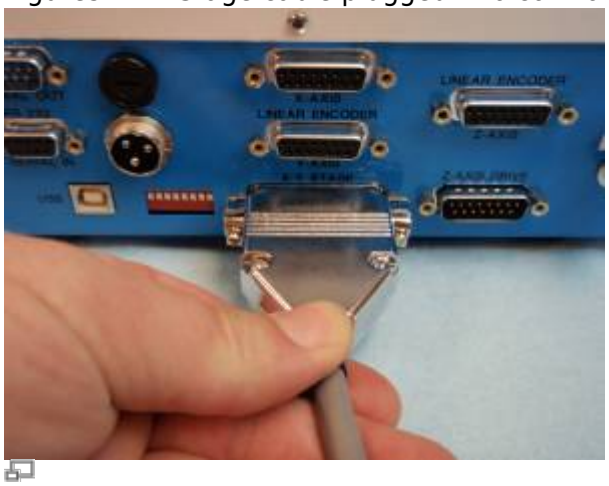
Figure 3. XY Stage cable, stage end.

Figure 4. X-axis cable connects to bottom stage plug.

Figure 5. Y-axis cable connects to top stage plug

Figure 6. XY Stage cable, controller end label

Figures 7 XY Stage cable plugged into controller



Figures 8. XY Stage cable plugged into controller

Connecting XY Stage Linear encoders: Figures 9 through 18

Figure 9. XY Linear Encoder Cables and the back of the MS-2000 controller.

Figure 10. Y Axis Linear Encoder plugged into controller. (bottom plug).

Figure 11. Y Axis Linear Encoder plugged into controller. (bottom plug).

Figure 12. X-axis Linear Encoder plugged into controller. (top plug).

Figure 13. X-axis Linear Encoder plugged into controller. (top plug).

Connecting Z-Axis Drive: Figure 14 though 16

Figure 14. Z-Drive and Z-Drive cable connected

Figure 15. Z-Drive and Z-Drive cable connected

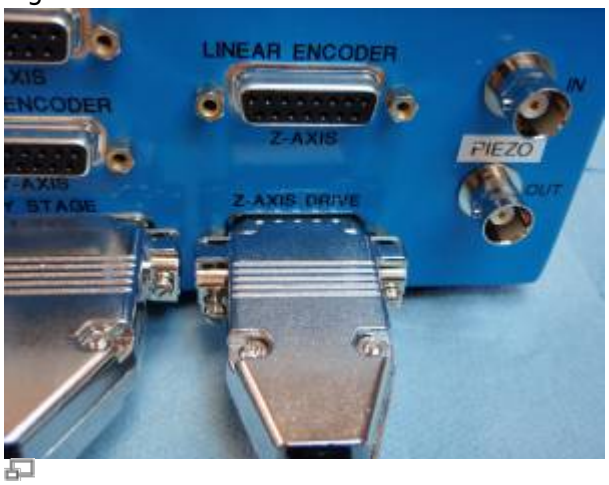


Figure 16. Z-Drive cable connected at controller end.

Connecting Z-Axis Linear Encoder: Figure 17 through 18

Figure 17. Z-Axis Linear Encoder, read head and plug end.

Figure 18. Z-Axis Linear Encoder plugged into controller

Connecting RS232 Serial Cable: Figure 19 through 22

Figure 19 Serial-In Plug on MS-2000

Figure 20 Serial-connected on to MS-2000

Figure 21. Typical PC

Figure 22. Serial cable connected

Connecting Power: Figure 23 through 24

Figure 23. Power Connector on MS2000

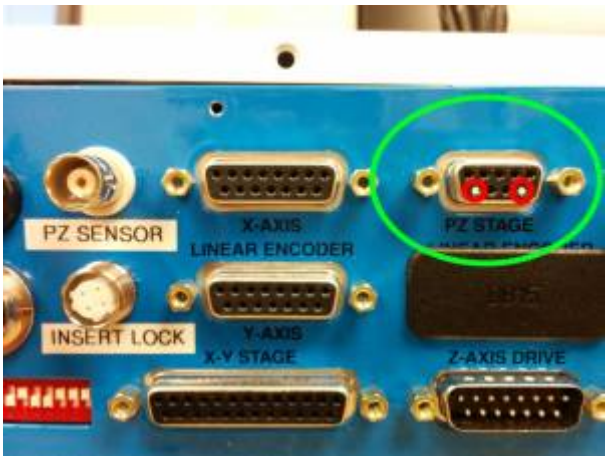
Figure 24. Power Plug connected to MS2000

Connecting Piezo Stage to MS2000 controller

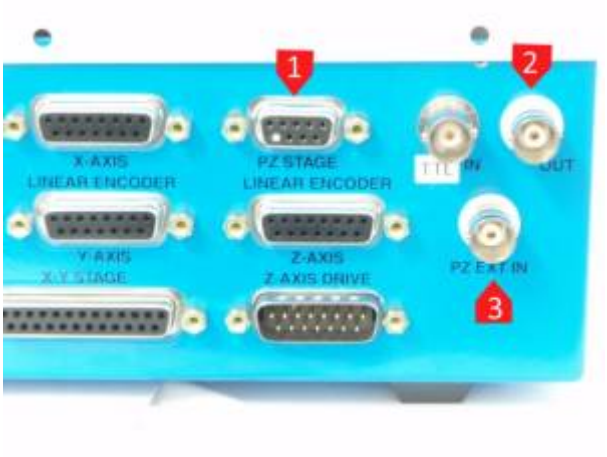
The Piezo stage connector is a male DB9 connector with 2 pins removed.

The Corresponding connector on the controller is a Female DB9 connector with two pins permanently plugged. This prevents connecting serial cable or crisp accidently to the piezo connector, Doing so will

damage these devices as the Piezo connector carries very high voltage.



Apart from the DB9, the controller also has 2 BNC connector **PZ Sensor Out** and **EXT IN** . These are optional connectors and don't need to be connected for regular operation.



Connecting Piezo and TTL BNCs:Figure 25 through 26

Figure 25 Piezo Out Plug on MS-2000

Figure 26 TTL-In Plug on MS-2000

Figure 27. MS-2000 Power Supply can now be connected to an AC power source.

Connecting to LED Illuminator when 4-Pin Connector is Present

LED Illuminator

The LED illuminator connects to the MS2000, MFC2000, RM2000 and TG-1000 with the cable shown below.

LED cable

The Cable has a mini-usb end that plugs into the Illuminator itself. Then the 4-Pin HiRose connector plugs into the Controller. Location of the HIRose connector is shown below.

Location of 4-Pin HiRose Connector and TTL out on MS2000 and MFC2000

Location of 4-Pin HiRose Connector and TTL out on RM2000

Connecting to LED Illuminator when 4-Pin Connector is Absent

However not all controllers come with the 4-Pin HiRose connector installed.

Controller with no HiRose Connector. However TTL Out is always present.

In that case, ASI will supply this Y cable(shown below). The HiRose end plugs into the LED cable's HiRose end. Then the BNC plugs into the TTL Out , and the wall-wart to the wall wart.

Work Around Y cable

5V to 9V wall-wart

Please note , the controller needs a LED firmware module to operate the LED. If the LED illuminator was ordered later as an upgrade , controller may not have the necessary firmware. To Check , Issue serial command BU X . If the controller replies with `LED DIMMER` then the controller has the necessary firmware needed. If not, contact ASI with your controller's serial number and request for it.

manual, ms2000, led