QUICK START GUIDE 994-008

UB-500A, UB-1500A and UB-4000A LINEAR DC POWER SUPPLY

AMADA WELD TECH

Revision	ECO #	Date	Basis of Revision
A	42701	7/13	Original Publication.
B	43438	11/14	Updated to Amada Miyachi America name and logo plus multiple wiring options added.
C	44390	09/16	Added UB29A Model
D	46131	12/20	Update Model Numbers and change to Amada Weld Tech format

This Quick-Start Guide covers the following models:

Current Model Name	Current P/N
UB-500A	1-335-05
UB-1500A	1-336-05
UB-4000A	1-340-05

SPACE REQUIREMENTS

- Install the Power Supply in a well-ventilated area that is free from excessive dust, acids, corrosive gasses, salt, and moisture.
- Allow sufficient clearance around both sides and the back for power and signal cable runs.
- The work surface must be level, stable, and free from vibration.
- The Power Supply must be far enough from the Weld Head to avoid contact with weld splash.
- Makes sure there are no sources of high-frequency energy close by.

POWER REQUIREMENTS

88–264 VAC, 47–63 Hz, 10A Single Phase.
Connect the included IEC power cable into the **AC INPUT** connector on the rear panel of the Power Supply.

ELECTRICAL AND DATA CONNECTIONS

Install Voltage Sensing Cable and Weld Cables.

Attach the voltage sensing cable and weld cables as shown for a manual or air-actuated (EZ-Air) weld head.

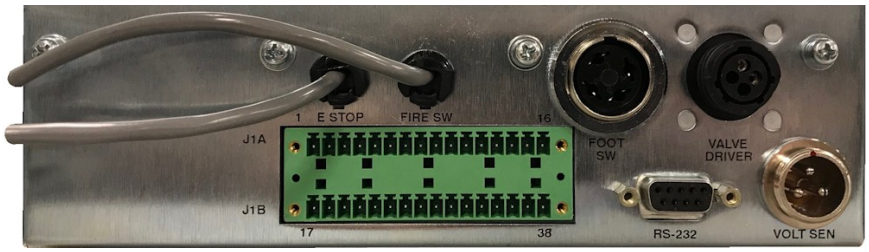
Connecting the Power Supply

The following instructions give you two options to connect the Power Supply to your existing equipment, choose the option that best suits your installation requirements. For each option you ***must*** install two 16-pin mating plugs to I/O connectors **J1A** and **J1B** on the rear panel. **Option A** uses plugs supplied in the ship kit, **Option B** uses 16-pin connectors already wired on cables. These connectors contain factory-wired jumper wires for a typical basic I/O connection configured for negative logic. ***The Power Supply will not function if these plugs are not installed.***

The connector pin identification and specifications for the rear panel connectors are located at the end of this Guide as well as in the 990-919 User's Manual, Appendix *B. Electrical and Data Connector*s.

The Power Supply is manufactured with 16-pin Phoenix connectors on the rear panel for I/O connections as shown on the right.

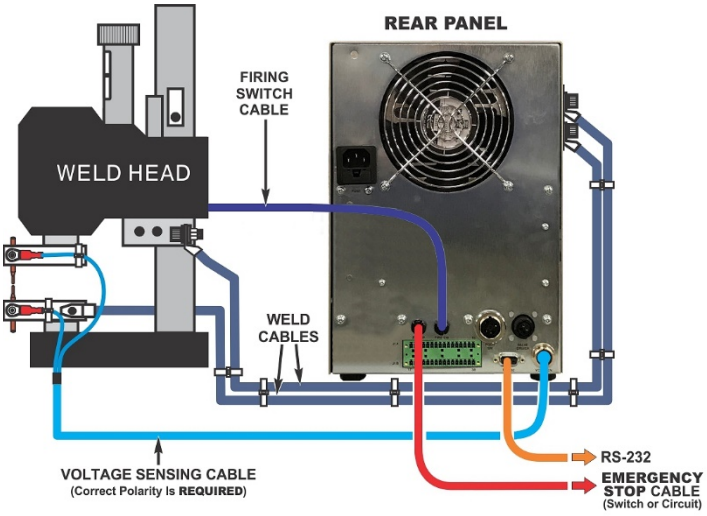
Two 16-pin mating connectors are included in the Ship Kit. Connections to these mating plugs is done using screw terminals inside the connector so no soldering is necessary.



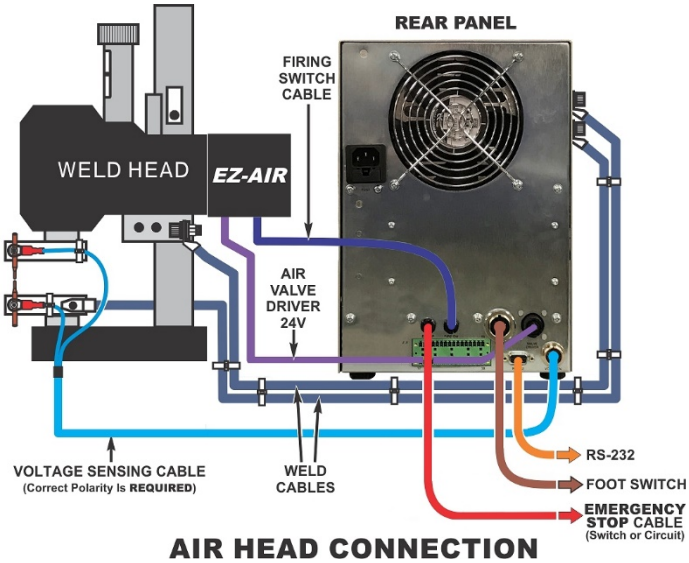
REAR PANEL CONNECTORS

WIRING OPTION A

For a basic I/O installation, use the connections shown below for the manual or air heads. You need to make the wiring connections to the two 16-pin mating connectors using the **I/O SIGNAL INTERFACE CONNECTOR SPECIFICATIONS** on page 3 for pin identification. For a more comprehensive I/O installation, see the 990-919 User's Manual for the Power Supply. ***Optional accessories for wiring to these I/O connectors are also shown below.***



MANUAL HEAD CONNECTION



AIR HEAD CONNECTION

WIRING OPTION B

This option is similar to **Option A**, but uses the optional factory-wired **10-378-01 - PWACA Pre-Wired Footswitch/Firing Switch/Valve Driver Adapter Cable.** This wiring harness provides discreet connectors for the Footswitch, Firing Switch, and Valve Driver signals to the I/O Connectors. Connect the two 16-pin mating plugs attached to this cable to the 16-pin I/O connectors on the back panel. Attach your equipment to the appropriate connectors on the **Adapter Cable**.

NOTE: The two 16-pin mating plugs provided in ship kit are not needed for this wiring option.

Accessory Part Numbers and Descriptions

Required Accessories:

- **Weld Cables** (various part numbers depending on application). Install as shown in the diagrams above.

Optional Accessories for Wiring to the I/O Connectors:

- **10-378-01 – PWACA Pre-Wired Footswitch/Firing Switch/Valve Driver Adapter Cable.**
- **10-242-01 – FS2LNC 2-Level Footswitch.** Connect the wire leads to **J1A-1**, **J1A-2** and **J1A-6**.
- **10-382-01 – AVCA Valve Drive Adapter Cable**. Connect the wire leads to **J1B-31** and **J1B-32**.
- **10-383-01 – FCA Firing Cable Adapter Cable.**
  Connect the wire leads to **J1A-3** and **J1A-6** for negative logic installation.
- **10-384-01 – FSCA Footswitch Adapter Cable for footswitches FS1L and FS2L**.
  Connect the wire leads **to J1A-1**, **J1A-2** and **J1A-6**.

Partial Listing of I/O Signal Interface Connections

NOTE: See 990-919 User's Manual, Appendix B for complete signal table.

PIN #	NAME	I/O	VOLTAGE (MAX)	CURRENT (MAX)	SIGNAL TYPE	COMMENTS
J1A-1	FS1	I	+ 24 VDC	5 mA	voltage signal	Foot Switch 1 input
J1A-2	FS2	I	+ 24 VDC	5 mA	voltage signal	Foot Switch 2 input
J1A-3	Fire	I	+ 24 VDC	5 mA	voltage signal	Firing Switch input
J1A-4	F3 Pullup	I	+ 24 VDC	15 mA	voltage signal	Jumper to pin no. 5 or 6, as appropriate, to receive FS1, FS2, and Fire switch input circuit excitation
J1A-5	24V +	O			24V_I/O DC Power Supply	Provide FS1, FS2, and Fire switch input circuit excitation
J1A-6	24V -	O			24V_I/O DC Power Supply	Provide FS1, FS2, and Fire switch input circuit return
J1A-7	I/O Common	I	+ 24 VDC	45 mA	voltage signal	Jumper to pin no. 8 or 9, as appropriate, to receive input circuit excitation for Binary 0 to Binary 6, Weld Inhibit, and Reset Alarm inputs
J1A-8	24V +	O			24V_I/O DC Power Supply	Provide input circuit excitation for Binary 0 to Binary 6, Weld Inhibit, and Reset Alarm inputs
J1A-9	24V -	O			24V_I/O DC Power Supply	Provide input circuit return for Binary 0 to Binary 6, Weld Inhibit, and Reset Alarm inputs
J1B-19	EMO1	O	+24 VDC			Emergency Stop (EMO) Switch terminal 1
J1B-20	EMO2	I		2 A		Emergency Stop (EMO) Switch terminal 2
J1B-31	VALVE+	O	+24 VDC	0.5 A	voltage signal	Valve Driver +
J1B-32	VALVE-	O		0.5 A	voltage signal return	Valve Driver -