OWNER'S MANUAL

OM-265411F   2016−12
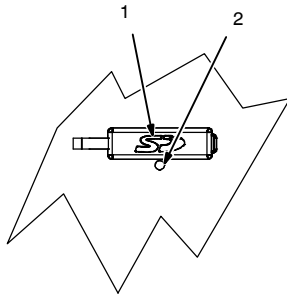
Miller®

Dynasty® – Maxstar®
Automation Expansion

> ⚠ 📖 Read and follow the power source Owner's Manual and labels carefully before installing, operating, or servicing unit.
> Read the safety information at the beginning of the manual and in each section.

1-1. Software Expansion

☞ *A software update is required to ensure proper operation of all purchased feature expansions. For instructions to download TIG Software updates, see PDF file F269272 on software expansion memory card.*

Card Requirements:

☞ *Purchased software expansion memory card required.*

1 Memory Card Port
2 Indicator LED

Enabling Software Expansion:

Insert card containing software expansion into port.

LED indicator blinks green while machine is reading from or writing to the card. After successfully reading from or writing to the card, the LED switches from blinking green to continuous green. The machine is now ready to use software expansion. **Do not** remove card while LED is blinking green.

☞ *Software expansion card must remain in memory card port to enable software expansion.*

Disabling Software Expansion:

Remove the software expansion card from the memory card port.
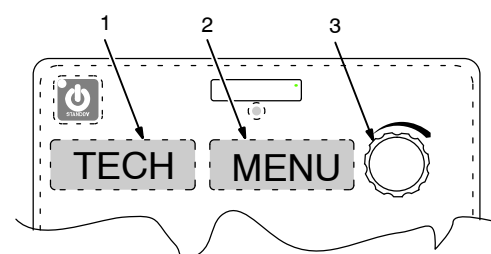
Troubleshooting:

Problem: Indicator LED is continuous red.

Remedy: Remove and reinsert card. If problem continues, the card is bad. Contact Factory Authorized Service Center for a replacement card.

The memory card port uses an SD memory card. The SD Logo is a trademark of the SD-3C LLC Company.

Automation Expansion – Enabling the automation software expansion configures Remote 14 socket I for valid arc and socket J for arc length control, and the ability to configure socket E as an input for Output Enable (Weld Stop) in Dynasty and Maxstar Models.

Additional Parts Required: Plug and pins required to connect to the Dynasty or Maxstar Remote 14 receptacle can be obtained from Miller Electric Mfg. Co.   Parts Dept. :Order Part No. 141 162 – Housing Plugs + Pins (service kit), and install according to instructions provided with the kit.

1-2. Automation Remote 14-Socket E

☞ *See ADVANCED MENU FUNCTIONS in the Dynasty/Maxstar Owner's Manual for additional information on Accessing Tech Menu options.*
The [14-E] option is before [MACH] [RSET], replacing the existing [EXPC] option.

1 Parameter Display
2 Setting Display
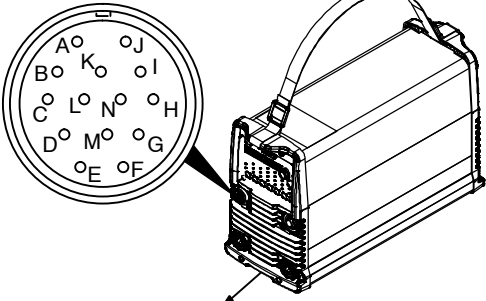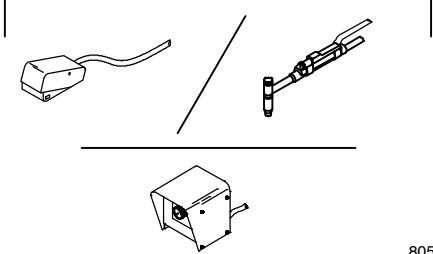3 Encoder

Rotate Encoder to adjust parameter setting.

[14-E] Remote - Remote14-Socket E input can be configured for the following:
[RMT] –   Remote Controls – Select when using typical Miller remote amperage controls such as: RFCS - 14 HD Foot Control, or RCC -14 Remote Contactor and Current Control
[EXPC] – External Pulse Control – Select when it is desired to control machine amperage from an external source. A command voltage of 0–10 volts DC equals 0 (off) – maximum amperage.
[STOP] – Output Enable (weld stop) – Select to remotely stop the weld outside the normal weld cycle.
          Remote 14 socket E connection to socket D must be maintained at all times to enable output. If connection is broken, output stops, postflow begins, and AUTO STOP is displayed on the meters.

1-3. Remote 14 Receptacle Information

REMOTE 14	Socket	Socket Information
15 VOLTS DC ⊖→ **OUTPUT CONTACTOR**	A	Contactor control +15 volts DC, referenced to G.
	B	Contact closure to A completes 15 volts DC contactor control circuit and enables output.
REMOTE OUTPUT CONTROL	C	Output to remote control; +10 volts DC output to remote control.
	D	Remote control circuit common.
	E	0 to +10 volts DC input command signal from remote control. *Reconfigurable as input for Output Enable (Weld Stop) – used to remotely stop the weld outside the normal welding cycle. Connection to the D socket must be maintained at all times. If the connection is broken, output stops, and Auto Stop is displayed.
Output Signals	F	Current feedback; +1 volt DC per 100 amperes.
	H	Voltage feedback; +1 volt DC per 10 volts output.
	I*	Valid arc indication closed to socket G with valid arc. Electrical specifications: open collector transistor (see Section 1-4 for connection example).
	J*	Arc length control lockout closed to socket G during Initial and Final Amperage and Slope, and during the background time of a <=10 Hz pulse waveform. Electrical specifications: open collector transistor (see Section 1-4 for connection example).
	**	Touch Sense Detection closed to Socket G, with Modbus's Touch Sense enabled and machine not triggered for weld output.
COMMON	G	Return for all output signals: F, H, I, J and A.
CHASSIS	K	Chassis
Serial Communication Bus	L**	Modbus Common (RS485 Common)
	M**	Modbus D1 (RS485 B+)
	N**	Modbus D0 (RS485 A-)

Sockets G and K are electrically isloated from each other.

☞ *If a remote hand control, like the RHC-14, is connected to the Remote 14 receptacle, some current value above min. must be set on the remote control before the Panel or Remote contactor is turned on. Failure to do so will cause current to be controlled by the panel control, and the remote hand control will not function.*
*Available with optional Automation Expansion memory card.
**Available with optional Modbus Expansion memory card. Modbus serial communication provides access to all front panel parameters and machine functionality. See Owner's Manual 265415 for a list of Modbus registers. Modbus expansion also includes functionality of Automation, AC Independent Amplitude (Dynasty 210/280 only), Hot Wire and Hot Start Adjust Expansions.

1-4. Simple Automation Application

Coil resistance plus R should be chosen to limit current to 75 mA

CR1

To User Equipment

Pin I, J: Collector

Pin G: Emitter

+ − User supplied power up to 27 volts DC peak