

USER MANUAL

PRO SPOT®
QUALITY WELDING SYSTEMS

Multi Task Welding System

PR-2



MADE IN U.S.A.

WARRANTY CARD

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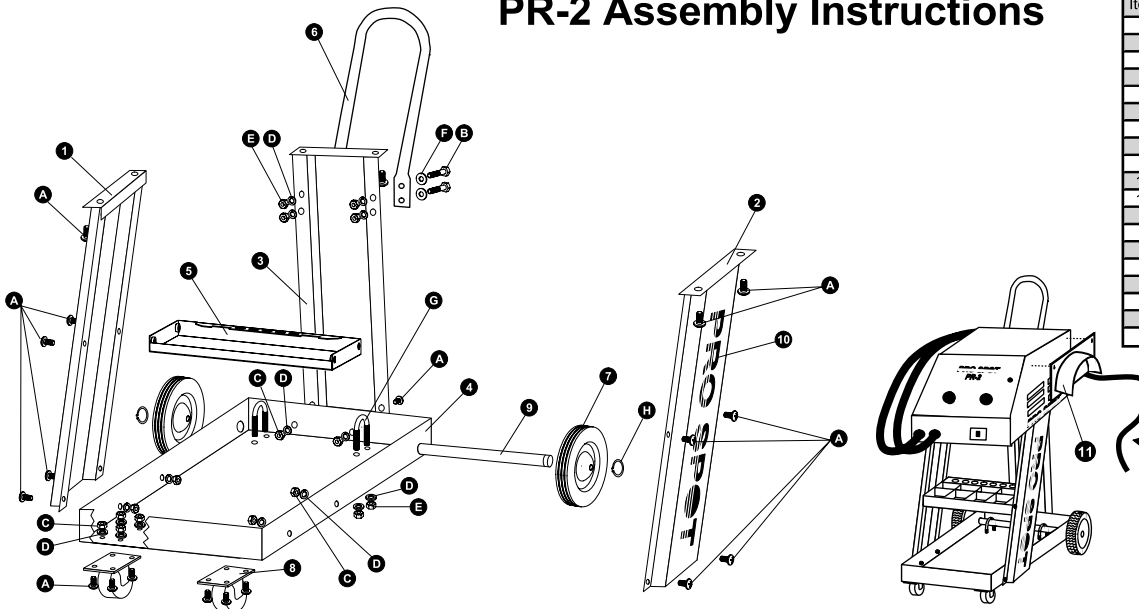
FILL OUT AND MAIL TO ENSURE WARRANTY REGISTRATION

Company name:		Owner's name:		Address:	
City:		State:	Zip:	Phone:	
Fax:		E-Mail:		Web Site:	
Model Purchased:		Date of purchase:	Serial No:		Purchased from:
Buyer is: Body shop owner <input type="checkbox"/>		Body man <input type="checkbox"/>		Other <input type="checkbox"/> Please explain:	
		How did you first get to know about our product:			
Comments:					

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PR-2 Assembly Instructions



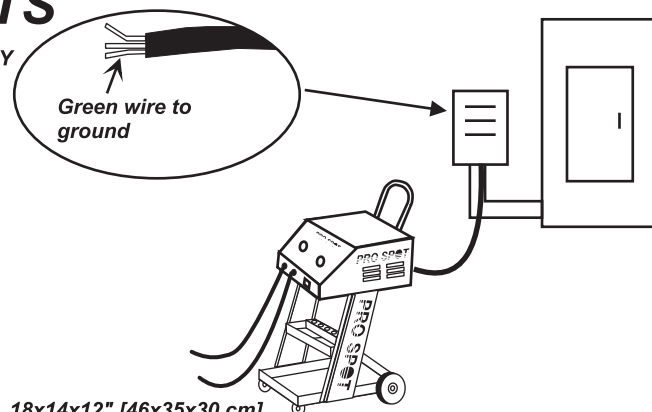
Item	Part #	Description	Qty.
1	P2-02	Stand Right Member	1
2	P2-03	Stand Left Member	1
3	P2-04	Stand Rear Member	1
4	P2-05	Stand Bottom Tray	1
5	P2-08	Stand Tool Tray	1
6	P2-17	Stand Handle	1
7	P-03	6" Solid Wheel	2
8	P2-09	2" Swivel Caster	2
9	P2-12	Wheel Axle	1
10	P2-50Y	Decal - 15" Pro Spot	2
11	P6-18	Cable Holder	1
A	S-43	M6x10 PPHS	22
B	S-50	1/4 - 20 x 1 1/4" HHCS	4
C	N-03	M6 Nut	14
D	W-20	1/4" Lock Washer	22
E	N-06	1/4x20 Nut	8
F	W-15	1/4 x 5/8 SAE Flat Washer	4
G	P-05	1/4x20 U-Bolt	2
H	SR-07	1/2" External Snap Ring	2

Install approved electrical plug, consult electrician. Attach green wire to earth. White & black wire to 208-240V 50-60 Hz.

INSTALLATION REQUIREMENTS

CONSULT A CERTIFIED ELECTRICIAN TO INSTALL THIS WELDER PROPERLY

- * This welder is designed to operate with 208-230V
- * Connect green wire to the ground
- * Install welder over an external breaker.
- * This welder does not come equipped with an electrical plug. Consult your electrician for selection of proper plug. The plug should be rated at 240 volt 30 amp(minimum), 1-phase



SPECIFICATIONS

Input voltage.....208/230, 50-60Hz
Input amperage.....24A
Output amperage.....2000A (at tips)
Open circuit voltage.....5.5-7V
Duty cycle.....2%
Operating temperature...+5-40°C [41-104°F]
Operating humidity.....35% to 85% RH
Maximum altitude.....6562' [2000 m]

Dimensions.....18x14x12" [46x35x30 cm]
Dimensions w/cart18x14x18" [46x35x46 cm]
Weight.....69 Lbs [31 kg] (w/cart-92Lbs [42 kg])
Timer, Output.....Adjustable 10-50 cycles
Current control.....Variable 10-100%
Welding cable.....8' [2.5 m] long AWG 3/0
Ground cable.....6' [1.8 m] long
Input cable.....3 wire 10 gauge x 30' [9 m] long



WARNING



*Only qualified personnel
should install, use or service
this equipment*

ELECTRICITY CAN KILL! Confirm proper installation before operating the welder. Do not use welder if your clothing, gloves or work area is damp.

HIGH VOLTAGE CAN KILL. Do not operate welder with covers removed. Always disconnect input power before removing any panels for servicing.

CONSULT CERTIFIED ELECTRICIAN FOR INSTALLATION. Make sure ground cable is connected at all times.

WELDING SPARKS CAN CAUSE FIRE OR EXPLOSION. KEEP FLAMMABLE MATERIAL AWAY FROM THE WORK AREA. ALWAYS USE PROTECTIVE EYEWEAR AND GLOVES.

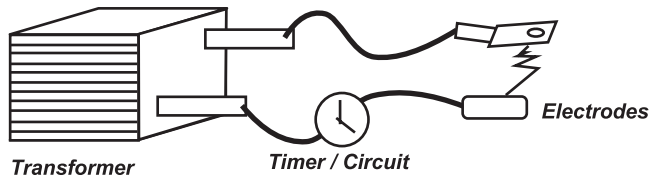
THE CABLES AND TOOLS USED WITH THIS WELDER CAN BE EXTREMELY HOT DURING OPERATION. Do not exceed welder's duty cycle.

PRODUCT INFORMATION AND FUNCTION

RESISTANCE WELDING

This resistance type welder performs a variety of functions. It was designed for the body shop industry to enhance performance, speed and flexibility for light welding and dent pulling applications. This welder performs shrinking, single sided spot welding, attachment of threaded studs and nuts, attachment of moulding clip rivets for windshields, and such welding for patch work. The biggest advantage is that very little heat is used compared to other welding methods, yet it is also clean and easy to use. There is very little clean up to do afterwards.

PRINCIPAL OF RESISTANCE WELDING



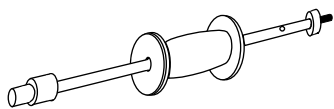
ELECTRICITY ONLY

This resistance welder uses electricity only to create the welds. No gas or wire is used. A large current with low voltage rushes through the welding cable and the copper adapter. The high resistance in the sheet metal heats quickly to melt the work pieces together. The current is controlled by a timing device on the welder that shuts the current off automatically. Both time and current are adjustable by turning the control knobs on the welder.

***ALWAYS KEEP THE COPPER ELECTRODES CLEAN**

***ALWAYS GRIND THE CONTACT AREA FREE FROM PAINT**

Welding results rely on a firm, solid connection. The ground attachment is very critical when using resistance welding. Always make sure the ground is attached firmly to a clean flat surface close to the work area. The closer the ground is attached to the work area, the better the results.

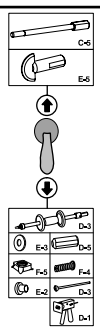
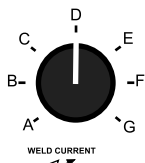


CLP-70

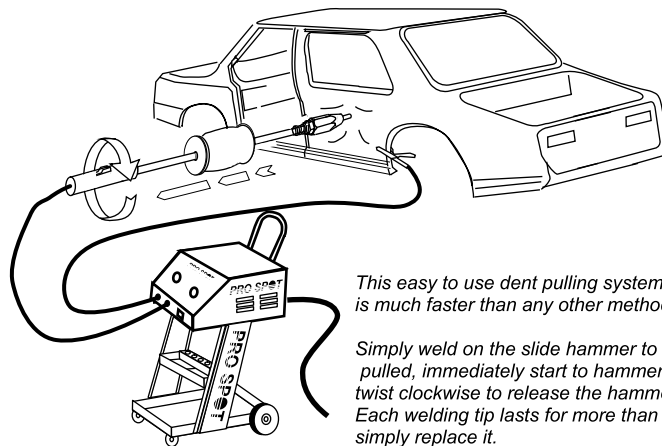
SPOT HAMMER WELDING For quick dent pulling

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FRONT PANEL SETTINGS



1. Attach the Spot hammer (CLP-70) to the cable adapter.
2. Set the welder controls according to the menu.
This is an average setting. If more or less heat is required, adjust accordingly.

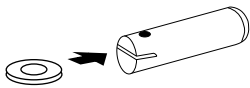


This easy to use dent pulling system is much faster than any other method on the market.

Simply weld on the slide hammer to the area to be pulled, immediately start to hammer the dent out and twist clockwise to release the hammer from the sheet metal. Each welding tip lasts for more than 1000 welds, then simply replace it.

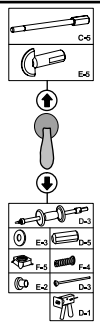
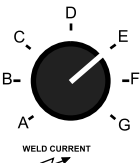
WASHER WELDING For dent pulling

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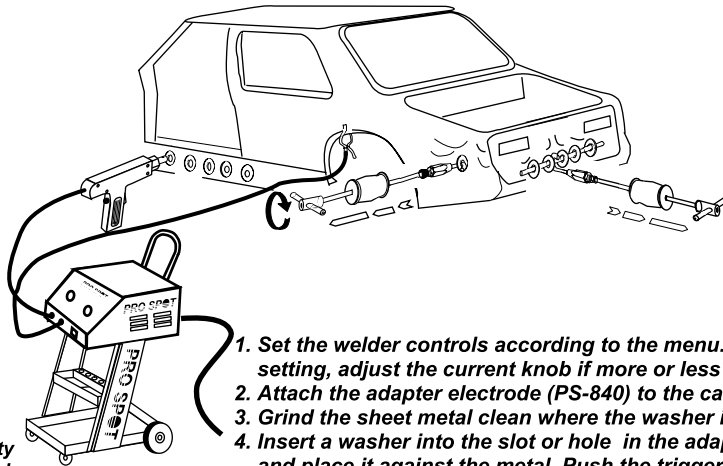


PS-840

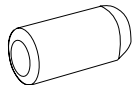
FRONT PANEL SETTINGS



This feature using washers for dent pulling increases flexibility and speed. Since the washers can be used over again, it will also save you material costs.

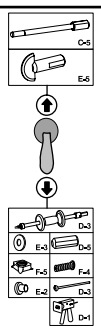
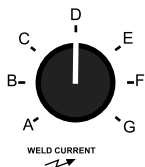


1. Set the welder controls according to the menu. This is an average setting, adjust the current knob if more or less heat is desired.
2. Attach the adapter electrode (PS-840) to the cable adapter.
3. Grind the sheet metal clean where the washer is to be welded.
4. Insert a washer into the slot or hole in the adapter, and place it against the metal. Push the trigger.
5. Use slide hammer with hook (CLP-72) to pull, twist the washer to release.



PS-860

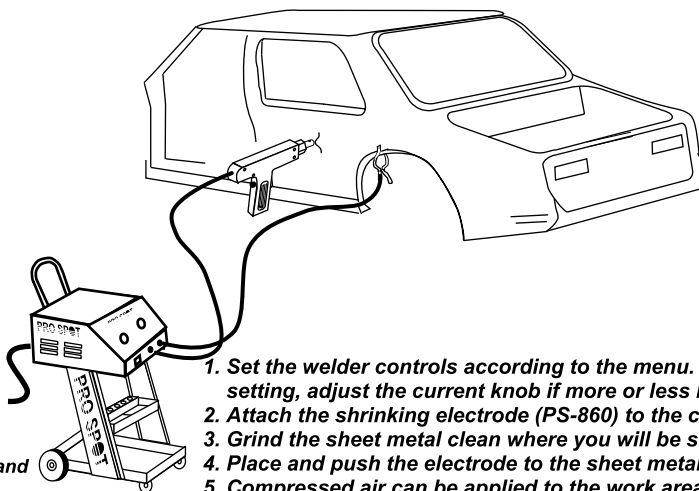
FRONT PANEL SETTINGS



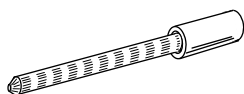
This function is excellent for shrinking any kind of high spot and can be used with a wet rag or compressed air to enhance the shrinking performance.

SHRINKING with copper tip

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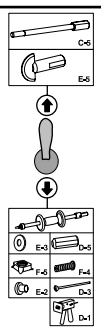
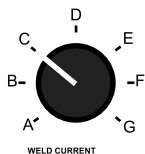


1. Set the welder controls according to the menu. This is an average setting, adjust the current knob if more or less heat is desired.
2. Attach the shrinking electrode (PS-860) to the cable adapter.
3. Grind the sheet metal clean where you will be shrinking.
4. Place and push the electrode to the sheet metal. Push the trigger.
5. Compressed air can be applied to the work area to cool the metal, and to enhance shrinking performance.



CLT-29

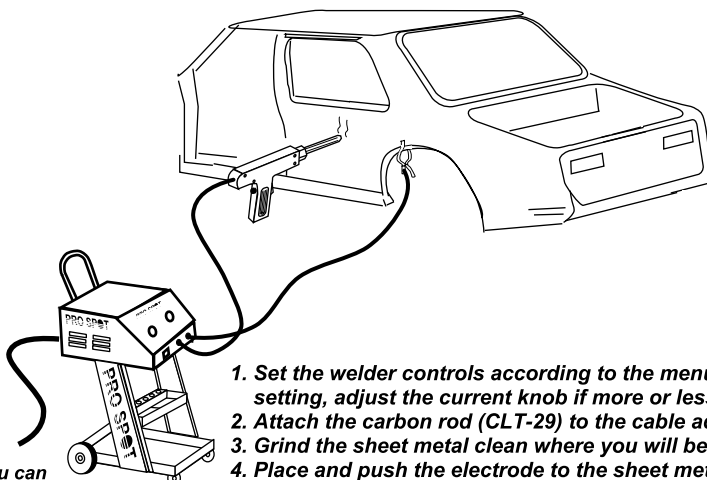
FRONT PANEL SETTINGS



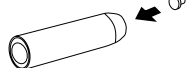
This function is excellent for stretching sheet metal. Here you can control the heat very accurately. Use a wet rag or compressed air to enhance the stretching performance.

STRETCHING of sheet metal with carbon rod

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1. Set the welder controls according to the menu. This is an average setting, adjust the current knob if more or less heat is desired.
2. Attach the carbon rod (CLT-29) to the cable adapter.
3. Grind the sheet metal clean where you will be stretching.
4. Place and push the electrode to the sheet metal. Push the trigger.
5. Compressed air can be applied to the work area to cool the metal, and to enhance stretching performance.

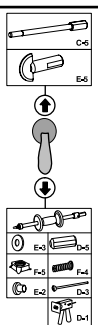
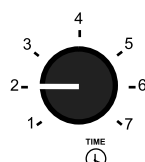
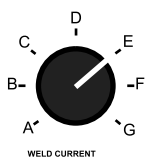


PS-1204

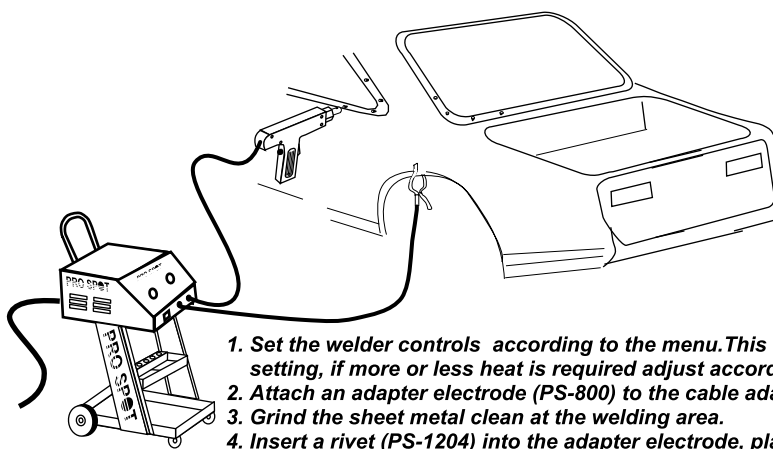
WELDING OF MOULDING CLIP RIVETS

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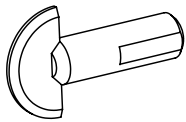
FRONT PANEL SETTINGS



This function will weld on factory type clips for the window moulding. The clips that hold the moulding do not come on the replacement parts. Simply insert the rivet into the adapter and weld it in place. Quick and easy.

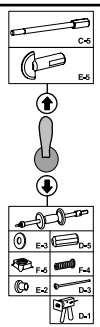
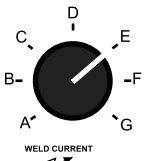


1. Set the welder controls according to the menu. This is an average setting, if more or less heat is required adjust accordingly.
2. Attach an adapter electrode (PS-800) to the cable adapter.
3. Grind the sheet metal clean at the welding area.
4. Insert a rivet (PS-1204) into the adapter electrode, place it against the sheet metal and push the trigger.



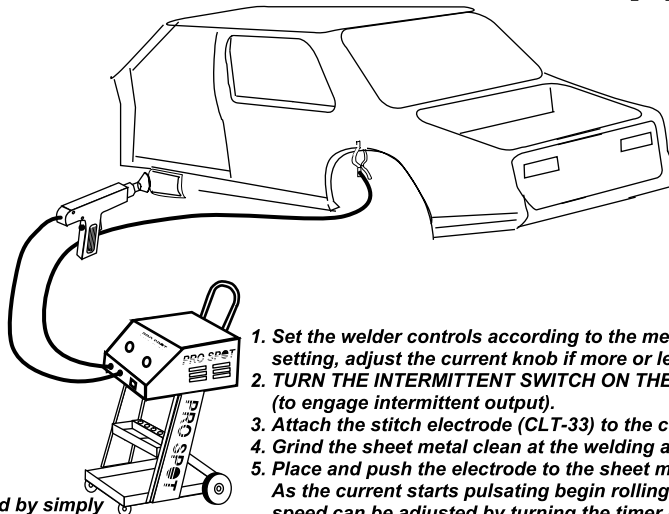
CLT-33

FRONT PANEL SETTINGS



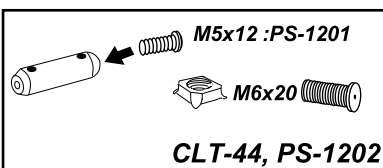
STITCH WELDING

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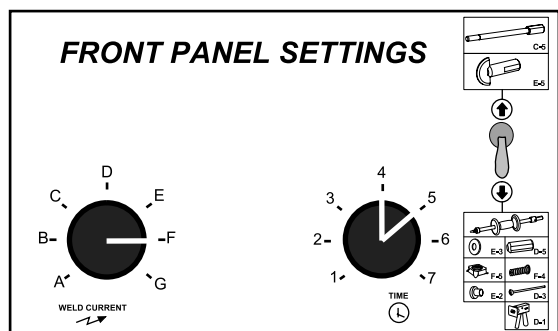
Stitch Welding makes it possible to perform a seam type weld by simply rolling the blade on top of the edge of the sheet metal. The welder will send an intermittent current output. Excellent for patching holes, rust repair etc. Will weld stainless steel on to regular steel sheet.

1. Set the welder controls according to the menu. This is an average setting, adjust the current knob if more or less heat is desired.
 2. **TURN THE INTERMITTENT SWITCH ON THE FRONT PANEL TO "ON"** (to engage intermittent output).
 3. Attach the stitch electrode (CLT-33) to the cable adapter.
 4. Grind the sheet metal clean at the welding area. 3 sides must be clean.
 5. Place and push the electrode to the sheet metal edge. Push the trigger. As the current starts pulsating begin rolling the blade. The intermittent speed can be adjusted by turning the timer knob.
- For best results use 24 gauge stainless sheet metal.
NOT RECOMMENDED FOR STRUCTURAL REPAIR

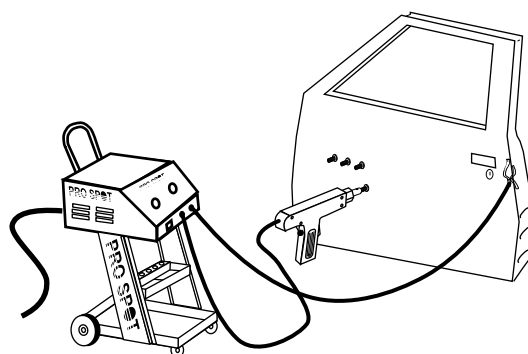


WELDING OF THREADED STUDS AND NUTS

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This function will weld threaded studs and nuts M6x20 and M5x12 on to sheet metal. Many of today's vehicles come with studs and nuts to hold interior panels, tail lights, door moulding, etc., although they are not attached to the replacement parts.



1. Set the welder controls according to the menu. This is an average setting, if more or less heat is required adjust accordingly.
2. Attach the stud adapter electrode (PS-830) to the cable adapter.
3. Grind the sheet metal clean at the welding area.
4. Insert a desired stud into the adapter electrode, place it against the sheet metal and push the trigger.

TROUBLE SHOOTING GUIDE

PROBLEM

Nothing happens while pushing the trigger

Welding a hole through the sheet metal when using single sided welding.

Weak welds.

SOLUTION

Check circuit breakers. Check voltage supply in the shop. Check switch cable for damage.

*Make sure there is contact between work pieces.
Make sure sheet metal is ground on 3 sides.
Clear copper tip of metal residue.
Adjust current and/or time down.*

*Make sure ground is connected firmly on cleaned sheet metal close to work area.
Clean copper electrodes, tighten connectors.
Too thick sheet metal is being used.*

Make sure spot hammer tip is ground ball shaped



