

# Weller®

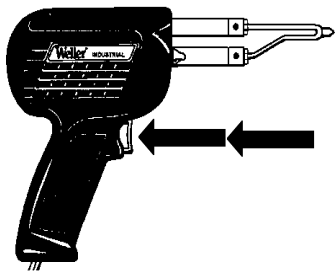
## MODEL D650 INDUSTRIAL SOLDERING GUN

### PRODUCT DESCRIPTION

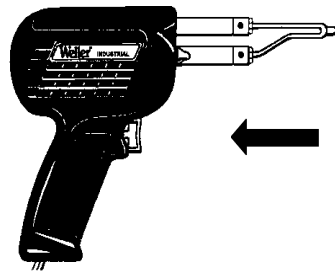
The Weller® D650 Industrial Soldering Gun is a multipurpose heavy duty tool boasting the highest power output of the Weller® soldering gun product line. The D650 yields 300 watts of power in the high trigger position and 200 watts in the low trigger position. The D650 features a new thermoplastic housing and a three wire power cord. Designed for many applications, a selection of soldering, cutting, and smoothing tips are available for the D650.

### OPERATING INSTRUCTIONS

The D650 Industrial Soldering Gun is designed for intermittent use with a duty cycle of one minute power “On”, then four minutes “Off”. For high wattage output (300 watts), pull the trigger to the first position. For low wattage output (200 watts), pull the trigger to the second position, or fully compressed. (See Figure below).



LOW TRIGGER POSITION  
(200 Watts)



HIGH TRIGGER POSITION  
(300 Watts)

**WARNING:** This product, when used for soldering and similar applications, produces chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

### SOLDERING HINTS

Soldering is a fast and easy way to join metals. Solder has a low temperature melting point and with heat flows into the joint via capillary action, fusing the parts together. A properly soldered joint is considered both mechanically stable and electrically efficient. To correctly solder a joint, you need:

- A source of heat - your Weller® soldering gun
- Clean metal surfaces to be joined
- A suitable grade of flux cored solder
- Flux - when not using flux core solder

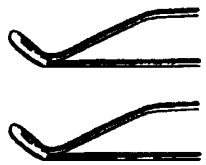


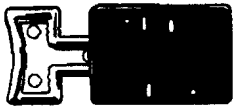
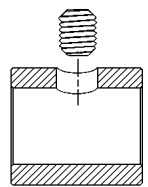
‘Flux-cored’ solder is used for the majority of jobs. ‘Flux-cored’ solder contains flux in the strand of solder, rendering separate fluxes unnecessary. Rosin core solders should be used for electrical connections.

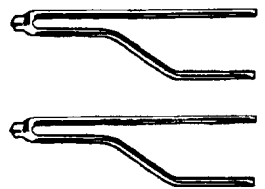
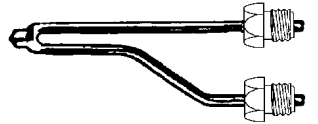
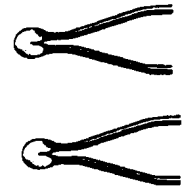
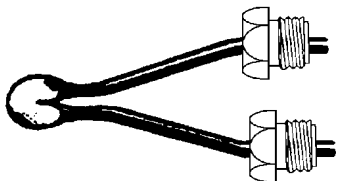
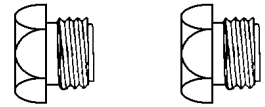
### Follow these instructions for best results:

1. Assure that items to be soldered are especially clean at the connection area. This can be achieved with wire wool or fine emery cloth. Just because a piece of metal looks bright and clean it is not necessarily so.
2. Make a good mechanical connection by wrapping wires around each other or around a terminal post.
3. When applying heat, apply a small amount of solder to the tip to provide proper heat transfer. Heat should be applied to the base material e.g. wires so that they become sufficiently hot to melt the solder to flow into the joint.
4. After the solder has flowed, smoothly slide the tip away to leave the joint neat. When using a soldering gun, the trigger should never be released before the tip has cleared the solder joint. Allowing the tip to cool while in contact with the solder will result in a disturbed joint.
5. Avoid joint or wire movement while soldering. A soldering aid tool or pliers can be used to hold the joint in place. Gently blowing on the joint will speed cooling.
6. On electrical and particularly electronic components avoid too much heat. To achieve this use a pair of Xcelite® long nose pliers between the solder joint and the component body. They will act as a heat sink and dissipate heat away from component.
7. Do not apply more solder than necessary. Excess solder may damage components and cause short circuits.
8. It is advisable to tin wires before soldering, especially stranded wire. Twist the strands together then heat and saturate with solder.
9. Creating a joint is easy after tinning. Just twist the wires together and apply a little solder or flux with heat. The result will be a smooth electrically efficient, soldered joint.
10. To un-solder a joint apply heat and use a soldering aid tool to separate joint. Be sure to use new solder when re-soldering.
11. Fumes given off by some fluxes can be dangerous. **Important: Be sure there is adequate ventilation to the working area.**

# Weller®

## D650 INDUSTRIAL Replacement Parts

PART #	DESCRIPTION	PACKAGE CONTENTS
<b>6160</b> STYLE 1 OR 2	<b>Smoothing Tips</b> (2 per package)	
<b>6140</b> STYLE 1 ONLY	<b>Smoothing Tips with Threaded Studs</b>	
<b>7333</b> STYLE 1 OR 2	<b>Light Bulb</b>	
<b>7324</b> STYLE 1 OR 2	<b>Switch</b>	
<b>D550HEXCOL</b> STYLE 2 ONLY	<b>Collar and Screw</b>	

PART #	DESCRIPTION	PACKAGE CONTENTS
<b>7250W</b> STYLE 1 OR 2	<b>Soldering Tips</b> (2 per package)	
<b>7250N</b> STYLE 1 ONLY	<b>Soldering Tip with Threaded Studs</b>	
<b>6150</b> STYLE 1 OR 2	<b>Cutting Tips</b> (2 per package)	
<b>6130</b> STYLE 1 ONLY	<b>Cutting Tip with Threaded Studs</b>	
<b>7417</b> STYLE 1 ONLY	<b>Threaded Studs</b> (2 per package)	

## SAFETY PRECAUTIONS

The Weller® D650 Soldering Gun is a very safe tool. It is UL listed and complies with all the relevant safety regulations in the USA. Nevertheless, like all electrical appliances, it must be handled with proper care. Never forget that the operating tip of the **Industrial** Soldering Gun reaches high temperatures.

### Follow these safety rules at all times:

1. Keep your soldering gun well away from all flammable material.
2. To avoid burns, always assume that the tip is hot.
3. Be sure the hot metal tip does not come into contact with the electric power cord.
4. Before making any adjustment - removing or replacing a tip etc. - make sure the gun is unplugged and cool.
5. Release the trigger whenever the tip is not in contact with work. **NEVER** tape back the trigger.
6. Do not hold work in your hand if you can possibly avoid it. Use a vise, clamp or pliers.
7. Do not dip the tool into any liquid.
8. Many materials give off unpleasant or possibly toxic fumes when heated - so **ALWAYS** work in a well ventilated room.
9. Clean the tip by wiping it, when hot, across a damp soldering tool sponge - placed on a non-flammable surface, **NOT** held in the hand. Immediately re-tin the tip with solder after wiping it on a damp sponge. This prevents the tip from oxidizing and provides a better means of heat transfer. (See directions below on how to re-tin tips).
10. After use, disconnect the soldering gun, allow the tip to cool completely, and store the tool in a safe place (out of reach from children).
11. Always wear safety goggles to prevent hot materials from entering eyes.
12. Never attempt to use, or even plug in the gun if the power cord or plastic housing is damaged in any way.
13. When handling the gun, always grip the gun by the handle. Do not carry the unit by the power cord.
14. Your D650 is equipped with a three prong power plug. Do not remove the grounding pin. Do not use 2 prong converter plugs.

## CARE AND MAINTENANCE

The D650 soldering gun needs very little in the way of care and maintenance to keep it in first class condition. Occasionally, the soldering tip needs re-tinning. Also, other tips can be used for different applications.

## RE-TINNING TIPS

If the solder doesn't cling to the work tip and instead of flowing smoothly, rolls off in small globules, the tip probably needs re-tinning. The following steps explain how to re-tin a tip.

1. While the tip is cool, scrape the wettable area of the tip with very fine sandpaper or steel wool.
2. Depress the trigger and apply solder to the tip until it starts to melt.
3. Keep the tip in contact with the solder.
4. After 3 or 4 seconds, release the trigger, but continue to apply solder until the tip cools.
5. Once heated, wipe off any excess solder, but re-apply a small amount before continuing.
6. The tip should now be thoroughly tinned. If it is not, repeat the procedure starting with Step 1.

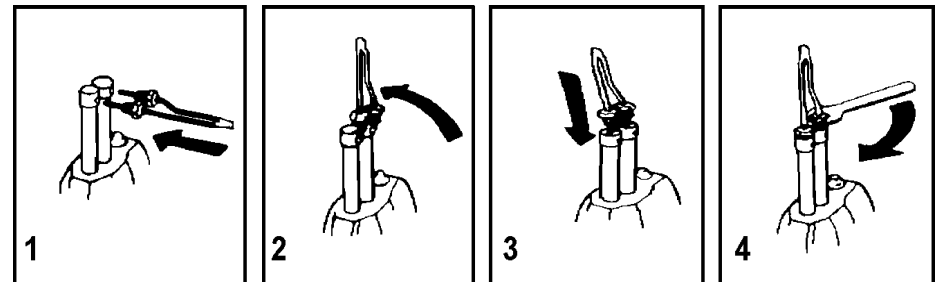
## REPLACING TIPS:

Weller® has been producing soldering guns since 1945. During that time there have been two styles of tip attachments.

### STYLE 1

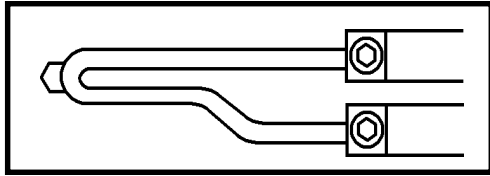
Replacement tips can be purchased with or without threaded studs. If you purchased tips only (Replacement Part # 7250W), and plan to use the threaded studs that came with your soldering gun, then follow the entire procedure below. However, if you purchased a replacement tip complete with threaded studs (Replacement part # 7250N), then skip Step 3.

1. Ensure tip fastening nuts are placed on new tip as shown.
2. Insert tip ends into side holes approximately 6 mm or 1/4" and pull forward to start bend.
3. Insert tip ends through barrel opening and into side holes.
4. Carefully start nuts by hand and after threads take hold complete tightening with a wrench until secure. **Important: Snug tip nuts are necessary to provide a good electrical connection. Loose tip nuts can cause soldering gun to not heat properly.**



## STYLE 2

1. Loosen set screws with supplied hex key.
2. Pull tip from gun.
3. Slide new tip into gun until it bottoms out.
4. Tighten set screw.



## TROUBLE SHOOTING:

### **Soldering Gun doesn't heat properly:**

If your Weller® Soldering Gun appears to be heating, but not hot enough to perform the job, try loosening and re-tightening the tip. It may become necessary to clean the connecting area of the tip ends with sandpaper or possibly install a new tip. **(Refer to Replacing Tips section)**. A good electrical connection between the tip and the soldering gun is essential for the tool to heat properly.

### **Light bulbs don't light up:**

Try tightening the bulbs in the sockets. If problem still persists, then replacement bulbs can be purchased. (Part # 7333).