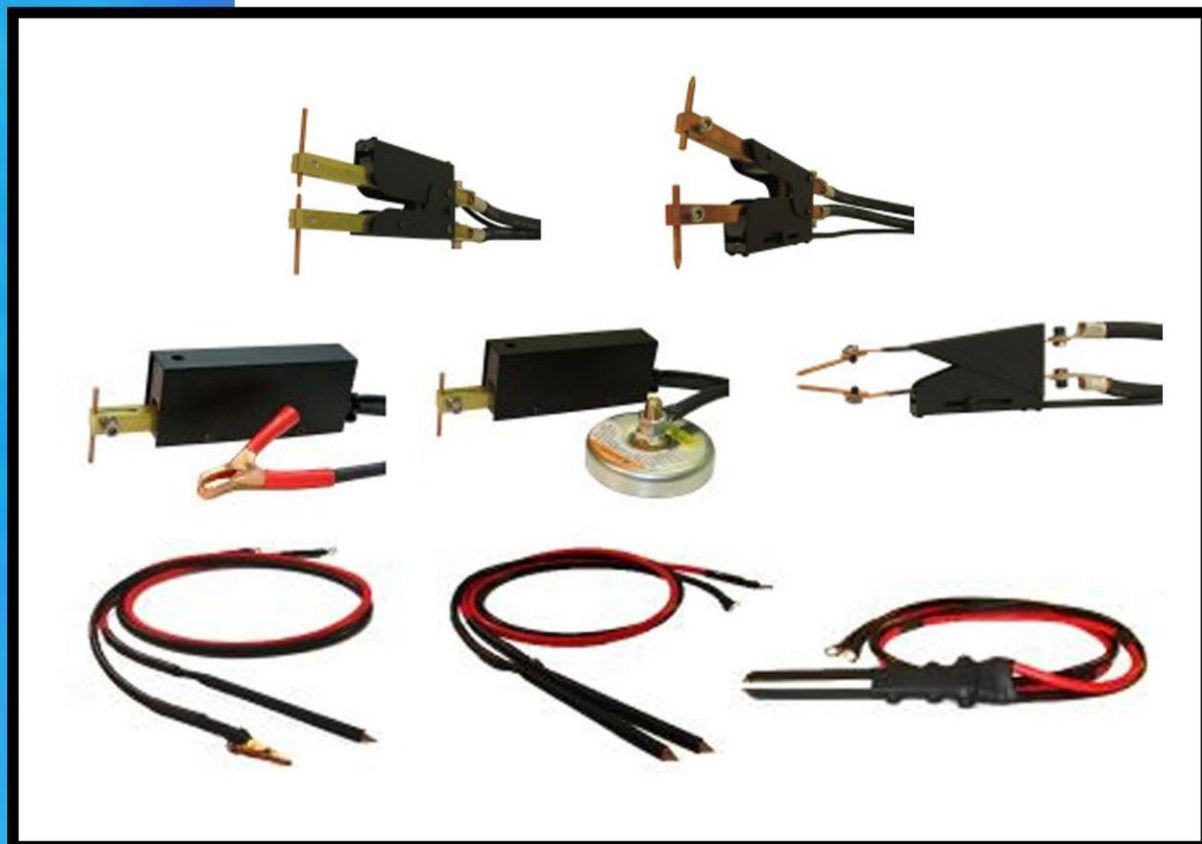




Sunstone Engineering  
1693 American Way Unit 5  
Payson, Utah 84561  
Phone: (801) 658 - 0015



# Welder Hand Piece Manual

User Manual



Copyright 2009 Sunstone Engineering R&D Corp.

A PRODUCT OF SUNSTONE ENGINEERING

# Hand-Held Weld Attachments

---

Sunstone Engineering  
1693 American Way • Suite 5  
Payson, UT 84561  
Phone 801.658.0015 • Fax 866.701.1209  
[www.SunstoneSpotWelders.com](http://www.SunstoneSpotWelders.com)

**Copyright 2009 Sunstone Engineering R&D Corp.**

---

At Sunstone we are committed to producing quality products and ensuring complete owner satisfaction. If you require assistance after reading this manual please contact us with the information provided below.

---

**SUNSTONE ENGINEERING R & D.**

---

1693 American Way Suite #5 Payson, UT 84651

---

Voice: 801.658.0015

---

Fax: 866.701.1209

---



## Safety Procedures and Precautions

- Wear appropriate eye protection at all times while using hand pieces.
- Do not wear metal jewelry when welding. The terminals are safe to touch without fear of arcing as long as no metal is on your hands.
- Welding cables can become extremely hot. After extended use, be cautious when removing the weld cables.
- When altering any part of the welding path (such as swapping electrodes or cables), turn the unit off or enter the menu to ensure no accidental triggering of a weld occurs

## Hand-Held Weld Attachment

### Benefits:

- More Flexibility than a Weld Head
- Works with Any Sunstone Welder
- Inexpensive
- Easy to Maintain
- Simple to Use

## THE DUAL PROBE HAND PIECE (DPHP)



The dual probe hand piece (DPHP) allows single sided, series welds to be made on thin sheet metal. The DPHP offers the flexibility to weld from any angle, at any orientation. Make two welds from the same side of a work piece with each weld actuation.

As seen in Figure 1, the most popular application for the DPHP is to weld battery pack assemblies. The proper procedure for using the DPHP to weld battery packs is outlined below. If using a Sunstone dual pulse welder, follow the process outlined in the dual pulse welder instruction pamphlet to set pulses one and two.

1. Place both welding probes on the battery tab material.
2. Apply light to moderate pressure.
3. Actuate the foot switch.



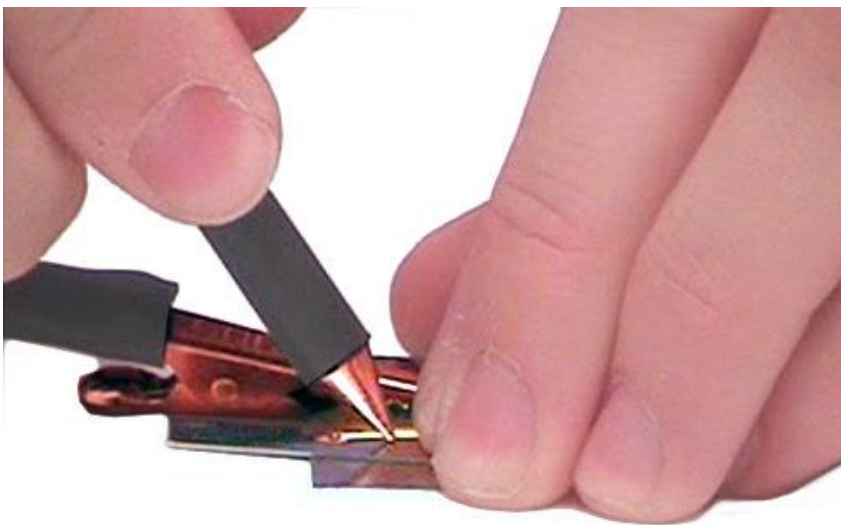
**FIGURE 1:** A cordless drill battery pack being welded using the dual probe hand piece (DPHP) welding attachment.

Electrode sticking may be an indication that more pressure is needed. It may also indicate that less weld energy is required. If electrode fouling occurs, use a Scotch Brite abrasive pad to remove oxide and foreign metals. Electrode tips can be maintained using a small needle file (provided with each welder). If the DPHP requires re-coning, a belt sander can be used.

## THE SINGLE PROBE HAND PIECE (SPHP)



The single probe hand piece (SPHP) is used to make single point welds in thin sheet metal. The SPHP can be used for hard-to-reach locations or in fixtures by attaching to a ground plane. Figure 2 shows the SPHP being used to weld two thin pieces of sheet metal.



**FIGURE 2:** The single probe hand piece (SPHP) being used to weld thin sheet metal.

The proper procedure to use the SPHP is outlined as follows:

1. Attach the ground clip as close as possible to the weld location.
2. Place the probe at the location to be welded.
3. Apply pressure
4. Actuate the weld using the panel or foot switch.

Again, if electrode fouling occurs use a Scotch Brite abrasive pad to remove oxide and foreign metals. Electrode tips can be maintained using a small needle file (provided with each welder). If the SPHP requires re-coning a belt sander can be used.

### THE TWEEZER HAND PIECE ( THP)



The tweezer hand piece (THP) can be used when opposing surfaces are available. Figure 3 shows the THP being used to weld two sheets of thin sheet metal.



**FIGURE 3:** The tweezer hand piece (THP) being used to weld thin sheet metal.

The proper procedure to use the THP is outlined as follows:

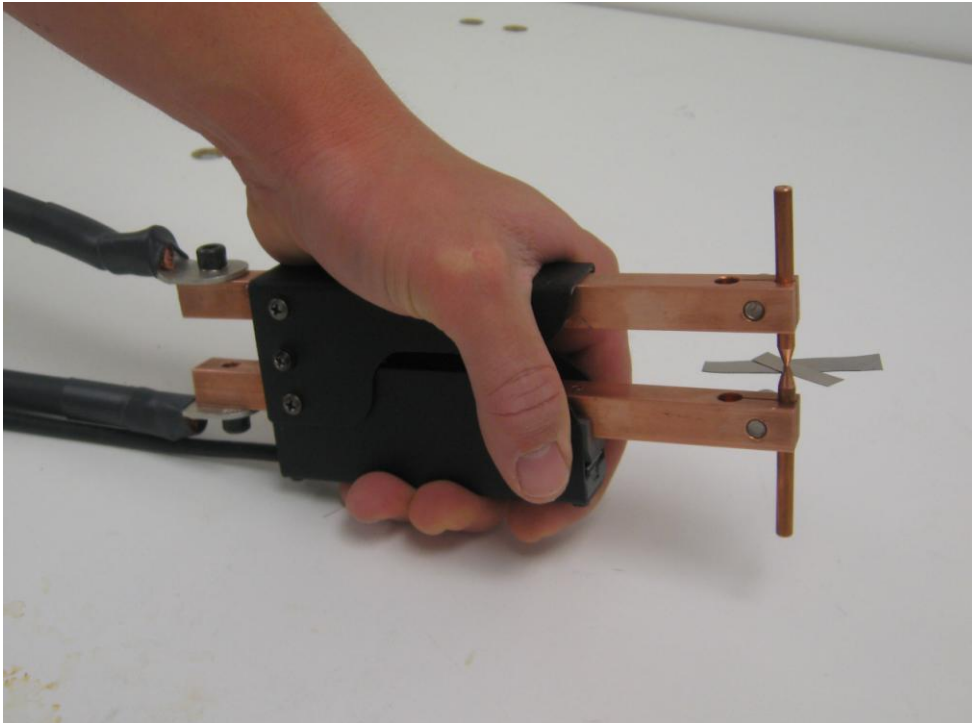
1. Pinch the metal between the tweezer electrodes.
2. Apply adequate pressure to insure good contact between the metal surfaces.
3. Actuate the weld using the panel or foot switch.

Again, if electrode fouling occurs, use a Scotch Brite abrasive pad to remove oxide and foreign metals. Electrode tips can be maintained using a small needle file (provided with each welder).

## **PRESSURE ACTUATED TWEEZER HAND PIECE - HIGH POWER**



Like the Tweezer Hand Piece, the High Power Pressure Actuated Tweezer Hand Piece can be used when opposing surfaces are available. Figure 4 shows the High Power (PA-THP) welding two thin sheets of sheet metal.



**FIGURE 4:** The High Power (PA-THP) being used to weld thin sheet metal.

The proper procedure to use the High Power PA-THP is as follows:

1. Pinch the metal between the electrodes.
2. Apply adequate pressure to insure good contact between the metal surfaces.
3. When the metal pieces are securely held in the desired weld location between the two electrodes, apply more pressure to actuate the trigger (located within the hand piece) to initiate the weld.

If electrode fouling occurs, use a Scotch Brite abrasive pad to remove oxide and foreign metals. Electrode tips can be maintained using a small needle file (provided with each welder).

## **PRESSURE ACTUATED TWEEZER HAND PIECE - MODERATE POWER**



The Moderate Power Pressure Actuated Tweezer Hand Piece functions the same way as the previous model; it can be used when opposing surfaces are available. Figure 5 shows the Moderate Power (PA-THP) welding two thin sheets of sheet metal.



**FIGURE 5:** The Moderate Power (PA-THP) being used to weld a thin strip of sheet metal.

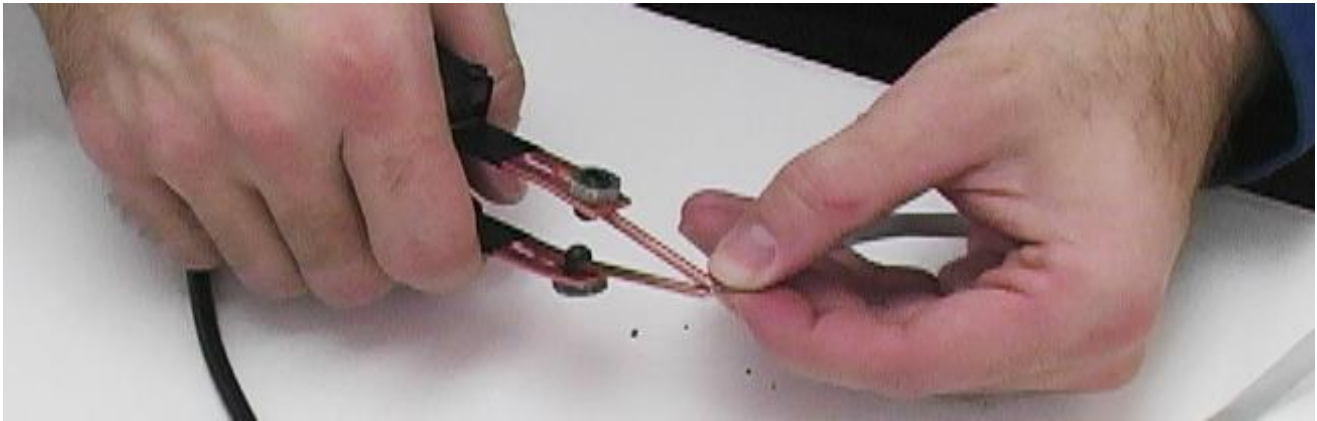
The proper procedure to use the Moderate Power PA-THP is as follows:

1. Pinch the metal between the electrodes.
2. Apply adequate pressure to insure good contact between the metal surfaces.
3. When the metal pieces are securely held in the desired weld location between the two electrodes, squeeze the hand piece tighter to apply more pressure to actuate the trigger (located within the hand piece) to initiate the weld.

## **PRESSURE ACTUATED TWEEZER HAND PIECE - LOW POWER**



The Low Power Pressure Actuated Tweezer Hand Piece can be used when opposing surfaces are available. Figure 6 shows the Low Power (PA-THP) welding two thin sheets of sheet metal.



**FIGURE 6:** The Low Power (PA-THP) being used to weld a thin strip of sheet metal.

The proper procedure to use the Low Power PA-THP is as follows:

4. Pinch the metal between the electrodes.
5. Apply adequate pressure to insure good contact between the metal surfaces.
6. When the metal pieces are securely held in the desired weld location between the two electrodes, squeeze the hand piece tighter to apply more pressure to actuate the trigger (located within the hand piece) to initiate the weld.

If electrode fouling occurs, use a Scotch Brite abrasive pad to remove oxide and foreign metals. Electrode tips can be maintained using a small needle file (provided with each welder).

## **PRESSURE ACTUATED SINGLE PROBE HAND PIECE**



## **PRESSURE ACTUATED SINGLE PROBE HAND PIECE CLIP**



For additional instruction, please see our instructional video at [www.SunstoneSpotWelders.com](http://www.SunstoneSpotWelders.com)

## **CONTACT INFORMATION:**

### **Phone**

1.801.658.0015

### **Fax**

1.866.701.1209

### **E-mail**

**Sales:** [sales@sunstoneengineering.com](mailto:sales@sunstoneengineering.com)

**Technical Support:** [tech@sunstoneengineering.com](mailto:tech@sunstoneengineering.com)

**Customer Service:** [custservice@sunstoneengineering.com](mailto:custservice@sunstoneengineering.com)

### **Web**

[www.SunstoneSpotWelders.com](http://www.SunstoneSpotWelders.com)

### **Mail**

Sunstone Engineering R&D Corporation  
1693 W. American Way, Unit 5  
Payson, UT 84651