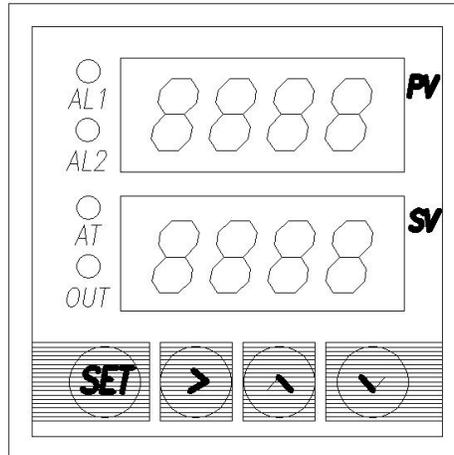


# Instruction Sheet for American Beauty Digital Solder Pot

## 1. Understanding the Display



**PV:** Present Value ~ The Actual Temperature of the solder pot.

**SV:** Set Value ~ The Target Temperature of the solder pot.

**AT:** Auto tune indicator ~ Flashing light indicates the controller is learning the system.

**OUT:** Output Indicator ~ Solder pot is actively heating when lit.

**SET:** SET key is used to enter input

▶ : Right Arrow - Used to shift a digit over or reset auto tune.

▲ : Up Arrow - Used to increase a value or parameter.

▼ : Down Arrow - Used to decrease a value or parameter.

## 2 Changing the Operating Temperature between Fahrenheit & Celsius

The solder pot arrives operating in Fahrenheit. To change back and forth between Fahrenheit and Celsius, follow these steps:

- Turn the solder pot ON (Reset switch next to controller).
- Hold the SET key until value in **SV** field is reading **0000** and the first 0 is blinking.
- Use ▶, ▲ or ▼ keys to change reading to **0089**. Press SET key.
- Use ▲ or ▼ keys to change the parameter in **PV** field until **CorF** is flashing (in red). Press the SET key.
- Change the flashing number in SV field to desired measurement.
  - 0 is C
  - 1 is F
  - Press SET key.
- Use ▲ or ▼ arrows to change parameter in **PV** field to **End**. Press SET key.

Your controller is now programmed to operate in your desired unit of measure. ***It is now critical to run Step 3 (Auto-Tuning) and Step 4 (Calibrating).***

## 3. Initial Auto-Tuning of Digital Solder Pot

Each and every digital solder pot is tested, auto-tuned & calibrated at our facility prior to shipping. This procedure is performed without solder and at a selected temperature that ensures the solder pot and all of its temperature control componentry are functioning properly. After solder has been added for the first time (charging), its optimal operating temperature has been selected, we strongly recommend running the Auto-Tuning feature on the pot, where it will determine how to best maintain the solder bath at the desired temperature within the tightest specifications. Any time there is a change to the solder pot (solder, location,

standard set temperature) its a good idea to repeat this step.

- For best results, start with solder pot at room temperature.
- Use ▲ or ▼ arrows to ensure the desired Target temperature of the solder pot in the **SV** field.
- Hold the ► key down for approximately 5 seconds until the Auto tune (AT) indicator light begins to flash.
- The pot has now entered learning mode
- Once the auto-tune indicator light has stopped flashing, your solder pot is ready for use and will maintain operating temperature of the pot within the tightest Mil-spec Standards.
- You may wish to calibrate the solder pot at this time.

#### 4. Calibrating your Solder Pot

Calibrating your solder pot will require the use of an independent thermocouple thermometer.

##### **Determine if Calibration is Required**

1. Ensure solder pot is plugged in. Turn the solder pot ON (Reset switch next to controller).
2. Adjust the controller to the Target temperature by following instructions in STEP 3.
3. Allow the Actual temperature of the solder bath (PV) to reach the Target temperature (SV) as set on the controller. Set Value (SV) should equal Present Value (PV) on the controller. (+/- 5 °F)
4. Place the thermocouple from the independent thermometer into the solder bath. Avoid unnecessary movement of thermocouple throughout the rest of this procedure.
5. Compare the Actual temperature found in the PV field of the Controller to the temperature determined by the thermocouple thermometer. If these readings match within (+/- 5 °F), calibration isn't required at this time.

##### **Proceeding with Calibration**

6. Subtract PV temperature from Thermocouple Thermometer temperature. Being careful with +/-, *Record this Number* \_\_\_\_\_.
7. Hold the SET key until value in **SV** field is reading **0000** and the first 0 is blinking.
8. Use ►, ▲ or ▼ keys to change reading to **0089**. Press SET key.
9. Use ▲ or ▼ keys to change the parameter in **PV** field until **PSb** is flashing (in red). Press the SET key.
10. The number that appears in the SV field is the pot's pre-programmed temperature offset. This is the number that will need to be adjusted up or down dependent upon the reading from the independent thermocouple thermometer.
  - $\text{New Offset} = \text{Current Offset} + (\text{Value from 6})$
  - If the reading from the thermocouple thermometer was **higher** than the value displayed in the PV field, the offset will need to be **increased** by the difference.
  - If the reading from the thermocouple thermometer was **lower** than the value displayed in the PV field, the offset will need to be **decreased** by the difference.
11. Use ►, ▲ or ▼ keys to enter the New Offset value. Press the SET button.
12. Use ▲ or ▼ keys to change parameter in **PV** field to **End**. Press SET key.

A new offset has now been entered. Wait until PV once again equals SV. Check to see if the PV now equals the temperature on the thermocouple thermometer within acceptable range (+/- 5 °F). *It is normal & quite likely that this procedure will need to be repeated (Steps 5 - 12) multiple times to ensure precise calibration.*

#### 5. Troubleshooting

In the event your system isn't reacting as expected, such as taking longer than normal to heat up or the PV and SV values never match, it may be necessary to perform a Reset/Relearn of the controller.

- Turn the solder pot OFF.
- Once the solder pot has reached room temperature, turn the solder pot back ON (Reset)
- Follow Step 3 Instructions