

# DIRECTIONS FOR PROPER USE OF PLATO SOLDER POTS

## MODELS SP-500T/TP, SP-150T/TP

**WARNING:** Solder pots generate high temperatures, and therefore have hot surfaces which present burn hazards. Always exercise caution around a solder pot that is on or is hot. Wear eye protection and hand protection. Beware of splattering or splashing of molten solder.

### SETTING UP THE SOLDER POT

- 1) Unpack the solder pot and check for any signs of external damage.
- 2) Place the unit on a stable, flat work surface. Level the pot by adjusting the leveling screws, using a flat-blade screwdriver.

### FILLING THE SOLDER POT WITH SOLDER

- 1) Place two (2) one-pound solder bars into the crucible.
- 2) Follow the procedure under "Normal Operation of the Unit" to apply power and set the desired temperature.

### NORMAL OPERATION OF THE UNIT

**CAUTION:** Do not stand immediately over or around a solder pot containing frozen or solid solder while heating. Do not leave the unit unattended whenever the pot is hot or heating.

- 1) Plug the unit into a properly-grounded receptacle and turn the POWER switch to the "ON" position. The red pilot light located above the switch should illuminate. If it does not illuminate, check to see if the solder pot is properly plugged-in, and verify that power is available at the receptacle.
- 2) Push down- and hold the spring-loaded PRESET switch, while viewing the LCD display. The display reading will change from the actual solder temperature to the programmed solder temperature.
- 3) Continuing to hold down the PRESET switch, turn the TEMP SELECTION knob to adjust the programmed temperature to the desired value. Rotating the knob clockwise will increase the preset temperature, while rotating it counter-clockwise will reduce the preset temperature.
- 4) Release the PRESET switch. The LCD display should change back to the actual solder temperature.
- 5) Allow approximately one hour for the pot to stabilize at normal operating temperatures when starting it from room temperature. Changes made in the temperature of a pot that is already hot should take significantly less time.

Note that the SP-500T/TP can operate from ambient temperature to approximately 925°F, and the SP-150T/TP can operate between ambient temperature and approximately 500°C. Operation at the high end of these ranges will significantly reduce heater life, as well as rapidly increasing the rate of dross production and oxidation of the solder. Therefore, it is always advisable to operate the solder pot at the lowest temperature that will achieve the desired soldering results.

## SOLDER POT CALIBRATION PROCEDURE MODELS SP-150T AND SP-500T

**DANGER:** Risk of Electric Shock! The solder pot temperature controller box contains high voltages that present danger of electric shock. The box should not be opened while the unit is plugged in, nor should any metal tool or implement be inserted through the calibration hole or any other opening into the temperature controller box.

- 1) Turn power on and preset LCD readout to desired temperature and wait 15 to 20 minutes to stabilize.
- 2) Insert your calibrated test probe to a depth of 1/2" into solder at center point of crucible and wait 2 minutes for temperature stability. If not the same, proceed with step 3.
- 3) Remove chassis plug from left side of control box. Insert a plastic screwdriver (DO NOT USE METAL) through hole into slot in potentiometer. Turning clockwise decreases the LCD display, and turning counter-clockwise increases the LCD display. Adjust the LCD number quickly to match the calibrated probe number and wait until the LCD display returns to the pre-set point.
- 4) When the calibration is complete, re-install the chassis plug into hole.

Plato 240 VAC solder pots, MODELS SP-201/201P, SP-401/401P, SP-150T/150TP, SP-750T/750TP, are shipped without an electrical plug. The following is the color code used on the wires to the plug. Use this for proper connection to a 240 VAC electrical plug.

BLUE:	NEUTRAL
BROWN:	240 VAC
GREEN WITH YELLOW STRIPE:	EARTH GROUND

# READ THESE INSTRUCTIONS BEFORE OPERATING!

THEY CONTAIN IMPORTANT SAFETY AND USE INFORMATION

## Solder Pot Operating Instructions Models SP-500T/TP and SP-150T/TP

**Warning:** Solder pots generate high temperatures, and therefore have hot surfaces which present burn hazards. Always exercise caution around a solder pot that is on or is hot. Wear eye protection and hand protection. Beware of splattering or splashing of molten solder.

### Setting up the solder pot

1. Unpack the solder pot and check for any signs of external damage.
2. Place the unit on a stable, flat work surface. Level the pot by adjusting the leveling screws, using a flat-blade screwdriver.

### Filling the solder pot with solder

1. Place two (2) two-pound solder bars into the crucible.
2. Follow the procedure under "Normal Operation of the Unit" to apply power and set the desired temperature.

### Normal operation of the unit

**Caution:** Do not stand immediately over or around a solder pot containing frozen or solid solder while heating. Do not leave the unit unattended whenever the pot is hot or heating.

1. Plug the unit into a properly-grounded receptacle and turn the POWER switch to the "ON" position. The red pilot light located above the switch should illuminate. If it does not illuminate, check to see if the solder pot is properly plugged-in, and verify that power is available at the receptacle.
2. Push down and hold the spring-loaded PRESET switch, while viewing the LCD display. The display reading will change from the actual solder temperature to the programmed solder temperature.
3. Continuing to hold down the PRESET switch, turn the TEMP SELECTION knob to adjust the programmed temperature to the desired value. Rotating the knob clockwise will increase the preset temperature, while rotating it counter-clockwise will reduce the preset temperature.
4. Release the PRESET switch. The LCD display should change back to the actual solder temperature.
5. Allow approximately one hour for the pot to stabilize at normal operating temperatures when starting it from room temperature. Changes made in the temperature of a pot that is already hot should take significantly less time.

Note that the SP-500T/TP can operate from ambient temperature to approximately 925<sup>o</sup> F., and the SP-150T/TP can operate between ambient temperature and approximately 500<sup>o</sup> C. Operation at the high end of these ranges will significantly reduce heater life, as well as rapidly increasing the rate of dross production and oxidation of the solder. Therefore, it is always advisable to operate the solder pot at the lowest temperature that will achieve the desired soldering results.

## Calibration

**Danger: Risk of Electric Shock!** The solder pot temperature controller box contains high voltages that present danger of electric shock. The box should not be opened while the unit is plugged in, nor should any metal tool or implement be inserted through the calibration hole or any other opening into the temperature controller box.

Your solder pot was carefully calibrated at the factory when it was assembled. It is desirable to periodically recalibrate the temperature control mechanism to compensate for slight changes in the characteristics of the controller due to the effects of heat and age. In performing this procedure, you should select a calibration temperature that is near the middle of the range in which you intend to operate the solder pot, as the controller is most accurate near this value.

1. Turn on the solder pot, and heat it to the desired calibration temperature, per the instructions under "Normal Operation of the Unit." Be sure to allow enough time for the temperature to become completely stable.
2. Insert a calibrated temperature probe to a depth of  $\frac{1}{2}$ " into the molten solder at the center point of the crucible. If the temperature indicated on the LCD and the temperature probe device are not the same, continue with step 3. Otherwise, the unit is already calibrated.
3. Remove the chassis plug from the left side of the temperature controller box. You should see a potentiometer shaft inside the controller box through this hole.

**Danger: Risk of Electric Shock!** The solder pot temperature controller box contains high voltages that present a danger of electric shock. The box should not be opened while the unit is plugged in, nor should any metal tool or implement be inserted through the calibration hole or any other opening into the temperature controller box.

4. Insert a plastic (or other non-metallic, non-conducting) screwdriver through the hole into the potentiometer slot.
5. Rotate the potentiometer with the plastic screwdriver until the LCD indicates the same value as the temperature probe device. Turning the potentiometer clockwise decreases the reading on the LCD, while turning the potentiometer counter-clockwise increases the reading on the LCD.
6. After adjustment, the actual temperature displayed will be different from the preset temperature. Allow the solder pot sufficient time for the actual temperature to return to the preset temperature, and repeat steps 4 through 6 as required until the preset and actual controller temperatures match the reading on the temperature probe device.
7. Reinstall the chassis plug into the hole in the temperature controller box.



# PLATO®

ANALOG



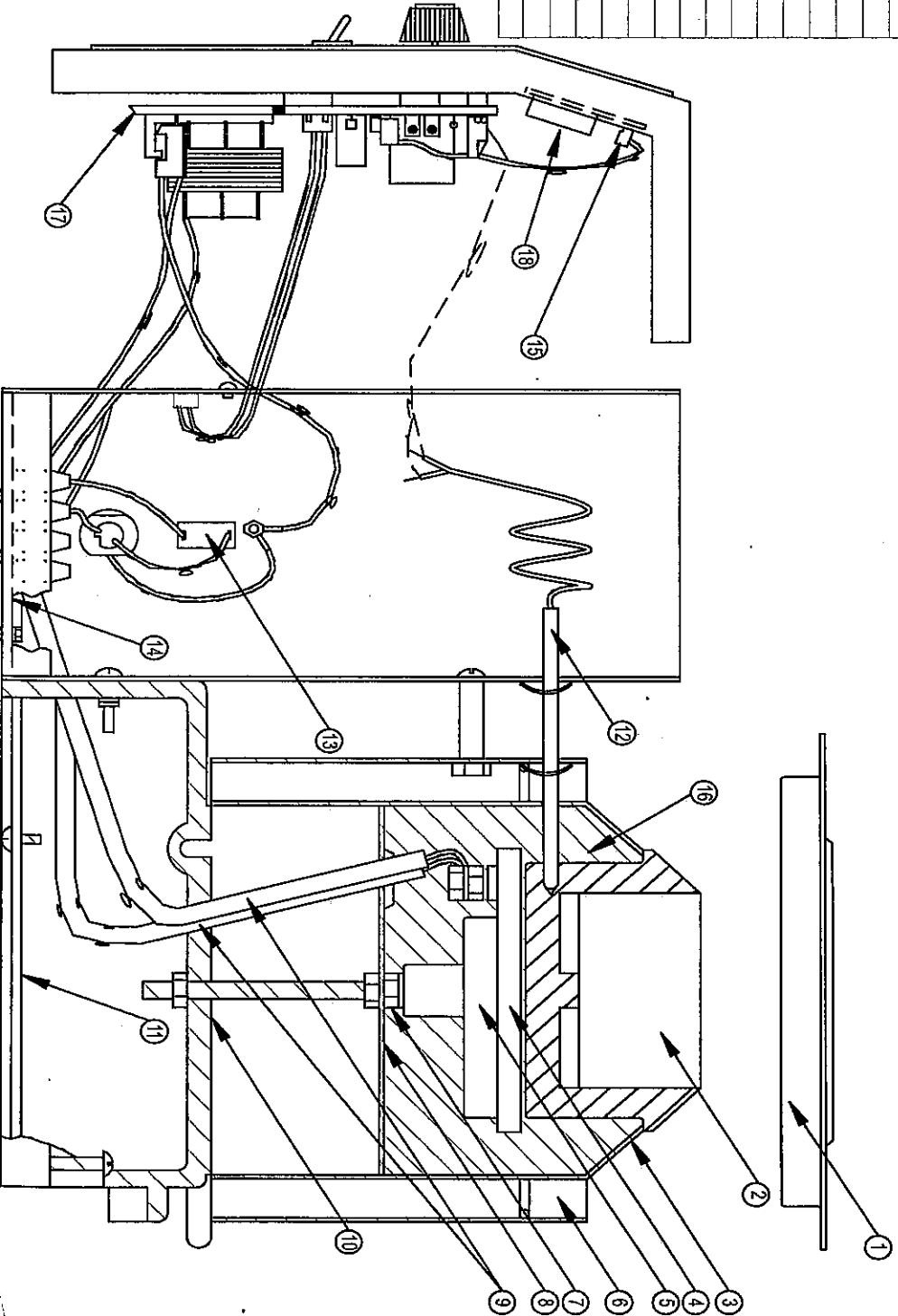
## SOLDER POT

MODELS: SP-500T, 500TP  
120 VAC - 350 WATTS

### REPLACEMENT PARTS LIST

ITEM NO.	PART NUMBER	DESCRIPTION
1	SP-1101	DROSS TRAY
2	SP-1103/SP-1103P	CRUCIBLE/CRUCIBLE (PORCELAIN COATED)
3	SP-1182	BODY ASSEMBLY
4	SP-1128	HEATER
5	SP-1109	ELEMENT WASHER ASSEMBLY
6	SP-1180	THERMAL SHIELD ASSEMBLY
7	SP-1009	STUDNUT/WASHERS
8	SP-1176	CENTRAL BAFFLE ASSEMBLY
9	SPT-150	WIRE ASSEMBLY
10	SPT-148	BASE
11	SP-1184	COVER PLATE
12	SPT-144	THERMOCOUPLE
13	02-1036	CIRCUIT BREAKER
14	SPT-142	TRIAC ASSEMBLY
15	SPT-141	LCD HARNESS
16	SP-1129	INSULATION
17	SPT-138	CONTROL ASSEMBLY - MAIN PCB
18	SPT-147	LCD DISPLAY & CIRCUITRY

APPROX. 2 Lb. (1 Kg) SOLDER CAPACITY



# PLATO

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