

Weller Tech Sheet

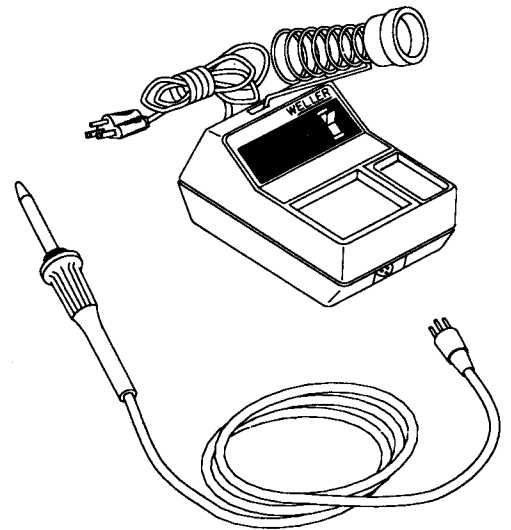
WTCPR

PRODUCT DESCRIPTION

A transformer powered soldering station, complete with a lightweight, heat insulated, low voltage, temperature controlled soldering pencil. The special Weller "closed loop" method of controlling maximum tip temperature is employed, thereby protecting temperature sensitive components while the grounded tip protects voltage and current sensitive components. The soldering pencil features a stainless steel plug in heating element construction, a non-burning silicon rubber cord and a large selection of iron plated tips in sizes from $\frac{1}{16}$ " diameter to $\frac{1}{8}$ " diameter with a choice of tip temperature of 600, 700 and 800°F.

The transformer case features an impact-resistant plastic for durability and protection against accidental damage, a quick connect/disconnect plug for the soldering iron, extra large wiping sponge, tip tray to store extra tips, plus a lighted off-on switch, with a non-heat sinking soldering pencil holder, and a round flexible 3-wire power cord.

The soldering iron is normally provided with a PTA7 $\frac{1}{16}$ " screwdriver 700°F. The complete WTCPR station is CSA approved.



SPECIFICATION

POWER UNIT:

1. Power Input — WTCPR - 120 Volts, 60 Hz, 60 Watts
— WTCPRD - 240 Volts, 50-60 Hz, 60 Watts
2. Transformer Output Voltage — 24 Volts
3. Power Unit Size — $4\frac{1}{8}$ " x $7\frac{3}{8}$ " x $3\frac{3}{8}$ "
4. 3 Wire Power Cord

SOLDERING PENCIL:

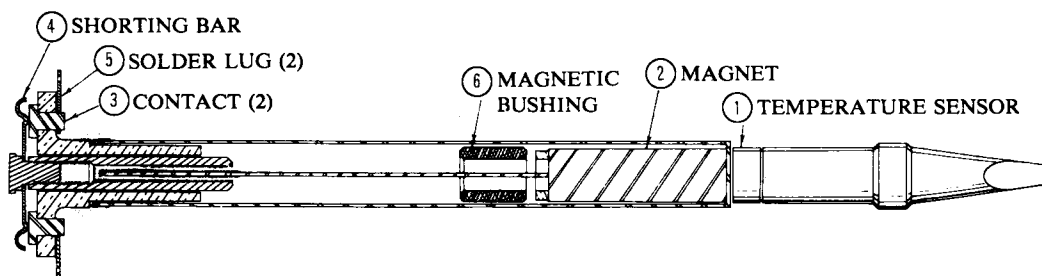
1. Soldering Pencil Wattage — 42 Watts
2. Tip Grounded
3. Pencil Weight — 2 oz.
4. Recovery Time (From 100°F Drop) W/PTA7 Tip — 11 Sec.
5. Cord: Silicon Rubber — Burn Resistant — 4 ft.

PRINCIPLE OF OPERATION

When the soldering tip is cold, a ferromagnetic temperature sensor (1) attached to the tip attracts a permanent magnet (2). The magnet movement causes a shorting bar (4) to make contact with a set of isolated electrical contacts (3) thereby supplying power to the heating element through the solder lugs (5). When the tip reaches its idle

temperature, the sensor becomes non-magnetic and no longer attracts the magnet. Then a magnetic bushing (6) attracts the magnet causing the shorting bar to break the circuit. In this manner, power to the heating element is turned on and off automatically.

CAUTION: TIP IS GROUNDED. DO NOT SOLDER IN AN ENERGIZED CIRCUIT.

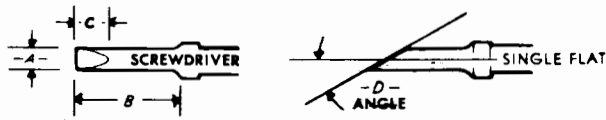


ABOUT WELLER SOLDERING PENCIL TIPS

All Weller PT Series soldering pencil tips have been plated with an exclusive process that deposits three (3) protective coatings. The high conductivity copper tips are iron plated, then nickel plated and finally chromium plated on non-working surfaces. The working surface is then pre-tinned. The chromium and nickel plating of the tip prevents oxidation of the iron plating which can cause freezing of the tip in the pencil. The chromium also prevents solder "creep-up". Weller's "temperature-sensing" tips have a small ferromagnetic sensing element attached to the tip shank. The sensing element is coded with a number to indicate idle temperature in hundreds of degrees F. Thus a simple change of tips is all that is necessary to adapt the tool to an entirely different temperature range. Use only original Weller soldering tips, parts and accessories for this product. The use of other brands will void warranty protection.

SELECTION OF WELLER PT SERIES TIPS

1. Select a tip configuration with the maximum working surface, thickest cross section and shortest reach compatible with the size, the accessibility, and the visual restrictions of the solder joint.
2. Select a tip temperature based on the size of the solder joint, the temperature sensitivity of the components, and the production rate required. Please note that tip life is directly related to tip temperature — the lower the tip temperature the longer the tip life. Weller Industrial soldering tips have heavy iron plating with anti-oxidation coating.



	Catalog Numbers			Description	Dimension			
	600°F	700°F	800°F		A	B	C	D
Screwdriver	PTA6	PTA7	PTA8	Screwdriver	1/16"	5/8"	3/32"	15°
	PTAA6	PTAA7	PTAA8	Single Flat	1/16"	5/8"	3/32"	30°
	PTB6	PTB7	PTB8	Screwdriver	3/32"	5/8"	3/32"	22°
Conical	PTBB6	PTBB7	PTBB8	Single Flat	3/32"	5/8"	3/32"	30°
	PTC6	PTC7	PTC8	Screwdriver	1/8"	5/8"	1/8"	22°
	PTCC6	PTCC7	PTCC8	Single Flat	1/8"	5/8"	1/8"	30°
Single Flat	PTD6	PTD7	PTD8	Screwdriver	3/16"	3/4"	3/16"	22°
	PTDD6	PTDD7	PTDD8	Single Flat	3/16"	3/4"	3/16"	30°
	PTE6	PTE7	PTE8	Screwdriver	15/64"	3/4"	3/16"	22°
Long Scwdr.	PTEE6	PTEE7	PTEE8	Single Flat	1/4"	3/4"	3/16"	30°
	PTF6	PTF7	PTF8	Conical Flat	1/32"	5/8"	1/32"	40°
	PTH6	PTH7	PTH8	Screwdriver	1/32"	5/8"	1/8"	15°
Long Conical	PTK6	PTK7	PTK8	Long Scwdr.	3/64"	1"	7/16"	7°
	PTL6	PTL7	PTL8	Long Scwdr.	5/64"	1"	1/2"	7°
	PTM6	PTM7	PTM8	Long Scwdr.	1/8"	1"	3/4"	7°
Narrow Scwdr.	PTO6	PTO7	PTO8	Long Conical	1/32"	1"	—	—
	PTP6	PTP7	PTP8	Conical	1/32"	5/8"	—	—
	PTR6	PTR7	PTR8	Narrow Scwdr.	1/16"	5/8"	1/8"	12°
	PTS6	PTS7	PTS8	Long Conical	1/64"	1"	—	—

CARE OF WELLER PT SERIES TIPS

1. Keep tip tinned; wipe only before using.
2. Use rosin or activated rosin fluxes. Acid type fluxes will greatly reduce tip life.
3. Remove tip and clean w/suitable cleaner for flux used. The frequency of cleaning will depend on the type of work and usage. Tips in constant use should be cleaned at least once a week.
4. Don't try to clean tip with abrasive materials and never file tip, to do so will greatly reduce tip life. If the tip becomes unwettable, it may be cleaned with a soft iron or brass brush using solder flux as a solvent.
5. Don't remove excess solder from heated tip before storing. The excess solder will prevent oxidation of the wettable surface when tip is reheated.
6. Don't use anti-seize compounds on tips, they have been plated for oxidation protection.

WTCPR TROUBLESHOOTING GUIDE

CAUTION: 120 VAC (240 VAC for WTCPRD) is present inside power unit whenever unit is connected to power line.

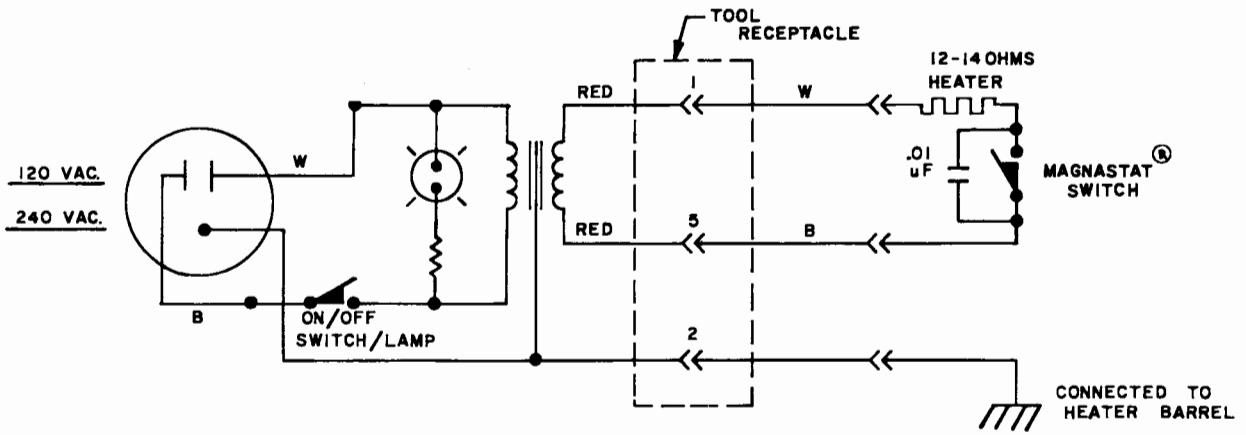
- I. TC201P hand tool will not heat.
 - A. Check at Pin 1 and Pin 5 of power unit tool receptacle for 24 VAC. If not found, proceed to step C. If power unit tests good, TC201P is defective.
 - B. TC201P Troubleshooting Guide* (Cold Tool).
 1. Tip Check—inspect tip for missing magnastat on tip or wrong type tip. Replace tip. Check tip spring action; there should be 1/16" minimum spring action.
 2. Heating Element Check—check resistance at Pin 1 and Pin 5 of tool plug (center and right hand pin), 12 to 14 ohms. If tool tests good, connector pins are worn or damaged and not making good contact. If tool tests bad, remove two screws from heating element flange. Grasp heater barrel and black heat insulator, pull heating element free from tool. Check resistance at two closely spaced pins on heating element (12 to 14 ohms).
 3. Magnastat Switch Check:

Place tool on workbench with flat at rear of handle up. Insert 3/16" flat blade screwdriver into slot at rear of handle. Compress cord by pushing downward and toward handle until cord is pushed into handle (do not pry on handle). This releases the strain relief catch. Slide handle down cord to expose switch terminals. Check for proper magnastat switch operation by testing for continuity across magnastat switch terminals with tip held against end of switch and loss of continuity when tip is removed. If magnastat switch checks good, check wiring for continuity. Refer to schematic.
 - C. TC202/TC202D Power Unit Troubleshooting Guide (No 24 VAC at Pin 1 & Pin 5 of tool receptacle.)

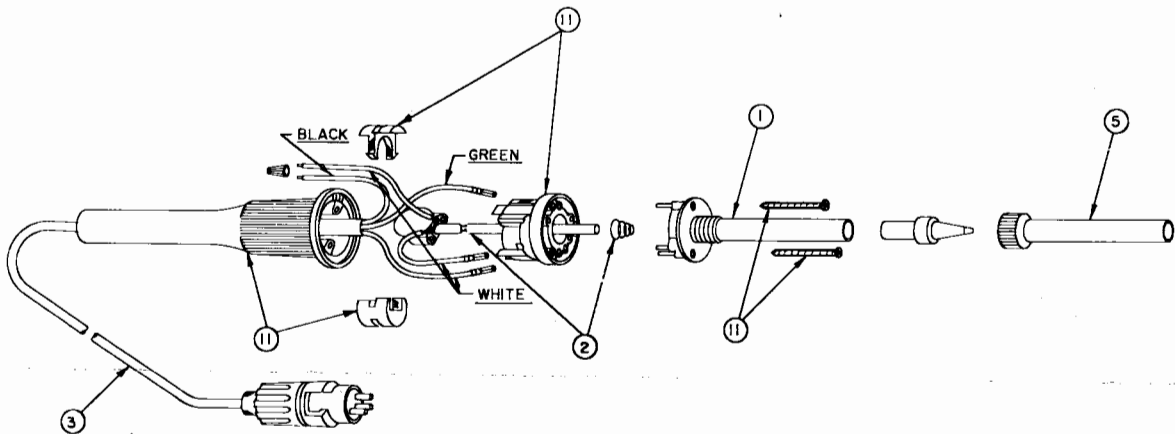
CAUTION: 120 VAC (240 VAC for WTCPRD) is present inside the power unit case whenever the line cord is connected to a line receptacle.

 1. Remove four screws from case bottom, remove case bottom.
 2. Check for on/off switch light when unit is turned on. If switch light is not on with unit turned on, on/off switch, line cord, or associated wiring is defective. Unplug unit from AC line and test wiring for continuity referring to schematic.
 3. Check internal fuse, replace with 3 amp fuse only, if blown. (Not shown on schematic)
 4. Check for 24 VAC at two transformer red wires with unit on and plugged into AC power. If transformer checks bad, replace TC202 (TC202D).
- II. TC201P hand tool overheats or temperature is higher than marked on tip, temperature control is erratic.
 - A. Replace tip with Weller tip.
 - B. Check magnastat switch & heating element. For correct type & operation refer to steps I.B.2. & 3.
- III. High voltage on tip or indication of damage to circuit components.
 - A. Check tip ground for maximum 1 ohm resistance from heater barrel to line cord round pin.
 - B. Check heater barrel to Pin 2 of tool receptacle for 1 ohm maximum. If this shows good, go to step III C. Remove heating element as in step I. B. 2. and check ground pin on heating element. Check from ground pin receptacle in heat insulator to tool receptacle pin. Replace line cord.
 - C. Remove case bottom and check green wire from line cord to tool receptacle. Replace power unit line cord.

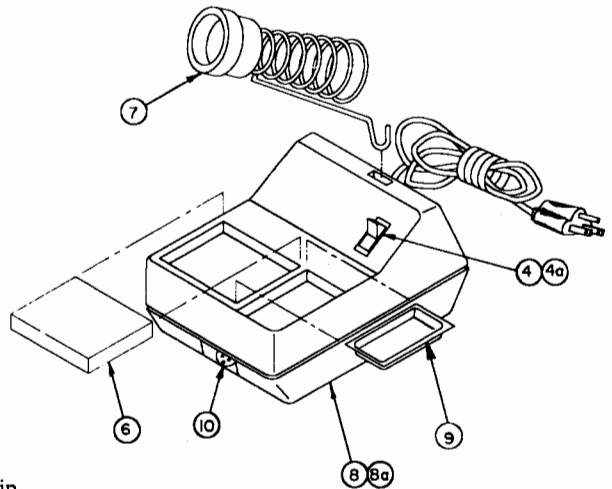
*For use with plug-in heating element tools only.



REPLACEMENT PARTS FOR WTCPR/WTCPRD
(Please state product model number when ordering)



KEY NO.	PART NO.	DESCRIPTION
1	EC234	Heater (plug-in type)
2	SW60	Switch Assembly w/Spring
3	TC212	Cordset w/plug
4	EC219	Switch/light Power Unit (WTCPR)
4a	EC220	Switch/light Power Unit (WTCPRD)
5	BA60	Barrel Nut Assembly
6	TC205	Sponge
7	TC204	Iron Holder w/Funnel
8	TC202	Power Unit Only. Includes Sponge and Iron Holder for WTCPR
8a	TC202D	Power Unit Only. Includes Sponge and Iron Holder for WTCPRD
9	TC206	Tip Tray
10	TC369A	Plug/Receptacle Kit
11	EC232	Handle Assembly
Not Shown	TC201P	Soldering Pencil, includes BA60 and PTA7 tip



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