Weller DIVISION OF COOPER INDUSTRIES, INC.
100 WELLCO ROAD • EASTON, PA. 18042 • PHONE 215 258-5371

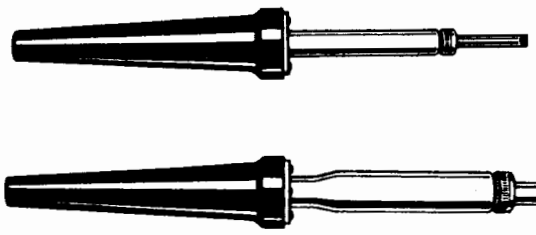
Series 4, No. 1A

MAINTENANCE, REPAIR
AND OPERATING BULLETIN

Models W60 & W100

9/5/69k

INDUSTRIAL BULLETIN



MODEL W60 - PENCIL GRIP
60W. 120V. 50/60Hz. Wgt. 2 1/2 oz.
7 1/2" long. Normally supplied with
#CT5E7 1/4", 700°F. screwdriver tip.
2 or 3 wire cord. Cool blue handles.

MODEL W100 - PENCIL GRIP
100W. 120V. 50/60Hz. Wgt. 3 1/2 oz.
8 1/4" long. Normally supplied with
#CT6F7 3/8", 700°F. screwdriver tip.
2 or 3 wire cord. Cool blue handles.

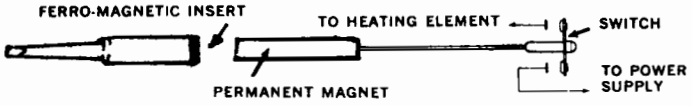
General

Weller controlled output tools are designed to operate under industrial working conditions with a minimum of maintenance. In order that the using people will achieve the best results with this tool, they should be familiar with its operation and care.

Theory of Operation

Magnastat (R) controlled tools use a patented control element which consists of the sensing unit (or Magnastat) which is built into the tip and the switch which is operated by a permanent magnet. In operation the permanent magnet is attracted to the control element, thereby closing the switch and supplying power to the heating element whenever the temperature falls below the set-point. After the sensing element reaches the set-point, it becomes nonmagnetic and releases the permanent magnet, thereby opening the contact and turning off power. (See schematic illustration below.)

Weller "Temperature Sensing" tips make the system work



The Magnastat (R) in the tips controls at one of several temperatures. Various outputs are achieved by selecting a tip style with the proper Magnastat. Once a control temperature has been selected, the tool will work within the limit of the control selected i.e., whenever the iron is idling the switch will respond closely to the set-point, with actual tip point temperature somewhat predicated by tip shape. The set-point is embossed into "Magnastat", in hundreds of degrees F. In addition to controlling idle temperature, it will also sense work load and adjust power to meet requirements within the limits of given tip and iron frame capabilities.

WARRANTY

Weller Industrial Soldering Tools are constructed of the finest materials available. Each tool is thoroughly inspected and tested before leaving the factory. Tools suffering from defective workmanship or materials will be repaired or replaced free of charge F.O.B. factory. Tools that have been used and returned to the factory for repair, will be repaired at a nominal service charge plus cost of parts, F.O.B. factory. Dealers and distributors are not authorized to make repairs or replacements.

Maintenance and Operation

As with any tool operating under conditions existing in modern soldering lines, a few necessary procedures have to be followed to insure that you receive maximum value from your tools. The following list has been compiled for your use.

DO	DON'T
Provide a suitable stand which will prevent barrel and/or tip from touching metal parts thereby resulting in a heat sink.	Drop iron as this may do permanent damage.
Keep tip tinned; wipe only before using.	Clean tip with abrasive materials.
Use rosin or activated rosin fluxes.	Use chloride or acid containing fluxes, as this will reduce tip life.
Remove tips and clean tips and sockets on a regular basis. The frequency should be determined by the type of work and usage. Tips in constant production use should be cleaned at least once a week as noted above.	Remove excess solder before storing heated tool.
Use a suitable cleaner for rosin based fluxes, such as, isopropyl alcohol or equivalent.	File or attempt to reshape tip, as this will destroy tip coating.
Use small amount of anti-seize compound to coat threads on tip nuts on irons so equipped. But do not use on tip shank or in tip receptacle.	Use anti-seize on tip or socket as these parts are already protected from oxidation.

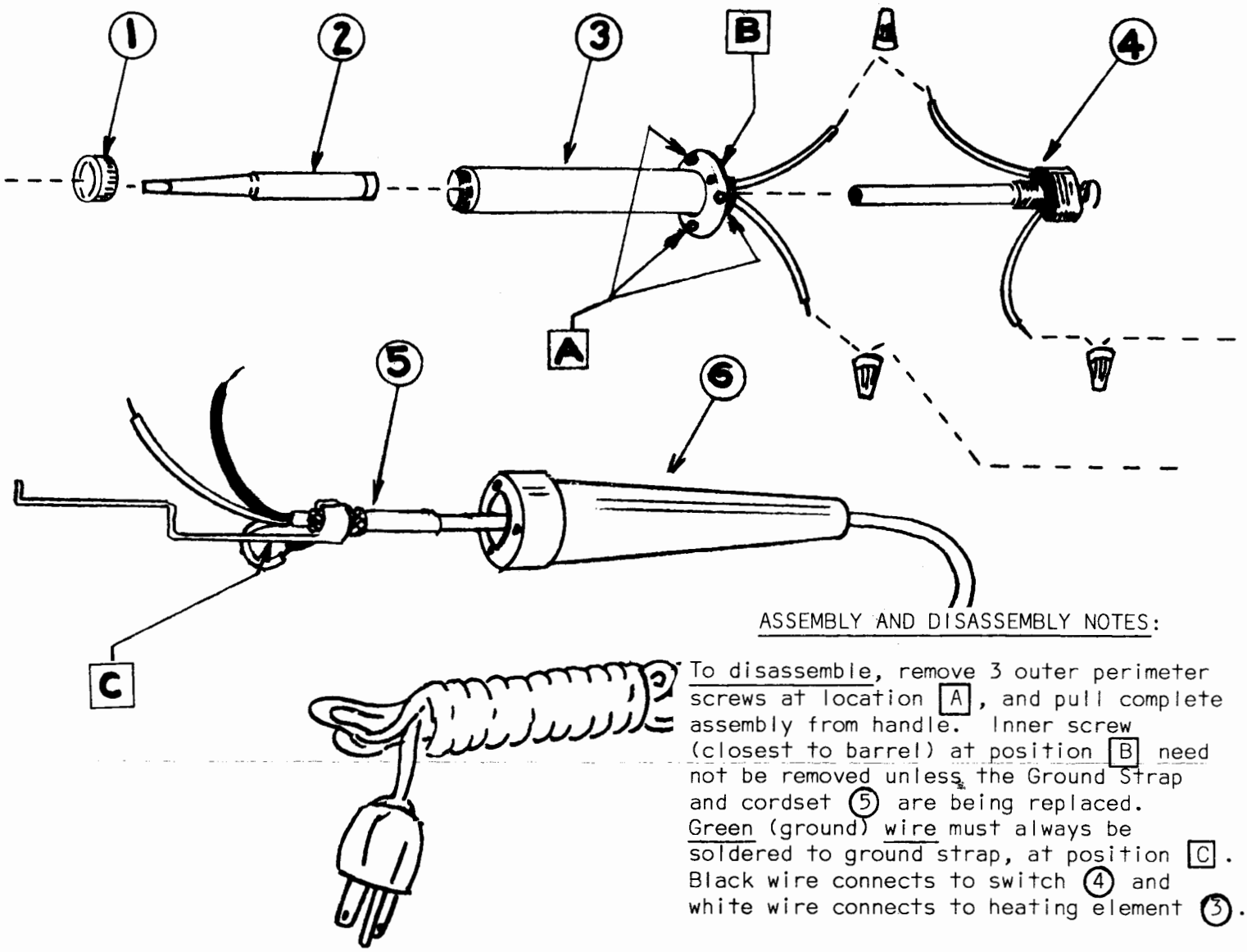
Trouble Shooting Guide

1. Check power.
   a. If power exists, check iron.
   b. If no power exists, check supply.
2. Check iron.
   a. If iron does not heat, check switch and element.
   b. If element and switch are OK, check wiring.
3. Check switch.
   a. Measure continuity across contact with tip against blunt end of switch. If none, replace switch. With tip removed, there should be no continuity.
4. Check element.
   a. If switch is OK, check continuity of element.
   b. Check element to frame, no continuity should exist.
5. Check wiring.
   a. Check cord set for continuity and possible grounded cord set. Flex while checking to look for intermittent faults.
   b. Check connection to switch and element for opens and shorts.

REPLACEMENT PARTS FOR MODELS W60 and W100

Key #	Part #	Description
6	HA1	Handle for W60 and W100
5	CS3	Cord Set and Strain Relief Assembly Kit for W60, W100; 2-Cord
5	CS4	Cord Set and Strain Relief Assembly Kit for W60, W100, W200; 3-Cond.
3	HEW60	Heating Element for W60
3	HEW100	Heating Element for W100
4	SW60	Switch Assembly for W60
4	SW100	Switch Assembly for W100
1	KN60A	Knurled Tip Fastening Nut for W60
1	KN100A	Knurled Tip Fastening Nut for W100

Models W60 and W100



ASSEMBLY AND DISASSEMBLY NOTES:

To disassemble, remove 3 outer perimeter screws at location [A], and pull complete assembly from handle. Inner screw (closest to barrel) at position [B] need not be removed unless the Ground Strap and cordset (5) are being replaced. Green (ground) wire must always be soldered to ground strap, at position [C]. Black wire connects to switch (4) and white wire connects to heating element (3).

Some Tips About Tip Selection And Care

1. First choose configuration. Pick maximum working surface physically compatible with size of solder joint. Also, pick shortest tip with thickest cross section compatible with accessibility and visual requirements.
2. Then, within the chosen configuration, select the idle temperature. This should be done empirically. Optimum selection is the lowest temperature that will give satisfactory production rate. Tip life is directly related to tip temperature. The lower the temperature, the longer the life. Where heat sensitive components are involved, the heat rating of the component will govern.
3. Generally speaking, larger joints to be soldered at higher production rates will require higher temperatures. For small printed circuit work, be sure to try 600°F.
4. Remember performance is determined by both temperature and configuration. As an example, check configuration chart below. Work done satisfactorily with a 5CIN at 600°F. might require 700°F. if a 5AIL is used.
5. 800°F. tips are recommended only for applications with relatively high production rates, (which provide sufficient heat sink action) or for stripping magnet wires. 800°F. tips in shaded areas should be used only when application actually forces their use. Life will not approach that of other types.

REPLACEMENT SOLDERING TIPS
HI-PERFORMANCE "CT5" SERIES — FOR MODELS W60

"¼ shank diameters—For use with tools having KN60A tip nuts (1/4" opening)

TIP POINT SIZE	DESCRIPTION	REACH	PART NUMBERS			
			500°F.	600°F.	700°F.	800°F.
1/16"	Screwdriver	1-5/32"	CT5A5	CT5A6	CT5A7	CT5A8
3/32"	Screwdriver	1-5/32"	CT5B5	CT5B6	CT5B7	CT5B8
1/8"	Screwdriver	1-5/32"	CT5C5	CT5C6	CT5C7	CT5C8
3/16"	Screwdriver	1-5/32"	CT5D5	CT5D6	CT5D7	CT5D8
1/4"	Screwdriver	1-5/32"	CT5E5	CT5E6	CT5E7	CT5E8

■ BULK PACKED, any single tip, lots of 100*. *To order, add "BULK" after part number.
Order as lot units (1=100 tips, 2=200 tips. etc). Order in unit lots (of 100) only.

HI-PERFORMANCE "CT6" SERIES — FOR MODELS W100

⅜" shank diameters—For use with tools having KN100A tip nuts (3/8" opening)

1/8"	Screwdriver	1-15/32"		CT6C6	CT6C7	CT6C8
3/16"	Screwdriver	1-15/32"		CT6D6	CT6D7	CT6D8
1/4"	Screwdriver	1-15/32"		CT6E6	CT6E7	CT6E8
3/8"	Screwdriver	1-15/32"		CT6F6	CT6F7	CT6F8

NOTE: Above tips fit only new Blue Color series tools. For black handle tools, see catalog or price list.

IMPORTANT - Inasmuch as "controlled output" tools are automatically controlled, use of improper metallic stands or holders will cause heat sinking; thereby, turning tool on full output. This will affect life of tools and tips. Refer to Weller industrial catalog for recommended stands and holders noted below.

FOR GREATER EFFICIENCY....LOWER OPERATING COSTS

consider these Weller Controlled Output Industrial Soldering Tools:

MODEL W-TCP-L
- Predetermined temperature by tip selection
- Tip will not freeze
- Cord set will not burn
- Isolation for protection of sensitive devices
- Low voltage operation
- Built-in on-off switch
- Built-in indicating light
- Available less light & switch as Model W-TCP

SOLDERING TOOL STANDS
- PH series includes heavy base with sponge receptacle.
- SFA series are less base, intended for attachment to bench or side rail.
- #PH60 for Model W60 Irons
- #PH100 for Model W100 Irons
- #SFA60 (less base) for Model W60 Irons
- #SFA100 (less base) for Model W100 Irons

NEW MODEL W-MCP
- Automatically controls output and temperature
- Fixed temperature (650°F.)
- Interchangeable tips
- For micro-soldering applications
- Isolated; shielded
- 750°F. and 550°F. units also available

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