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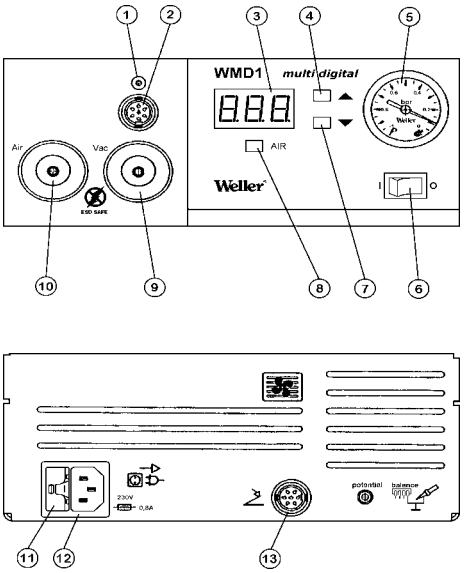
WRS1002



FEATURES

1. LED for heater control indication
2. Control Unit Receptacle
3. Digital Display
4. “Up” Key (increasing the set value)
5. Vacuum Gage
6. Power Switch
7. “Down” Key (decreasing the set value)
8. “Air” Key for setting the Air Volume
9. Vacuum Port/Filter
10. Air Port/Filter
11. Fuse 5mm x 20mm (0.2” x 0.8”)
12. Main Power Supply
13. Foot Switch Connector (Optional FS)

WARNING: This product, when used for soldering and similar applications, produces chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

DESCRIPTION

The WRS1002 is a multifunctional unit, which has an outstanding range of functions. The WRS1002 is packaged with an HAP1 Hot Air Pencil, but can also be used with soldering, desoldering, pre-heat plate, thermal tweezers, etc.

A list of available optional tools are in the accessories list. Tools that are rated from 25W to 80 Watts may be used with the WRS1002 Station. Calibration of the different soldering/desoldering devices is not required due to the unique capability of the microprocessor to automatically recognize which tool is connected to the station. The station automatically selects the relevant parameters for optimum and precise temperature control. The temperature is controlled via digital circuitry. The process parameters for temperature and air flow are entered using a series of three user-friendly keys (Up, Down and Air Flow). The “Set” value and the actual “Read” values are also displayed by the digital display panel.

The HAP1 Hot Air Pencil temperatures can be adjusted between the range of 150 - 1022°F (65 - 550°C). When one of the many soldering or desoldering tools are attached the adjustable range is from 150 - 850°F (65 - 454°C). When the desired (Set) temperature is reached, the green LED flashes. Continuous illumination of the green LED indicates that the system is heating up. The air for the HAP1 Hot Air Pencil, as well as for the vacuum used for desoldering is generated by a high efficiency rotary vane pump, internal to the unit. The air for the hot air pencil or the vacuum for the desoldering tool is actuated by the push key switch on the handle of the individual tool. An optional foot switch (see Optional Parts Lists) can be used to actuate the air flow or vacuum, depending on the tool connected to the station.

The WRS1002 offers features such as: temperature/air flow lockout, temperature setback and temperature offsets. The optional process parameters may be entered using the WCB1 Calibrator (optional).

A wide range of products including hot air nozzles, desoldering tiplets and soldering tips are available which allow many different soldering, desoldering and rework tasks to be achieved.

The housing of the WRS1002 has an ESD safe coating. The soldering tip, desoldering tiplet or hot air nozzles are “hard grounded” to the power cord ground prong. The hot-air is also ESD safe from static charges, due to the proprietary de-ionization circuit used in the HAP1 Hot Air Pencil. The WRS1002 complies with all MIL-STD AND J-STD requirements.

SPECIFICATIONS

Dimensions (W x D x H):	240 x 270 x 105 mm
Power Supply Voltage:	120 VAC 50/60 Hz
Power Consumption:	175W (Max.)
Fuse:	1,6 5mm x 20mm
Hot Air Pencil:	100W 150 - 1022°F (65 - 550°C)
Solder/Desolder:	25 to 80W 150 - 850°F (65 - 454°C)
Pump:	Maximum Capacity Hot Air - 10 l/min
Vacuum:	Maximum 0,7 Bar

PACKING LIST

Hot Air Unit - WRS1002 (Base Unit)

Power Cord 120VAC

HAP1 Hot Air Pencil w/Stand

Instruction Manual

INSTALLATION

Place the soldering iron, desoldering iron or hot air pencil in the appropriate tool holder. Connect the iron plug into the control unit receptacle (2).

Hot Air Pencil: Push the air hose onto the “Air” nipple (10).

Desoldering: Push the vacuum hose onto the “Vacuum” nipple (9).

CAUTION: To avoid injury, **do not connect** the “Vacuum” hose of the desoldering iron to the “Air” outlet.

Check that the power supply voltage and power cord agree with the value given on the nameplate. If the main voltage is correct, connect the WRS1002 to the main voltage supply (12). Switch on the WRS1002 at the power switch (6). When the unit is switched “ON”, a short self-test program is initiated, whereby all the digital display characters (3) are briefly illuminated. After the self-test feature is activated, the unit automatically switches to the default temperature and air Settings. The green LED (1) will then come “ON” to indicate that the heater circuit has been activated. The green LED serves as a heat control indicator. When the green LED is “ON” continuously, this means that the tool that is connected, is heating up. If the green LED is flashing, the LED indicates that the required temperature has been reached. The temperature display (3) now shows the actual (Read) temperature.

The internal pump is started using either the switch in the handle of the hot air tool, or by an optional foot switch. The connector for the foot switch (13) is on the back panel of the station.

The supply unit uses a vacuum gage (5) to display the level of vacuum. The vacuum gage may indicate a restriction due to the normal diameter of the desoldering tiplet, a clogged tiplet or a contaminated filter (9).

CAUTION: The rotary vane pump is supplied with an external fan to ensure that the pump remains cool. There must be a sufficient air supply for this fan to operate properly.

TEMPERATURE SETTING

The digital display (3) (see illustration on Page) shows the actual “Read” temperature. By depressing the “Up” or “Down” key (4) and (7), the display (3) switches to the “Set” value. The “Set” value can then be increased or decreased by depressing the “Up” and “Down” keys (4) and (7) respectively. If the “Up/Down” keys are depressed continuously, the adjustment scrolls very quickly. After approximately 2 seconds after releasing the key, the display (3) automatically switches back to showing the actual “Read” temperature.

NOTE: When the HAP1 Hot Air Pencil is connected to the station, only the “Set” value will be displayed.

AIR FLOW SETTING

When depressing the “Air” key (8), the display switches to read the air flow volume (LPM). The air output can then be changed gradually from 1 l/min - 10 l/min by depressing the “Up” or “Down” keys (4) and (7). If the keys are continuously depressed, the adjustment scrolls very quickly.

MAINTENANCE

When using the HAP1 Hot Air Pencil, be sure that the filter (10) for the air outlet is clean. Contamination of the filter affects the air output of the pump, which in-turn affects the performance of the Hot Air Tool. Therefore, the main filters for the air (10) and vacuum (9), should be checked regularly and changed when necessary. To do this, unscrew the filter cover, remove the contaminated filter and replace with a new Weller filter cartridge. Be sure that the filter cover seal is correctly in place, insert the compression spring and tighten the filter cover back on firmly.

CAUTION: Working without the vacuum or air filter in place can destroy the vacuum pump.

DESOLDERING TOOL USE

When using a desoldering tool with a desoldering tiplet, be sure to maintain a coating of solder (tinning) on the wettable area of the tiplet at all times. Desoldering tiplets should be treated like soldering tips. This would require wiping on a treated damp soldering tool sponge and re-tinned immediately after wiping the tiplet. Damage to the plated surfaces leads to oxidation. Therefore, the desoldering tiplet should never be filed or sanded. Only original Weller tool holders should be used for storing the tool. When desoldering, it is important to us additional flux core wire solder. This provides proper wetting of the tiplet and assist in helping to transfer the energy being produced by the desoldering iron. Care should be taken that the desoldering tiplet is perpendicular to the circuit board in order to achieve the proper level of vacuum to remove solder from the through hole connection.

It is important to choose the proper size tiplet to match the connection being desoldered. The rule of thumb is that the I.D. of the tiplet should closely match the diameter of the circuit board through hole.

NOTE: The Weller desoldering systems utilize a feature that allows the vacuum of the system to run for one or two seconds after the pump switch has been released. This allows the molten solder to fully travel into the solder collection chamber.

SWITCHING “OFF” THE PUMP DELAY CIRCUIT

Power “Off” the WRS1002 Station. Depress the “Up” and “Down” keys simultaneously while powering the unit “On”. Be sure to keep the “Up” and “Down” keys depressed until the self-test feature of the unit has finished. A “-0-” will appear in the display window which is the universal symbol for “Off”. It is now okay to release the “Up” and “Down” keys.

SWITCHING “ON” THE PUMP DELAY CIRCUIT

Power “Off” the WRS1002 Station. Depress the “Up” and “Down” keys simultaneously while powering the unit “On”. Be sure to keep the “Up” and “Down” keys depressed until the self-test feature of the unit has finished. A “-1-” will appear in the display window which is the universal symbol for “On”. It is now okay to release the “Up” and “Down” keys.

SOLDERING

When using a soldering tool with a new tip, be sure to maintain a coating of solder (tinning) on the wettable area of the tip at all times. It is required to wipe the tip on a damp soldering tool sponge and re-tin the tip immediately after wiping. Damage to the plated tip surface leads to oxidation. Therefore, the soldering tip should never be filed or sanded. Only original Weller tool holders should be used for storing the tool. When soldering, it is important to use additional flux cored wire solder. This provides proper wetting of the tip and assists in helping to transfer the energy being produced by the soldering iron.

NOTE: Soldering tips as well as desoldering tiplets should have a coating of solder applied to them at all times. Never wipe the tip/tiplet before storing unless planning to replace the tinning immediately after wiping. This prevents oxidation and contamination from occurring on the working surface of the tip/tiplet.

NOTE: The use of highly active or active fluxes in the core of the solder or as an addition (liquid flux/paste) to the flux core will greatly affect the life of the tips/tiplets. Use an RMA flux if possible, in the application to extend the life of your tips/tiplets.

NOTE: The us of water soluble, no clean or synthetic fluxes will also greatly affect tip/tiplet life. Indications of a “blackening or charring” affect on the working surface of the tip/tiplet is an indication that the tip is “contaminated” by a substance that is being used in the application. If a “blackening or charring” appears on the working area of the tip, do not try to file or sand the tip. There are many “tip tinner” type products available on the market today which utilize a very aggressive flux that can be used to clean this “blackening or charring” affect, from the tip/tiplet.

CAUTION: “Tip tinner” should only be used when the tip’s working surface becomes partially or fully “non-wettable”. Do not use the “tip tinner” frequently as this will reduce the life of the tip.

SAFETY INFORMATION

The manufacturer accepts no liability for use other than that specified in the operating manual.

ACCESSORIES

Part Number	Description
WSP80	80W Soldering Iron
WSP80AP	80W Soldering Iron w/Stand
EC1201A	40W Soldering Iron
EC1201AP	40W Soldering Iron w/Stand
EC1302B	25W Soldering Iron
EC1302AP	20W Soldering Iron w/Stand
EC1503B	42W Soldering Iron
EC1503AP	42W Soldering Iron w/Stand
0051319199	DS80 Desoldering Iron
0053312199	DS80 Desoldering Iron w/Stand
0051319499	DSV80 Desoldering Iron
0053312999	DSV80 Desoldering Iron w/Stand
0052702899	WHP80 Pre-Heat Plate 80W
0051310799	WTA50 Thermal Tweezer 50W
0053313399	WTA50 Thermal Tweezer w/Stand 50W
WST20	Thermal Stripper (No Blades)
WCB1	Calibration Reference Unit

WRS1002 EXPLODED VIEW