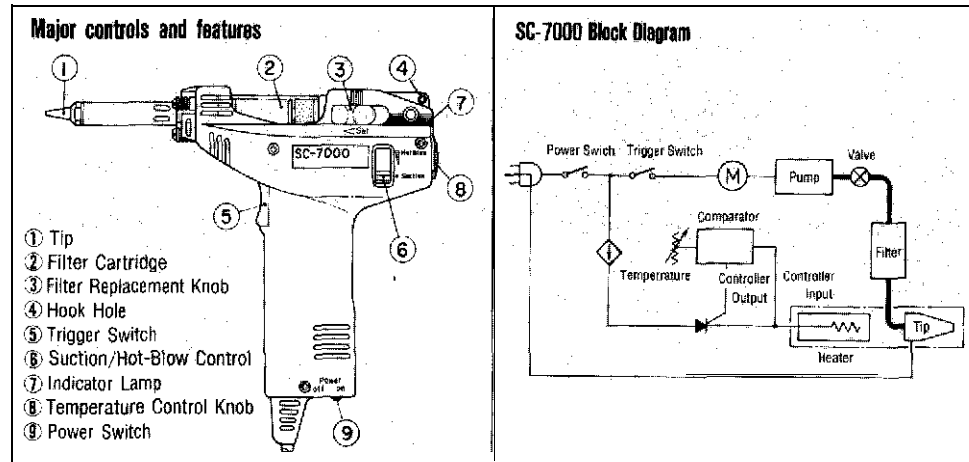


Thank you for your purchase of the DIC SC7000 high-performance desoldering tool as one of your auxiliary service instruments. We hope that the use of our quality product will give you satisfaction for years to come. To get the maximum performance from your instrument we suggest that you note the following instructions before operating the tool. This basic technical Sheet will help you to better understand the features, advantages, and maintenance necessary to keep your instrument functioning efficiently.



USAGE AND PRECAUTIONS

1. Plug the power cord into an electrical outlet. Then set power switch, located on the bottom of handgrip, to "ON" position and allow instrument to warm up for a few minutes.

NOTE:

 - a) When the instrument is operated the first time fumes may develop in the area of the heater holder. This is normal and is caused by the protective coating burning off of the heating element.
 - b) Check the filter cartridge for proper position and direction.
2. Set the temperature control knob to suit the application. For standard desoldering procedures, it is advisable to choose a position between 380C and 400C, when working on multilayer P.C.B applications the most satisfactory results will be obtained at temperatures ranging from 420C to 450C.
3. To remove the solder around any lead-wire of a given component, simply place the bore of the desoldering tool tip over the wire-end, insert and at the time the solder around it melts, gently pull the vacuum trigger switch to allow the pump to suck the molten compound away.
4. The removed Solder will gradually accumulate in the filter cartridge and may be removed with tweezers,
5. when the felt in the filter cartridge becomes dirty the suction effect of the system will decrease. it is recommended that the filter cartridge be changed when between one-fourth and one-half of the filter shows a build up of impurities.
6. If the bore of the desoldering tip becomes clogged with flux and/or solder and causes a decrease in suction performance it is necessary then to clear the channel in a heated condition, using the cleaning pin set.

Note: The instrument is delivered with a cleaning pin set composed of 3 different pin diameters to be used according to desoldering tip sizes. Each Size has a long and a short pin. Use the short pin first, then followed by the longer pin.
7. After a working session, clear the bore of any flux and/or solder residuals after that, set the operating mode switch to the hot-air-blow position and clear tip completely. Your tool will now be ready to proceed with your next job.
8. The hooking hole may be used to hang the tool in a counter weighted position for permanent desoldering operation.

REMOVAL OF 'SURFACE MOUNTED DEVICES' (SMD)


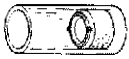



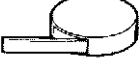
As you are aware, the unique design of the SC-7000 desoldering tool allows for the quick conversion from solder removal to HOT-AIR Blower. By using the hot-air blower with the SMD accessory kit (51.78.00) components are easily removed from PCB's and substrates. The change to hot-air blower requires:

- a) remove the desoldering tip and replace with hot-air Blower nozzle, using wrench supplied.
- b) Replace the desoldering cartridge with the special hot-air cartridge.
- c) Set the vacuum/hot-air control to hot-air blower position. The hot-air flow rate can be adjusted with the switch lever.
- d) Depending on the nature of the desoldering work and the size of the component, the temperature control should be set at the appropriate level. (440C-450C)

CAUTION: Take care when using the hot-air blower function. The operator should be aware that the "AIR" can cause serious burns.

'SMD' ACCESSORY KIT-OPTIONAL-(Order No. 51-78-00)

The kit consists of six items as shown below:

(1)	 SMD Hot-Air Nozzle	For use on SMD's
(2)	 Hot-Air Cartridge	Used for hot-air desoldering applications
(3a)	 Wire Holder PV-1	Stainless steel wire holder Used to remove a QFP* or SOP**
(3b)	 Stainless Steel Wire Roll WS-630	
(4a)	 Blade Holder ST-705	Stainless steel blade holder Used to remove PLCC***
(4b)	 Stainless Steel Blade Roll RB-641	

* QFP : Quad Flat Package ** SOP : Small Out-line Package *** PLCC : Plastic Leaded Chip Carrier

PRECAUTIONS

- a: Never attempt to wash or rinse a dirty filter in any kind volatile Solvent, as this may decrease the performance of the instrument and may present an explosive hazard.
- b: To avoid damage to heating element (from thermal shock) never use water or any other coolant on heating section or tip.
- c: Excessive shock and vibration to the instrument itself may also damage the heating element.
- d: After extended use, flux may accumulate on the valve sheet, gasket and/or the protective Silicon tubing the vacuum pump lowering its suction performance. Periodic maintenance and cleaning of these parts is advisable, any flawed or deformed parts should be replaced.
- e: The desoldering tool-stad (ST800) should be used in conjunction with your instrument. This particular stand has been designed to maximize the performance and life of your SC7000 desoldering tool.

PARTS REPLACEMENT AND MAINTENANCE

1. Filter cartridge replacement

When solder material has accumulated in the filter cartridge after a long period of operation, remove it with tweezers. When between one-fourth and one-half of the felt portion has been discolored by dirt, replace the filter cartridge and filter with new ones.

NOTE: When replacing the filter cartridge, be sure to clean adjacent area to prevent air leakage.

Removal and/or replacement procedure

Pull the filter releasing/fixing knob towards the handgrip of the tool (release position) and hold. Push the cartridge assembly in direction of mark "←" and remove it. Place the new cartridge with the sign 'FRONT' upwards into location and bring back the releasing/fixing knob to the 'FIX' position.

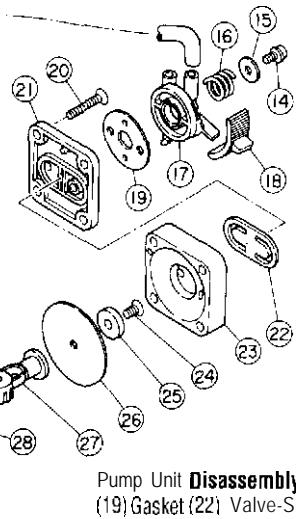
Make sure that the knob is properly locked after the replacement operation.

2. Desoldering Tip and SMD Hot Air Nozzle Replacement

To remove the desoldering tip or SMD hot air nozzle, unscrew them counterclockwise using the accessory wrench on the nut-cut face. To mount the tip or nozzle, proceed in reverse. Tightening clockwise until snug. Do not over-tighten.

3. Sheet-Valve, Gasket or Diaphragm Cleaning and/or Replacement

After long operation, the suction pump parts, such as sheet-valve, gasket and/or diaphragm may need cleaning or replacement.



Suction Pump Disassembly for Parts Cleaning and/or Replacement

Loosen and remove three screws on the body housing. Also, remove the fixing screw located in the base of the heater holder. Open the side of the body housing carrying the sticker. Take the pump unit out of the body. For gasket (19) and valve-sheet (22) cleaning and/or replacement, remove attaching screws (14) and (20), respectively. For diaphragm (26) cleaning and/or replacement, remove the attaching screws (20) and (24).

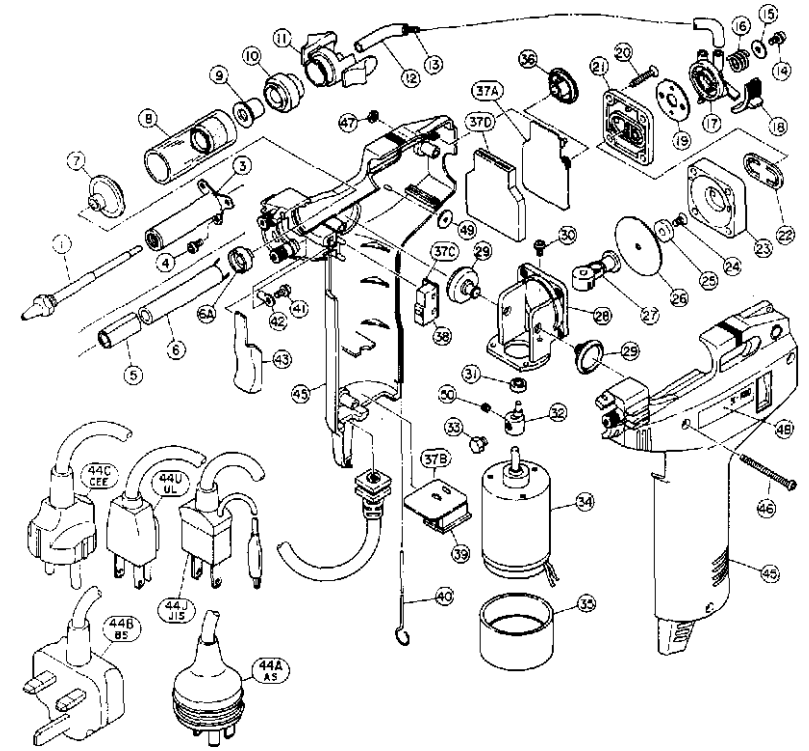
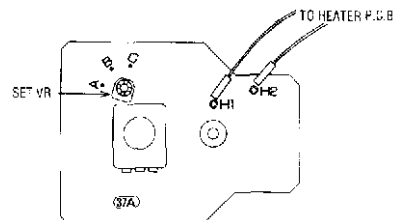
Pump Unit Disassembly
(19) Gasket (22) Valve-Sheet (26) Diaphragm Fig. 3

4. Heater Replacement

First of all, remove the desoldering tip or SMD hot air nozzle. Open the body housing using the same procedures as described on paragraph 3.

Disconnect the heater circuit plugs from the PCB (37A). Take the heater out of the body housing.

After replacement of the heater, adjust the variable resistor according to the table below.



Drawing No.	Order No.	Description	Remarks
3	70-03-00	Heater holder	
6	70-06-00	Heater with insulation tube	100 - 120 VAC Model
	70-06-50	Heater with insulation tube	220 - 240 VAC Model
7	50-07-00	Pipe setter (F)	
8	70-08-00	Filter cartridge set Filter B	consisting of 5 filter cartridges, and 5 filter-B
19	70-19-00	Gasket	
22	70-22-00	Sheet-Valve	
26	70-26-00	Diaphragm	

TROUBLESHOOTING CHART

No Heat generated

Does pump work?
 Yes: LED glows weak → Replace heater
 No: Is the fuse resistor on the PCB 378 open?
 Yes: Replace fuse resistor
 No: Check power supply circuit

Check heater resistance
 About 30 for 100 - 120 V AC
 About 150 for 220 - 240 V AC

No: Replace heater
 Yes: Check PCB (37A)

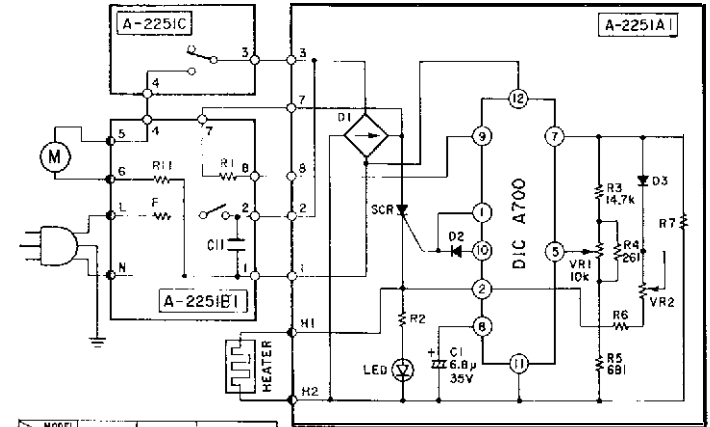
**Low Suction
No Suction**

Is the selector switch lever set to the "suction"?

Is pump motor running?
 No: Is Tip/Nozzle heating-up?
 No: Is fuse resistor on PCB open?
 No: Check power supply circuit.
 Yes: Replace fuse resistor
 Yes: Check microswitch, motor, etc.

Is diaphragm operating?
 No: Fasten set screw (50)
 Yes: Are pipe setters (F) and (R) firmly in place?
 No: Is filter clogged?
 No: Replace filter
 Yes: Does pipe setter (F) have flaws or is it deformed?
 No: Are there impurities in the pump?
 Check valve-sheet, gasket, diaphragm, etc.
 Yes: Replace pipe setter (F)

CIRCUIT DIAGRAM



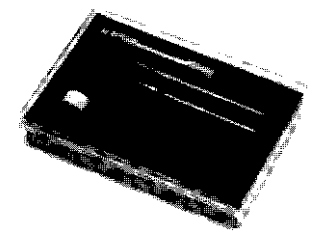
MODEL	100V	120V	220-240V
R1	1W 10k	1W 12k	2W 27k
R2	1W 22k	1W 22k	1W 51k
R5	1/6W 68Ω	1/6W 73Ω	
R6	1/6W 191Ω	1/6W 866Ω	
R7	220-240V ONLY		1/6W 5.6k
R11	5W 10Ω	5W 15Ω	1W 27
VR2	470		1.5k
C1	220-240V ONLY		0.22μ 250V

SC-7000 DESOLDERING TOOL
CIRCUIT DIAGRAM

■ STAND ST-800



■ SMD REMOVING SET



■ FILTER CARTRIDGE SET CARTRIDGE: 5pcs, FILTER: 5pcs

■ OPTION

SPEC.	STAMPED	φ d	φ D1	φ D2	L mm
0.8 Std	0.8	0.8	2.5	7.0	12.5
0.8 SLIM	08S	0.8	2.0	6.0	14.0
0.8U SLIM	S8	0.8	1.5	5.0	11.5
1.0 Std	1.0	1.0	2.5	7.0	12.5
1.5 Std	1.5	1.5	3.0	7.0	12.5
1.0 SLIM	10S	1.0	2.0	6.0	14.0
1.5 SLIM	15S	1.5	2.2	6.0	14.0

