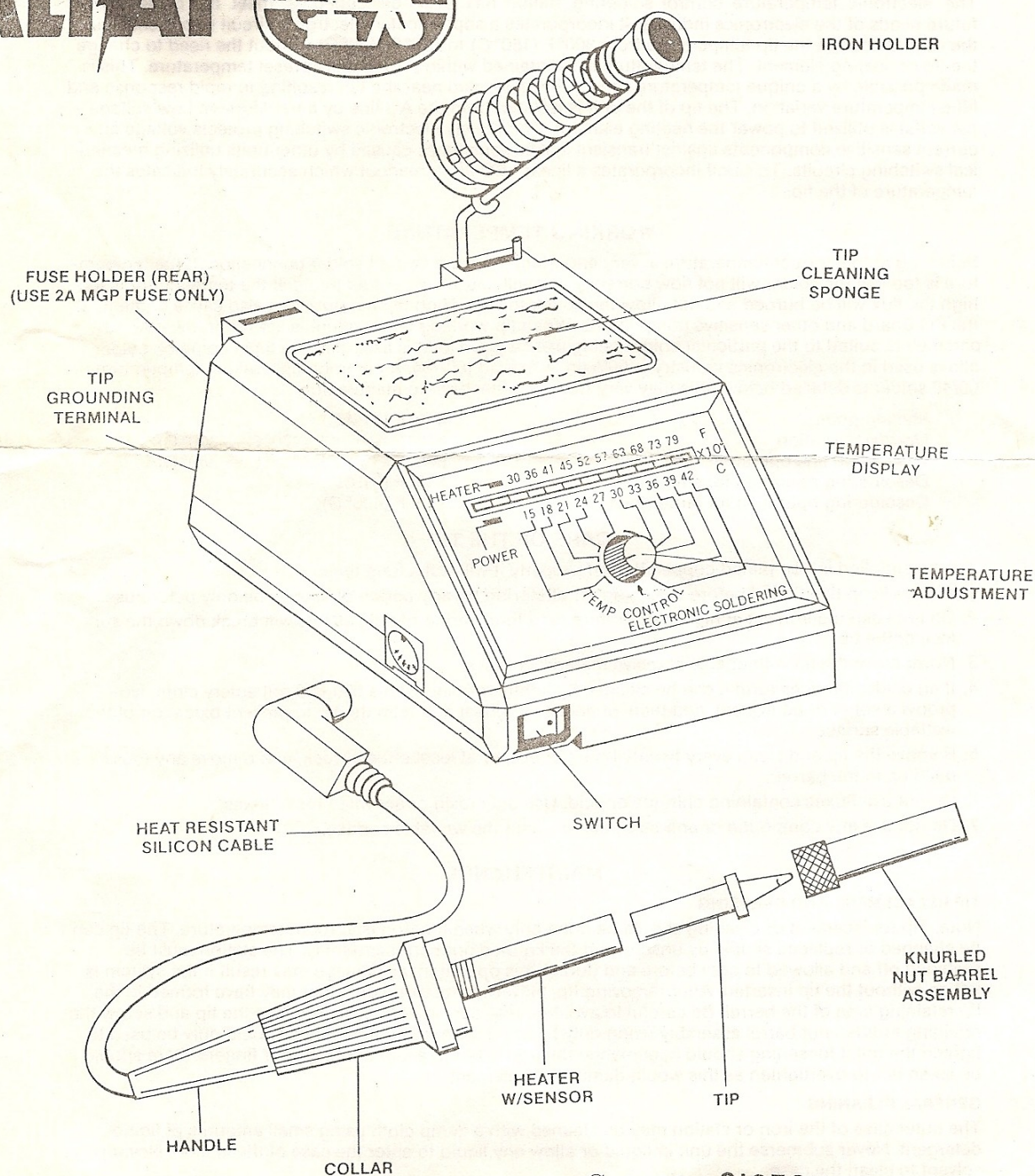


OPERATING INSTRUCTIONS

ALTA1



Cat. No. SIC505

TEMPERATURE CONTROLLED SOLDERING STATION

OPERATOR'S MANUAL FOR A TEMPERATURE CONTROL SOLDER STATION

PRODUCT DESCRIPTION

The electronic temperature control soldering station has been developed to meet the present and future needs of the electronics industry. It incorporates a sophisticated electronic circuit which enables the user to change the tip temperature from 300°F (150°C) to 790°F (420°C) without the need to change the tip or heating element. The temperature is maintained within $\pm 10^\circ\text{F}$ of its preset temperature. This is made possible by a unique temperature sensor that is located near the tip, resulting in rapid response and little temperature variation. The tip of the unit is isolated from the AC line by a transformer. Low voltage (24 volts) is utilized to power the heating element. Completely electronic switching protects voltage and current sensitive components against transient spikes sometimes caused by other units utilizing mechanical switching circuits. This unit incorporates a linear LED array readout which accurately indicates the temperature of the tip.

WORKING TEMPERATURE

Soldering at the correct temperature is very important to insure perfect solder connection. If the temperature is too low the solder will not flow correctly and will cause cold solder joints. If the temperature is too high the flux will be burned and not allow the solder to flow. High temperature can also cause damage to the PC Board and other sensitive components. When tip working temperature is set within the correct parameters suited to the particular solder being used a good joint is assured. The most common solder alloys used in the electronics industry is 60% tin, 40% lead (60/40). A common tip working temperature of 60/40 solder is detailed below (this may vary from manufacturer to manufacturer).

Melting point	419°F (215°C)
Normal operation	518°F — 572°F (270°C — 300°C)
Production line operation	608°F — 716°F (320°C — 380°C)
Desoldering operation for small joint	599°F (315°C)
Desoldering operation for larger joint	752°F (400°C)

CARE OF THE TIP

The tip supplied is iron plated copper. If used properly it will last a long time.

1. Always keep tips tinned before switching off or storing for any period of time; wipe only before use.
2. Do not keep the iron set at high temperature for a long period of time as this will break down the surface of the tip.
3. Never clean the tip with coarse abrasive materials or files.
4. If an oxide film does form it can be cleaned by lightly rubbing with a 600-800 grit emery cloth, isopropyl alcohol or equivalent, and then immediately reheat and retin the tip to prevent oxidation of the wettable surface.
5. Remove the tip and clean every twenty hours of use, or at least once a week, and remove any loose build up in the barrel.
6. Do not use fluxes containing chloride or acid. Use only rosin or activated resin fluxes.
7. Do not use any compound or anti-seize materials on the wettable surface.

MAINTENANCE

TIP REPLACEMENT AND DRESSING

Note: Tip replacement or cleaning should be done only when the iron is at room temperature. The tip can be changed or replaced simply by unscrewing the knurled nut barrel assembly. The station must be switched off and allowed to cool before and during this operation, as damage may result if the system is left on without the tip inserted. After removing tip, blow out any oxide dust that may have formed in the tip retaining area of the barrel. Be careful to avoid getting dust in your eyes. Replace the tip and screw the retaining knurled nut barrel assembly using only hand pressure to tighten. Pliers should only be used to tighten the nut if loosening should occur when the iron is hot to avoid burning your fingers. Care should be taken not to overtighten as this would damage the element.

GENERAL CLEANING

The outer case of the iron or station may be cleaned with a damp cloth using small amounts of liquid detergent. Never submerge the unit in liquid or allow any liquid to enter the case of the station. Never use solvent to clean the case.

