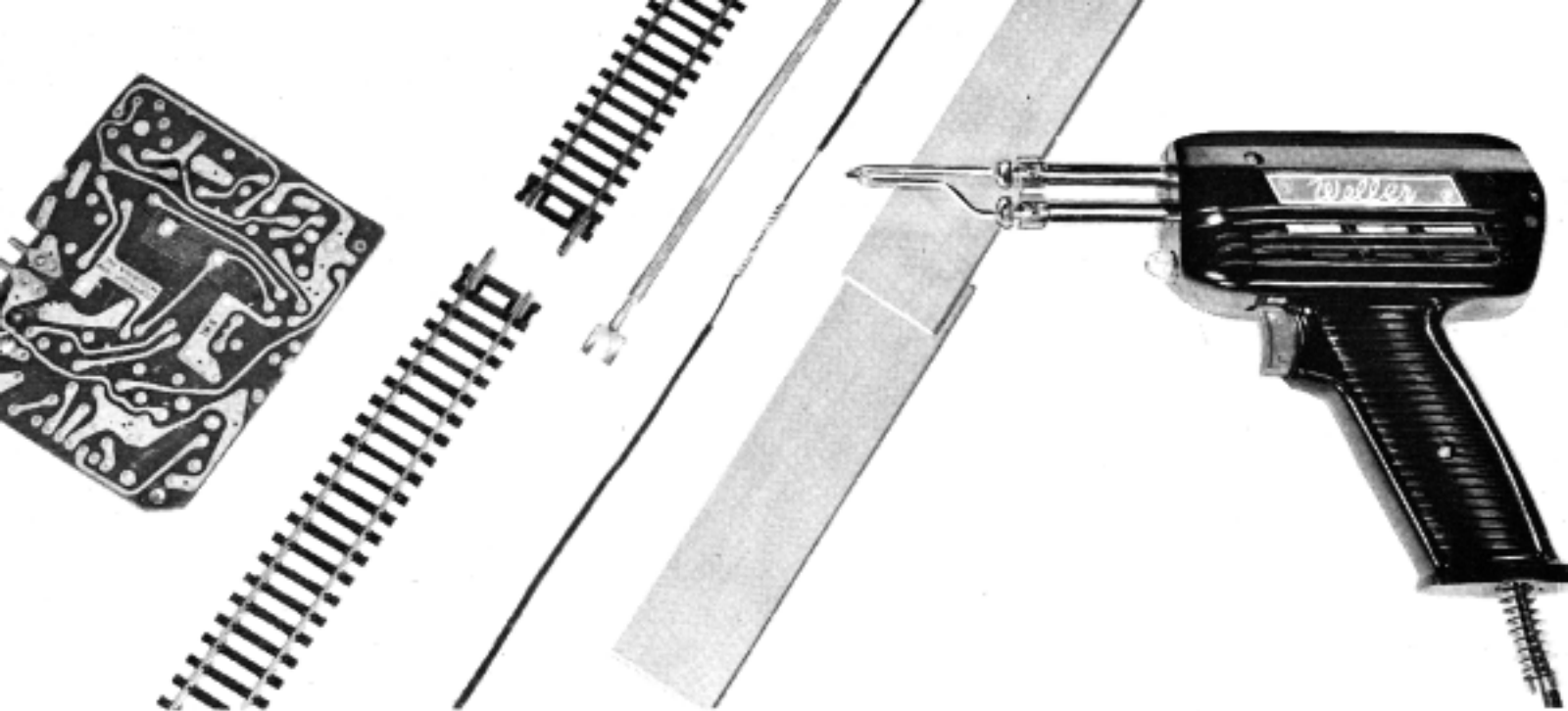


SOLDERING TIPS



... YOUR GUIDE TO EASY SOLDERING



ALL KINDS OF SOLDERING CAN BE SIMPLE

Soldering is used more often, in more crafts and hobbies than any other method of fastening. And it *can* be simple with the proper equipment, some know-how and a little experience.

A Weller Dual Heat Gun is the easiest soldering tool to use. Heat and spotlight come on instantly when trigger is pulled. Dual Heat gives high and low soldering temperatures. Two trigger positions let you switch in-

stantly to the heat best suited for the job.

The tip of a Weller Gun is made of copper for superior heat transfer.

Over 6 million Weller Guns have been sold. They're guaranteed one year against defects in material and workmanship.

A Weller Dual Heat Gun and the following soldering tips will help you do a fast professional soldering job.

FOLLOW THESE 6 BASIC SOLDERING RULES

1 Clean the work. Before soldering, remove rust or paint with wire brush or sandpaper—remove dirt or grease with alcohol. After soldering clean work with alcohol to prevent corrosion.

2 Choose the proper solder. The three grades of solder most commonly used are 40-60, 50-50 and 60-40. For most work, 60-40 is recommended because it flows freely at low temperatures. Aluminum and a few other metals require special solders.

3 Use the correct flux. The chart on the opposite page specifies proper fluxes for various metals. Some solder has a flux core. Never use an acid flux for electrical work.

4 Use the right soldering tool. Weller Dual Heat Guns are available in models ranging from 100 to 325 watts. Use the model best suited for your needs.

5 Be sure tip is tinned. Although the tip of a Weller Gun is tinned when you get it, re-tinning may be required periodically. Oxides which may have been formed on the surface of the tip can readily be removed with steel wool or fine sandpaper. Then heat the tip, working in new solder as working temperature is attained. Wipe off any excess solder with a rag.

6 Apply flux to the work. Never dip a soldering tip in a container of flux.

THIS CHART WILL HELP YOU FIND THE PROPER FLUX FOR A PARTICULAR METAL

Base material or applied finish	Rosin Flux	Aniline-phosphate Flux	Zinc-chloride Flux
Hot tin dip	Yes	Yes	Yes
Hot solder dip	Yes	Yes	Yes
Electro tin 0.0005"	Yes	Yes	Yes
Electro tin 0.0002"	1	Yes	Yes
Silver plate	2	Yes	Yes
Cadmium plate	3	3	Yes
Nickel plate	No	Fair	Yes
Galvanized steel	No	No	6
Copper	4	Yes	Yes
Brass	4	Yes	Yes
Phosphor-bronze	4	Yes	Yes
Beryllium-copper	No	Fair	Yes
Aluminum-bronze	No	No	5
Silicon-bronze	No	Yes	Yes
Zinc and zinc plate	No	No	6
Monel	No	Fair	Yes
Nichrome	No	No	Yes
Steel	No	No	Yes
Stainless steel	No	No	7

NUMERICAL REFERENCES FOR THE CHART ABOVE

1 Parts finished with 0.0002 in. electro-tin plate should be soldered within a short time after plating. This thin coating can be preserved if treated in hot palm oil or its equivalent.

2 Electro-silver-plated parts can be soldered with rosin if the parts are not corroded or tarnished.

3 Cadmium plate over brass, bronze, or copper solders well with rosin, aniline or zinc-chloride fluxes. Cadmium plate over steel is not readily soldered with rosin flux. However, if the steel has been given a pre-plate of copper before cadmium plating, rosin flux may be used.

4 Copper, brass, and phosphor-bronze can be soldered with rosin flux if they are chemically cleaned and have not tarnished.

5 Aluminum-bronze is not readily soldered unless it has been specially cleaned. Kolene cleaning salts are effective.

6 A zinc-chloride flux containing free hydrochloric acid should be used on zinc, zinc-plated parts, or galvanized steel.

7 Stainless steel can be soldered with zinc-chloride if it is chemically cleaned, but there are special stainless-steel fluxes which are more active than zinc-chloride.

ELECTRICAL AND ELECTRONIC SOLDERING

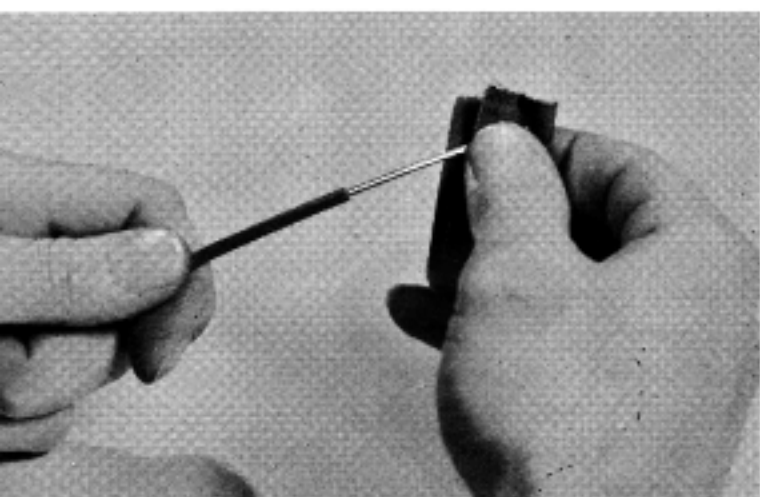
Weller Dual Heat Guns are unmatched for speed and accuracy in electrical and electronic soldering. That's why they're used by virtually all radio and TV service technicians.

In building hi-fi equipment from kits, a Weller Gun is indispensable. It permits soldering with pin-point accuracy. Its Dual Heat feature permits the use of low heat to prevent damage to heat-sensitive

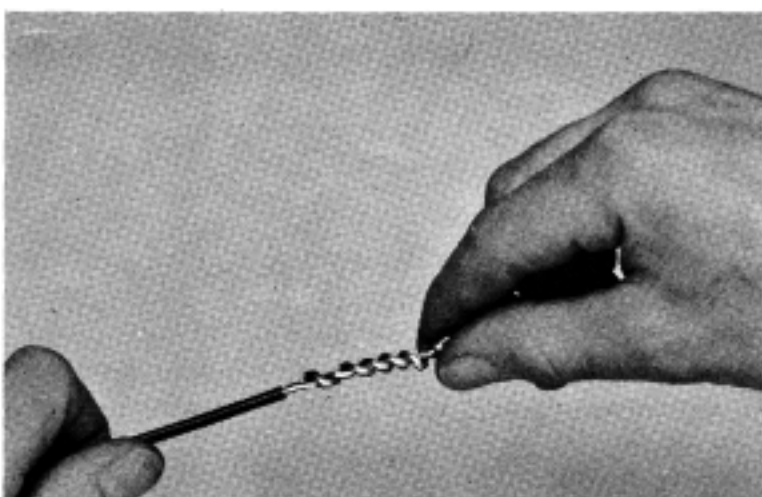
components. And the long reach of its tip permits soldering in tight places.

Hundreds of thousands of home-crafters also use Weller Guns to simplify and save money on household electrical repairs.

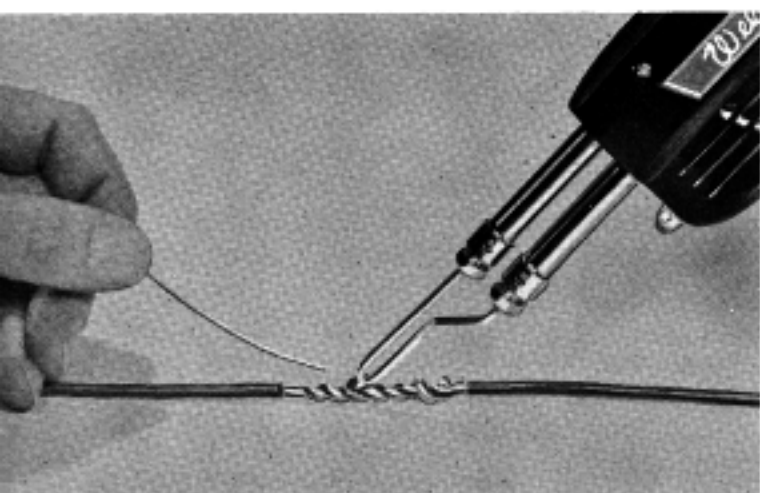
Use a Weller Dual Heat Gun and these procedures for fast, reliable electrical soldering.



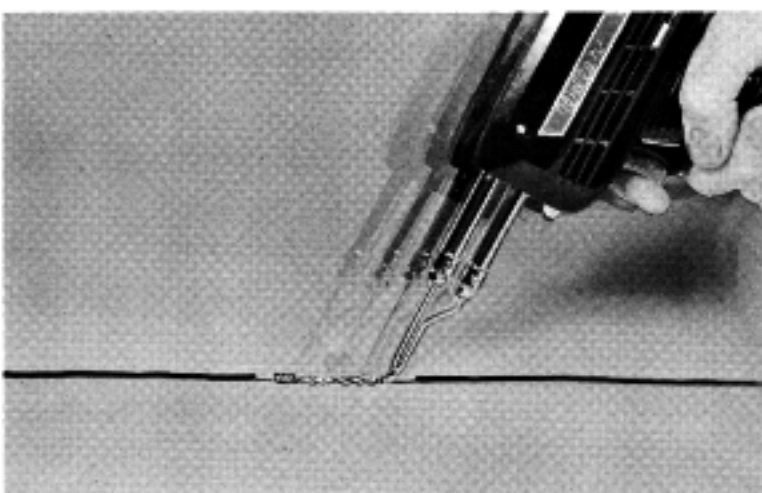
1 Strip and clean wire. Conductors should be cleaned with steel wool or fine sand paper. Solder will best adhere to a bright, clean surface.



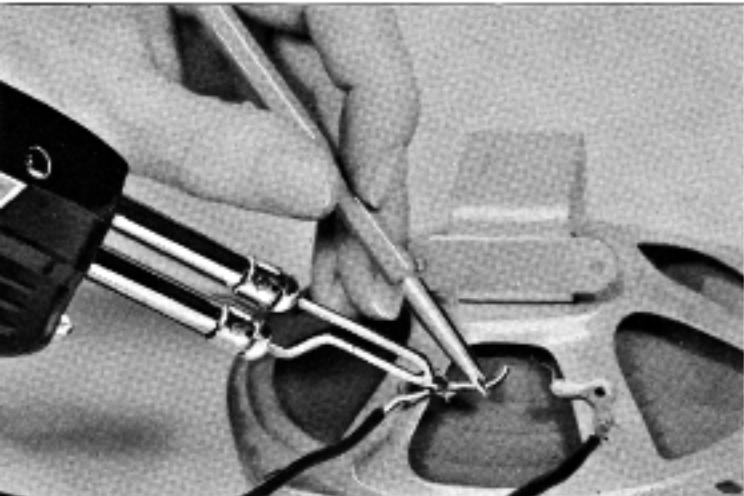
2 Twist the wires before soldering to assure a good mechanical connection. Before soldering to a terminal, crimp the end of the wire onto the terminal to make it secure.



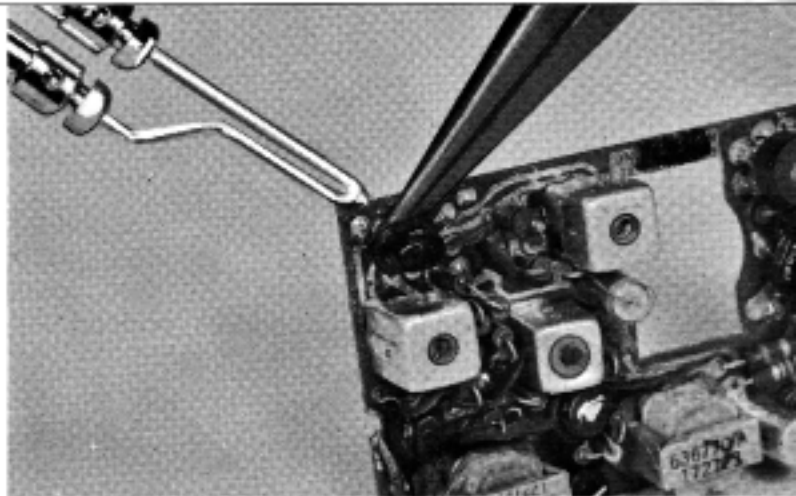
3 Heat the wires, not the solder. Wires will then become hot enough to melt the solder and it will flow into the joint. Never try to solder by applying heat to the solder itself.



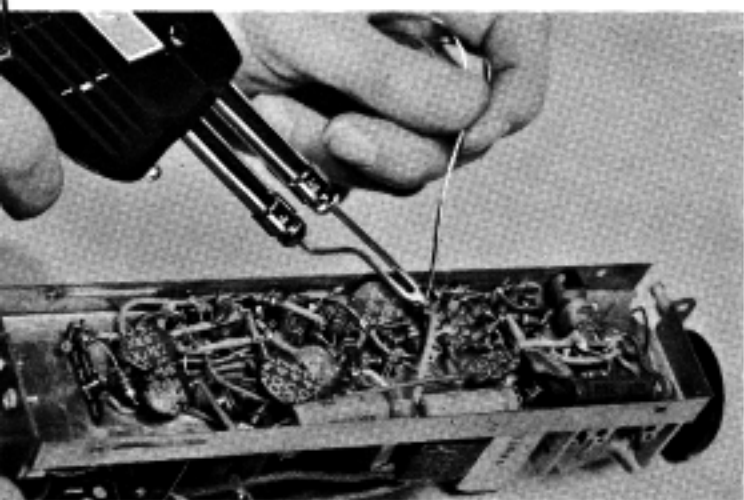
4 Slide tip away before releasing the trigger. The result is a smooth soldered joint. When tip becomes cold or is pulled away quickly, the soldering has a rough appearance.



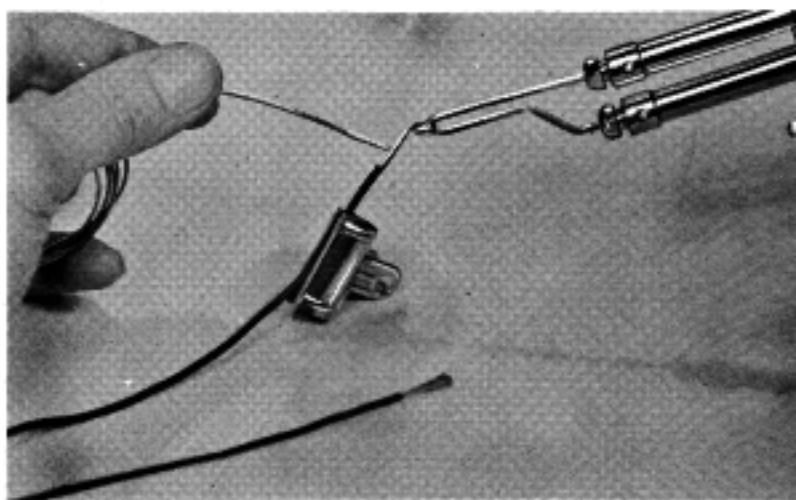
5 Position and hold wire with Weller-Soldering Aid. Joint must remain perfectly still until solder sets. Blowing on the solder will speed setting.



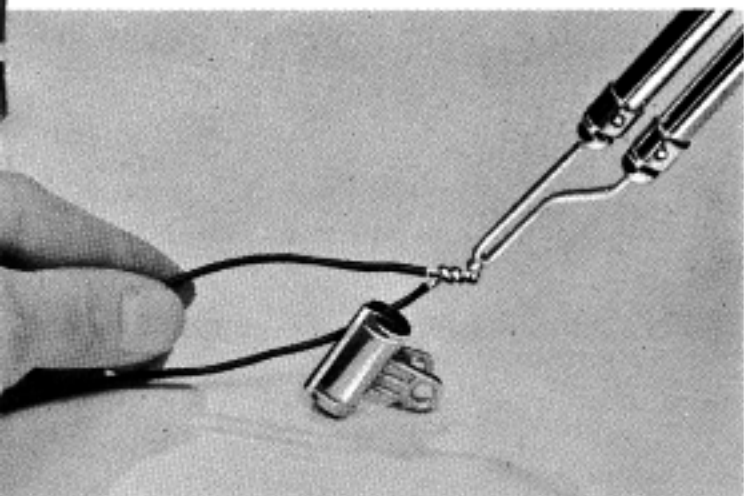
6 To avoid too much heat, use the low heat trigger position on a Weller Dual Heat Gun, and a pair of long-nose pliers to hold the wire. Pliers act as a heat sink, and prevent overheating.



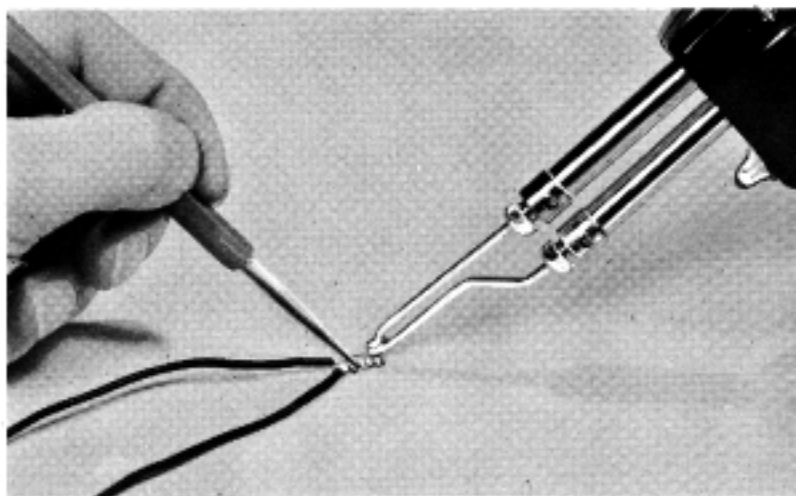
7 Don't use more solder than needed. Apply just enough solder to make a good connection. Excess solder may fill up tube sockets, freeze switches or cause short circuits.



8 Tinning wires is always good practice before soldering them together, especially with stranded wires. Twist the strands, then heat and saturate with solder.



9 Sweating a joint is easy after the wires are tinned. Just twist the two wires together and apply heat. The result will be a smooth, electrically efficient, soldered joint.



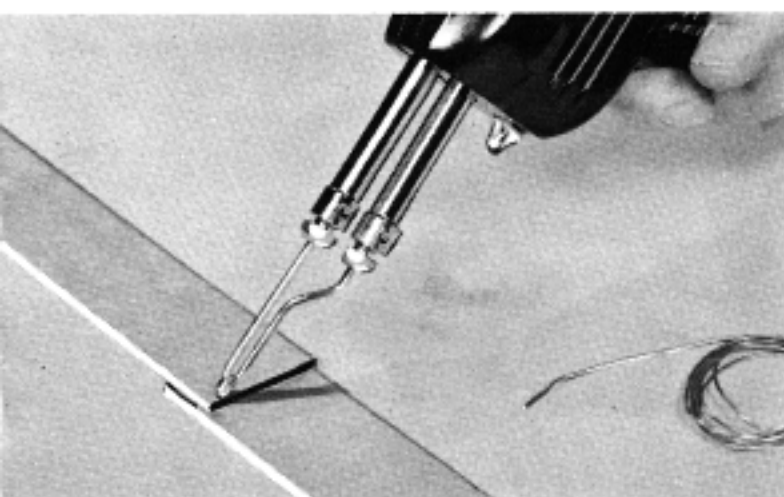
10 Un-soldering is easy. Just apply heat with a Weller Gun, and use a Weller Soldering Aid to separate the wires. Be sure to use new solder when re-soldering.

METAL WORK, HOUSEHOLD REPAIRS, HOBBIES

You'll find a Weller Dual Heat Soldering Gun the most useful tool you could own for household work. It's handy for many kinds of metal work and repairs, such as joining metal parts, sealing seams and patching holes. In these cases, a paste or liquid flux applied to the work

with a brush will help you do the best soldering job.

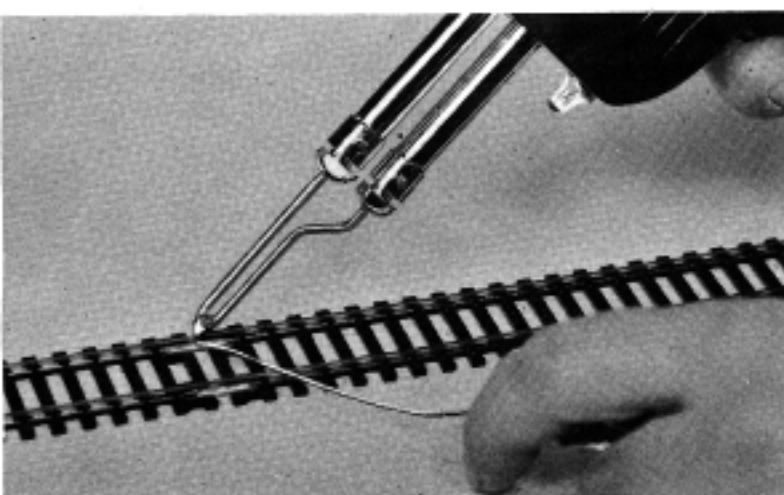
The following tips on metal soldering and suggestions for other uses of a Weller Dual Heat Soldering Gun, will aid you in money-saving work around your home or with your hobby.



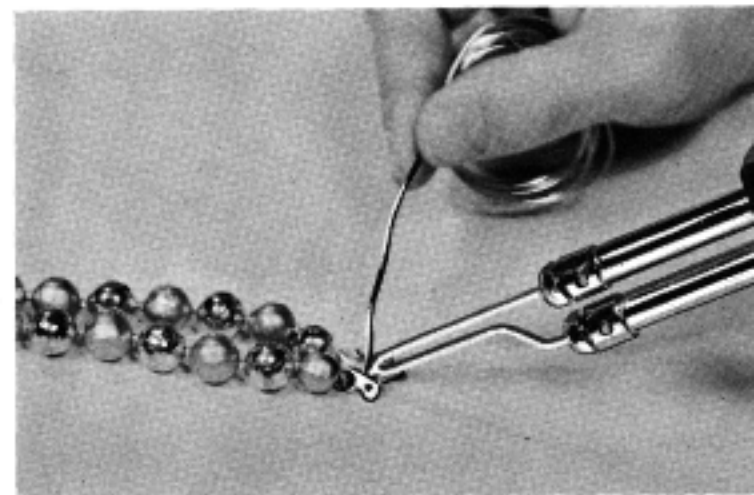
1 Pre-tin metal before soldering. Apply flux to both pieces. Get them hot enough to melt solder, then coat with a rubbing action of the tip. Pieces can then be sweated by applying heat.



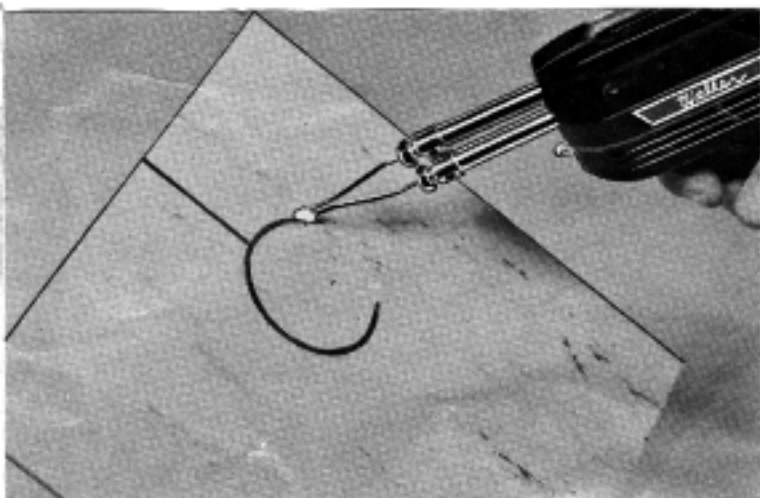
2 Keep a heavy film of solder between tip face and the work. This helps conduct and spread the heat. Also try to get heat under the work because heat rises.



3 Better model RR track connections can be made by using a Weller Gun and rosin-flux solder. You'll find that trains run much better because of these soldered connections.



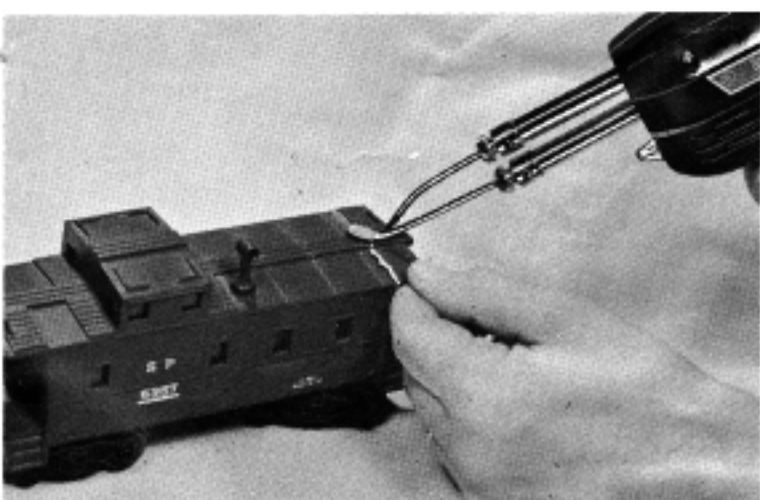
4 Jewelry making and repairs. Almost everything from costume jewelry to wrist watch bands can be repaired with a Weller Gun. The tool is ideal for all kinds of intricate soldering.



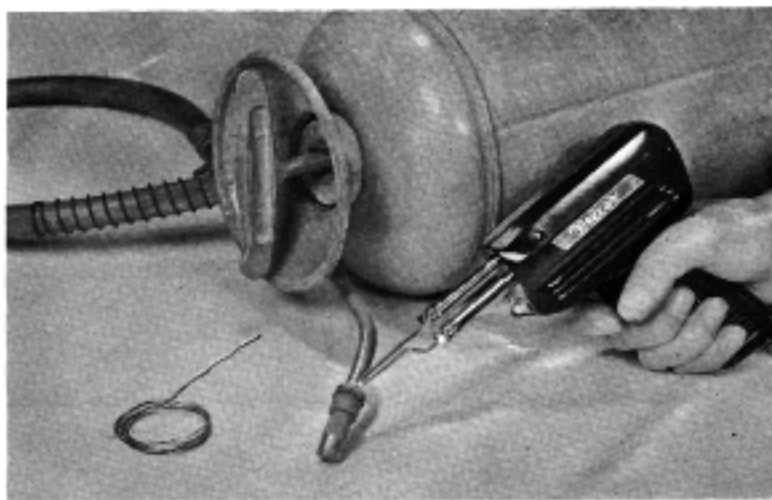
5 Cutting floor tile made of thermoplastic is easy with a Weller Gun. Special Weller Cutting Tips are available for this and many other uses.



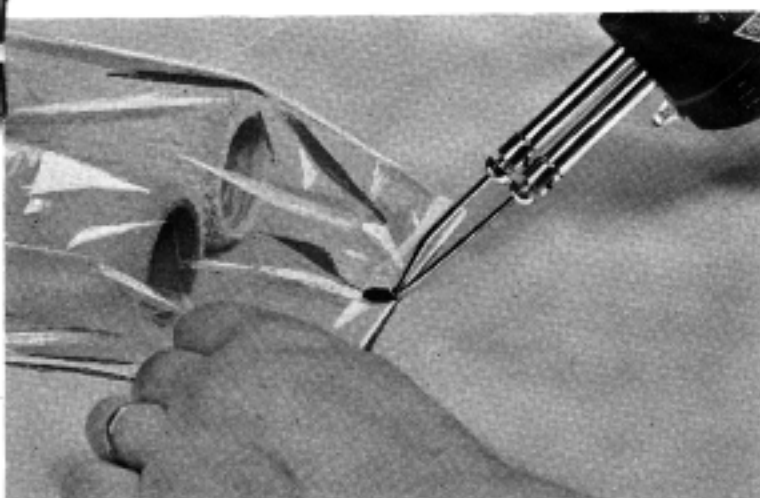
6 Metal working hobbies. Wire-form sections and other decorative metal projects are easily assembled with a neat, strong solder joint.



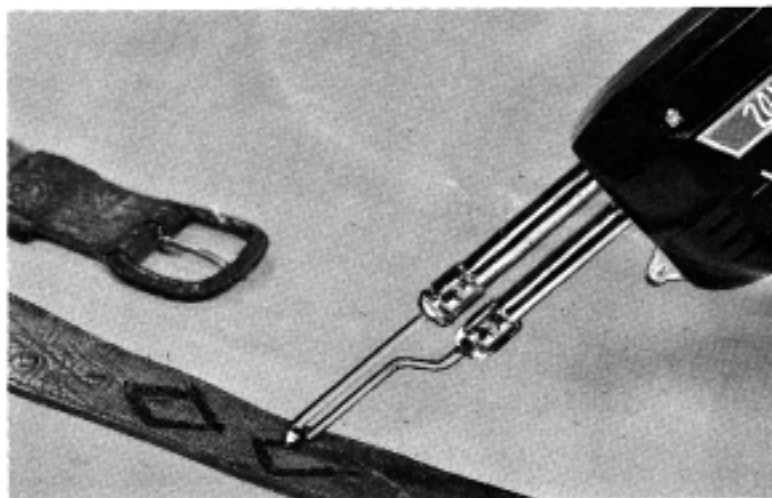
7 Repairing thermoplastic toys and utensils. Use a Weller Smoothing Tip for jobs like this. Simply hold the broken pieces together and apply heat.



8 Garden and lawn equipment. Many repairs can be quickly and permanently made with an instant heat Weller soldering gun.



9 Sealing thermoplastic bags. A Weller Gun with Smoothing Tip can be used to heat-seal thermoplastic bags and repair flexible thermoplastic items such as swimming pools.



10 Leather and wood burning. A Weller Gun with Soldering Tip does this job beautifully and safely. The tool can be easily turned to create attractive designs.

WELLER SOLDERING TOOLS AND KITS ARE UNMATCHED FOR EASY USE AND PROFESSIONAL RESULTS



STANDARD



HEAVY DUTY

Weller Soldering Guns are manufactured in various wattage ratings, and are available in complete kits contained in sturdy, plastic carry cases.

Weller — the ORIGINAL soldering gun.

ACCESSORY AND REPLACEMENT TIPS FOR WELLER GUNS



SOLDERING



SMOOTHING



CUTTING

WELLER SOLDERING IRONS



A complete selection of soldering irons ranging from low priced hobby irons to "Magnastat" temperature controlled irons, and automatic soldering systems for industry.



Weller — World Leader in Soldering Technology

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