

# FULL ONE YEAR WARRANTY

Your Elnor Model EI-20 was carefully tested and inspected before it was shipped from the factory. We warrant this product to be free from defects in materials and workmanship under normal use and service for one year from the date of purchase.

In the event of defect in materials or workmanship, we will either repair or replace without charge, at our option, any part which in our judgment shows evidence of such defect.

This warranty does not apply to the attachments, tips, or catalyst, which are items requiring periodic replacement, nor does it apply if the EI-20 has been misused, abused, altered, tampered with or used with butane fuel other than Master Appliance Ultratane butane fuel. At the end of the warranty period, Master Appliance shall be under no further obligation, expressed or implied. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Master Appliance assumes no responsibility for and this warranty shall not cover any incidental or consequential damages from any defect in this product or its use. Some states do not allow the exclusion or limitation if incidental or consequential damages, so the above exclusion may not apply to you.

This warranty gives you specific rights and you may also have other rights which may vary from state to state.

**For warranty repair** a proof of purchase receipt or other appropriate proof of date is required with your return for warranty repair to Master Appliance. All warranty claims must be made to Master Appliance and not the distributor. We decline responsibility where repairs have been made or attempted by others. Any different guarantee made by others is not authorized by us. If a warranty claim is to be made please return you EI-20 prepaid, with proof of purchase and a note describing the problem to our customer service department. See below.

**For repair service** we charge a flat rate fee. Please call Master Appliance for the flat rate charge, return your EI-20 prepaid, with a note describing the problem.

### Remove gas before shipment.

Master Appliance Corp., Customer Service Department  
2420 - 18th Street, Racine, Wisconsin 53403  
Phone (262) 633-7791 Fax (262) 633-9745

# MASTER<sup>®</sup> APPLIANCE

## ECONOIRON™ EI-20/EI-20K Cordless Soldering Iron Powered by Butane Gas Instruction Manual

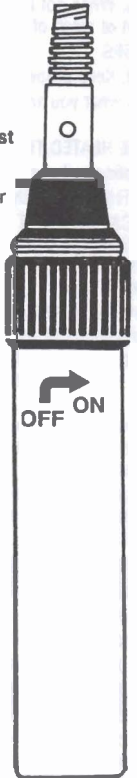
### Fer à souder sans fil alimenté au butane Manuel d'instructions Soldador (Cautín) sin cable alimentado por gas butano Manual de instrucciones



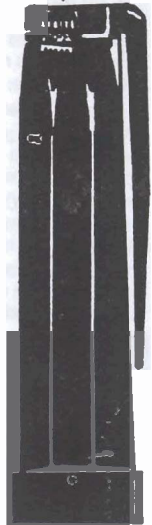
Air Stem  
Tige à air  
Vástago para aire

Soldering Iron Tip with Catalyst  
Panne du fer à souder  
avec catalyseur  
Punta de soldar con catalizador

Ignition Striker Wheel  
Molette d'allumage  
Rueda encendedora



ON/OFF Gas Control Ring  
Bague de commande du gaz  
Marche/Arrêt  
Anillo de control del gas, «ON-OFF» [encendido-apagado]



Protective Cap  
Capuchon protecteur  
Tapa protectora



Torch Tip  
Panne du chalumeau  
Punta de soplete



Flameless Heat Tip  
Panne chauffante  
sans flamme  
Punta de calentar  
sin flama

Filler Valve  
Vanne de remplissage  
Válvula de carga

SPECIFICATIONS / CARACTÉRISTIQUES TECHNIQUES / ESPECIFICACIONES		
SIZE / DIMENSIONS / DIMENSIONES	6.5/1.67mm (without cap) (sans capuchon) (sin tapa)	
WEIGHT / POIDS / PESO	1.9 oz / 54 g (empty) (vide) (vacío)	
NONSTOP RUN TIME / DURÉE DE COMBUSTION ININTERROMPUE/TIEMPO DE FUNCIONAMIENTO ININTERRUMPIDO	60 minutes (full tank) / 60 minutes avec réservoir plein / 60 minutos con tanque lleno	
TEMP	SOLDERING TIP / PANNE DE SOUDAGE / PUNTA DE SOLDAR	395 °F/200 °C - 789°F/400°C
	KNIFE TIP / PANNE DE COUP / PUNTA DE CUCHILLO	395 °F/200 °C - 789°F/400°C
	FLAMELESS BLOWER / SOUFFLEUR SANS FLAMME / SOPLADOR SIN FLAMA	up to / jusqu'à / hasta 932°F/500 °C
	TORCH TIP / PANNE DU CHALUMEAU / PUNTA DE SOPLADOR	up to / jusqu'à / hasta 2370°F/1300°C

### ACCESSORIES / ACCESSOIRES / ACCESORIOS

<p><b>35390</b> TORCH HEAD TÊTE DU CHALUMEAU CABEZAL DE SOFLETE</p>	<p>JUR COUPE DE MOUSSE DE POLYURETHANE PUNTA PARA CORTE DE POLIESTIRENO</p>	<p><b>35401</b> 1 MM SOLDER TIP PANNE DE SOUDAGE 1 mm PUNTA DE SOLDAR DE 1 mm</p>	<p><b>35404</b> DISC TIP, ROUND 1" dia. PANNE A DISQUE, RONDE PUNTA DE DISCO, REDONDA</p>
<p><b>35397</b> NEEDLE TIP PANNE AIGUILLE PUNTA DE AGUJA</p>	<p><b>35398</b> 2.4 MM SOLDER TIP PANNE DE SOUDAGE 2.4 mm PUNTA DE SOLDAR DE 2.4 mm</p>	<p><b>35402</b> 3.6 MM SOLDER TIP PANNE DE SOUDAGE 3.6 mm PUNTA DE SOLDAR DE 3.6 mm</p>	<p><b>35405</b> CLUTTER WHEEL TIP PANNE POUR MOLETTE DE COUPE PUNTA DE RUEDA CUCHILLA</p>
<p><b>35393</b> FLAT FLAME BEC PLAT FLAMA PLANA</p>	<p><b>35399</b> DOUBLE SHARP TIP PANNE POINTUE DOUBLE PUNTA DE DOBLE FILO</p>	<p><b>35403</b> 4.8 MM SOLDER TIP PANNE DE SOUDAGE 4.8 mm PUNTA DE SOLDAR DE 4.8 mm</p>	<p><b>35406</b> SCRAPING BLADE LAME GRATTOIR CUCHILLA DE RASPADO</p>
<p><b>35389</b> FLAMELESS HEAT TIP PANNE CHAUFFANTE SANS FLAMME PUNTA DE CALENTAR SIN FLAMA</p>	<p><b>35400</b> HOT KNIFE TIP PANNE DE COUPE THERMIQUE PUNTA DE CUCHILLO CALIENTE</p>	<p><b>35391</b> HOT KNIFE TIP PANNE DE COUPE THERMIQUE PUNTA DE CUCHILLO CALIENTE</p>	<p><b>35392</b> CAP WITH STRIKER WHEEL CAPUCHON AVEC MOLETTE D'ALLUMAGE TAPA CON RUEDA ENCEÑEDORA</p>
<p><b>35394</b> REFLECTOR REFLECTEUR REFLECTOR</p>	<p><b>35395</b> SOLDER HEAD BASE BASE DE TÊTE DE SOUDAGE BASE DEL CABEZAL SOLDADOR</p>	<p><b>Connect</b> Connecteur Conector</p>	<p><b>Adjustment Knob</b> Bouton de réglage Perilla de ajuste</p>
<p><b>10448</b> 15/16 oz. Master Ultratane Butane Butane Master Ultratane de 26.5 g Butano Master Ultratane de 26.5 g</p>	<p><b>51773</b> 5-1.8 oz. Master Ultratane Butane Butane Master Ultratane de 145 g Butano Master Ultratane de 145 g</p>	<p><b>35407</b> POPULAR ACCESSORY KIT INCLUDES SOURCES LES PLUS VENDUS COMPART. LE JUSQU'À 423232 25 POPULAIRES CONTENE</p>	

READ INSTRUCTIONS AND WARNINGS BEFORE USE  
PATENTED

LIRE LES INSTRUCTIONS ET LES AVERTISSEMENTS  
AVANT L'UTILISATION  
BREVETÉ

LEA LAS INSTRUCCIONES Y ADVERTENCIAS ANTES DE USAR.  
PATENTADO

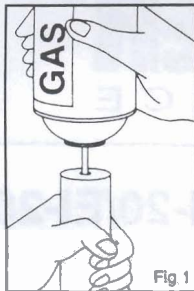


Fig 1



Fig 2



Fig 3



Fig 4

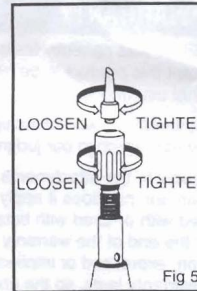


Fig 5



Fig 6

## IMPORTANT SAFETY INSTRUCTIONS – READ ALL INSTRUCTIONS

### Warnings:

- 1.1 Soldering Iron contains flammable gas (Butane) under pressure—use with care.
- 1.2 Do NOT expose to heat above +50°C (+120°F) and avoid prolonged exposure to the sun.
- 1.3 Do NOT puncture or incinerate.
- 1.4 Excessive gas flow, flaming or catalyst pulsing red may occur when the regulator is incorrectly adjusted, i.e., set high. It is essential, therefore, to keep iron away from face and body when igniting.
- 1.5 Do NOT refill, ignite or use near flame, heater, furnace or combustible materials.
- 1.6 KEEP WORK AREA CLEAN. Cluttered areas and benches invite injuries.
- 1.7 KEEP CHILDREN AWAY. All visitors should be kept away from work area.
- 1.8 STORE IDLE TOOLS. When not in use, tools should be stored in dry, and high or locked-up places out of reach of children.
- 1.9 USE SAFETY GLASSES.
- 1.10 DON'T OVERREACH. Keep proper footing and balance at all times.
- 1.11 STAY ALERT. Watch what you are doing. Use common sense. Do not operate tool when you are tired.
- 1.12 DO NOT TOUCH THE HEATED TIP OR BARREL OF THE SOLDERING IRON.
- 1.13 DO NOT leave operating or hot soldering iron unattended.
- 1.14 ALWAYS BE SURE THE SOLDERING IRON IS COOL BEFORE STORING IT.
- 1.15 DO NOT REPLACE CAP WITHOUT SWITCHING OFF AND ENSURING TIP HAS COOLED. Do ensure flames are extinguished before putting down. If flame does not self extinguish within 30 seconds a new tip is required.
- 1.16 Do USE Iron in a ventilated area.
- 1.17 Do NOT attempt to readjust or repair, this product is not user serviceable.

**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.

**WARNING:** The Department of Transportation Hazardous Material Regulations forbid carriage of butane or other flammable gas products on passenger aircraft. Do not pack this item or any other flammable gas item, in any checked or carry-on baggage.

**Contains flammable gas under pressure. Do not use near sparks or open flame. Do not puncture or incinerate container or store at temperatures above 120° F. Keep out of reach of children.**

### FILLING/REFILLING

1. Make sure the gas control ring is in "OFF" position.
2. Hold refill container above unit and press the container nozzle into gas refiller valve. (Fig 1)
3. Complete fill takes about 10 seconds; then allow a few minutes for gas to stabilize.

### LIGHTING

1. Push up, then turn the gas control ring clockwise to release a small amount of gas (hissing sound) through the burner. (Fig 2)
2. Use the lighter in cap (or lighter) to ignite at the tip exhaust ports (or torch). (Fig 3 & 4)

### ADJUSTMENT

1. Temperature can be controlled by the gas control ring between low and high.
  - ... Adjust the torch of flame to approx. 1/2 inch (12mm) length. Don't make the flame too long, it will only waste gas.
  - ... Adjust the temperature for soldering (Also hot knife & polyfoam cutter) to approx 1/2 Position. do not set the temperature too high on work that will cause the tip's catalyst to burn.

### TURNING OFF

1. When finished turn the gas control ring counter clockwise to Off Lock position and allow the tip (Torch) to cool before changing tips or storing.

### CLEANING ORIFICE

For peak performance cleaning the orifice periodically is recommended.

1. Turn off gas control. Make sure unit is cool.

2. Remove brass burner assembly and squirt 2 shots of butane into orifice to clear any debris
3. Reassemble unit.

### CHANGING TIP

1. Make sure the solder head and burner are not hot.
2. Remove the burner head from the connector and then screw in the solder head with the connector and then screw in (snug fit) any small tip (See Optional Accessories) you need for your job. (Fig 5)
3. Remove the solder head from the connector, and screw in the burner head, with connector your tool can now be used as a torch. (Fig 6)

### TIPS ON USING YOUR SOLDERING IRON

1. Select the proper solder for your application. Most solders sold today have the flux inside their cores. When making electric or electronic connections always use rosin core solder. For mechanical joining where the surfaces can be washed after soldering acid core solder can be used. Common nonplumbing solder is an alloy of tin and lead. A "60-40" solder is 60% tin and 40% lead. General purpose solders range from 40-60 to 60-40. 63-37 solder has the lowest melting temperature and highest strength. The diameter of the solder wire should generally match the size of the components to be joined.
2. Be sure the surfaces to be joined are clean. Remove any oil or grease. Surfaces can be thoroughly cleaned by using abrasives such as emery cloth, steel wool or by scraping or filing. The flux in the solder will remove the oxide layers which could prevent good bonding.

**NOTE:** New units are shipped untinned. Remove plating at end of tip before tinning.

3. BE SURE THE TIP OF THE SOLDERING IRON IS CLEAN AND WELL TINNED (COATED WITH SOLDER). The solder on the tip of the iron will melt rapidly and create a conductive path for the heat to reach the workpiece. A small additional amount of solder may be added to the tip while it is in contact with the workpiece to ensure good heat conduction.
4. If possible connect the workpieces mechanically, or position them as rigidly as possible.
5. Allow the soldering iron to heat sufficiently: 1 minute minimum to about 3 minutes for optimum operating temperature.
6. Apply the heated tip of the soldering iron directly to the work. Heat the work surfaces sufficiently for the solder to melt on them. Apply the solder to the work surface directly. Do not just melt the solder on the tip of the iron allowing it to fall onto the work. This will cause poor bonding between the solder and the surfaces to be joined. Remove the iron quickly after the solder flows on the work surfaces.

### TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	CORRECTIONS
Does not ignite	Low/No gas Gas pressure too high or low	Refill with butane gas Rotate the regulator to lower or higher position
Excessive gas flow or Catalyst pulsing red to black	Setting too high	Adjust the regulator to "OFF" position gradually reduce the gas volume
Tip does not heat up	Used up catalyst	Replace with new tip

### SAFETY STAND

Put unit on stand when not in use.

### CLEANING

Use only the mild soap and a damp cloth to clean the housings of the tool. Many household cleaners contain chemicals which could seriously damage the plastic. Also do not use gasoline, turpentine, lacquer or paint thinner, dry cleaning fluids or similar products. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid.

### IMPORTANT

To assure product SAFETY and RELIABILITY, repairs, maintenance, and adjustments should be performed by Service Centers or other qualified organizations. This tool contains no customer serviceable components.

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