

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

# C.H. Hanson Electric Pencil Engraver

## Description

2-speed electric pencil engraver has a solid stainless steel body with an ergonomic grip which provides comfort and ease of use. Engraver is lightweight, slender and balanced. Includes 1 carbon steel point, 1 HSS point and 1 diamond point.



## Unpacking

Check for shipping damage. If damage has occurred, a claim must be filed with the carrier immediately. Check for completeness. Immediately report missing parts to dealer.

## Specifications

Strokes/minute	3600/7200
Point Dia.	1/16" (.062)
Tool length	7¼"
Volts	110V
Watts	8
Weight	10 oz.

## General Safety Information



### PROPOSITION 65 WARNING:

Some dust created by using power tools contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks and cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area and work with approved safety equipment. Always wear OSHA/NIOSH approved, properly fitting face mask or respirator when using such tools.

### SAVE THESE INSTRUCTIONS



**WARNING** Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term power tool in all of the warnings listed below refers to your main-operated (corded) power tool or battery-operated (cordless) power tool.

### WORK AREA SAFETY

1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.

2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.

### ELECTRICAL SAFETY

1. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
2. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
3. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
4. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.

### PERSONAL SAFETY

1. **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

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### General Safety Information (Continued)

2. **Avoid accidental starting. Ensure the switch is in the off-position before plugging in.** Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.

#### POWER TOOL USE AND CARE

1. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
2. **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
3. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
4. **Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a live wire will make exposed metal parts of the tool live and shock the operator.

#### SAFETY RULES FOR ENGRAVERS

1. **Be aware of the switch location, when placing the tool down or when picking the tool up.** You may accidentally activate the switch.
2. **After changing the bits or making any adjustments, make sure the screw is securely tightened.** Loose adjustment device can unexpectedly shift, causing loss of control.
3. **Never use dull or damaged bits. Sharp bits must be handled with care.** Damaged bits can snap during use. Dull bits require more force to push the tool, possibly causing the bit to break.
4. **Use clamps to support workpiece whenever practical. Never hold a small workpiece in one hand and the tool in the other hand while in use. Allow for sufficient space, at least 6", between your hand and the bit.** Round material such as dowel rods, pipes or tubing have a tendency to roll while being cut, and may cause the bit to "bite" or jump toward you. Clamping a small workpiece allows you to use both hands to control the tool.
5. **Never start the tool when the bit is engaged in the material.** The bit cutting edge may grab the material causing loss of control of the cutter.

### Installation

#### ELECTRICAL CONNECTIONS

**▲ WARNING** *Make sure unit is off and disconnected from power source while motor is being mounted, connected, reconnected or any time wiring is inspected.*

Engraver is assembled with an approved line cord to use 115 volts.

Power supply to the engraver is controlled by a 3-position switch (off, high and low).

#### POWER SOURCE

The motor is designed for operation on the voltage and frequency specified. Normal loads will be handled safely on voltages not more than 10% above or below the specified voltage.

Running the unit on voltages which are not within the range may cause overheating and motor burn-out. Heavy loads require that the voltage at motor terminals be no less than the voltage specified.

#### ELECTRICAL SAFETY

1. Double insulated tools are equipped with a polarized plug (one blade is wider than the other.) This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.

**▲ WARNING** *Do not permit fingers to touch the terminals of plug when installing or removing from outlet.*

2. Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system. Before plugging in the tool, be certain the outlet voltage supplied is within the voltage marked on the nameplate.

# Model 50002

## Installation (Continued)

- Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded. If operating the power tool in damp locations is unavoidable, a Ground Fault Circuit Interrupter must be used to supply the power to your tool. Electrician's rubber gloves and footwear will further enhance your personal safety.
- Don't expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.

## EXTENSION CORDS

- The use of any extension cord will cause some drop in voltage and loss of power.
- Wires of the extension cord must be of sufficient size to carry the current and maintain adequate voltage.
- Use the table to determine the minimum wire size (A.W.G.) extension cord.
- If the extension cord is worn, cut, or damaged in any way, replace it immediately.

## EXTENSION CORD LENGTH

Wire Size . . . . .	A.W.G.
Up to 25 ft. . . . .	18
25 to 100 ft. . . . .	16
100 to 150 ft. . . . .	14

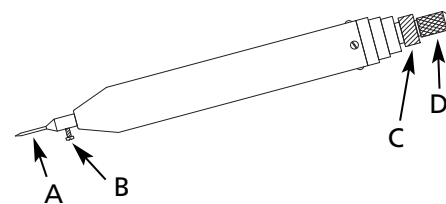
**Note:** Using extension cords over 150 ft. long is not recommended.

## Operation

Refer to Figure 1.

**▲ WARNING** *Always wear safety glasses complying with United States ANSI Z87.1 (shown on package) before commencing power tool operation.*

- Install the engraving point. Make sure engraver is off and disconnected from power source. Loosen locking screw (B) by turning it counter-clockwise with a small screwdriver. Insert point (A) completely and tighten screw securely.



**Figure 1 - Electric Pencil Engraver**

- Plug engraver into power supply and turn line cord switch to the low setting (3600 strokes/min.) or high setting (7200 strokes/min). Use lower setting for engraving on glass; and use high setting for engraving on plastics or metals.

- Hold engraver at approximately a right angle to your workpiece. For best results, use firm, but not excessive hand pressure and secure workpiece on a solid surface. Engraving bit will operate once pressure is applied to the engraving surface.
- After regular use and switching the speed settings on the line cord, the factory-adjusted power setting may have changed. To adjust the power setting, turn lock nut (C) counter-clockwise to loosen. While the motor is running turn adjusting screw (D) counter-clockwise until loudest vibration is heard. Slowly continue to turn the screw counter-clockwise to maximum power setting. Turning the screw too far will reduce the power. Adjust power to suit the workpiece. Retighten the lock nut to secure the desired setting.

**▲ WARNING** *No user serviceable parts inside. Any attempts at maintenance may result in misplacing of internal wires and components which could cause serious hazard.*

## REPLACEMENT ENGRAVING POINTS:

- 50003 (HSS) High Speed Steel
- 50004 Carbide
- 50005 Diamond Tip

