This Technical Sheet provides the basic setup for the Techno CNC Glass Cutter. Please read all instructions carefully and thoroughly!

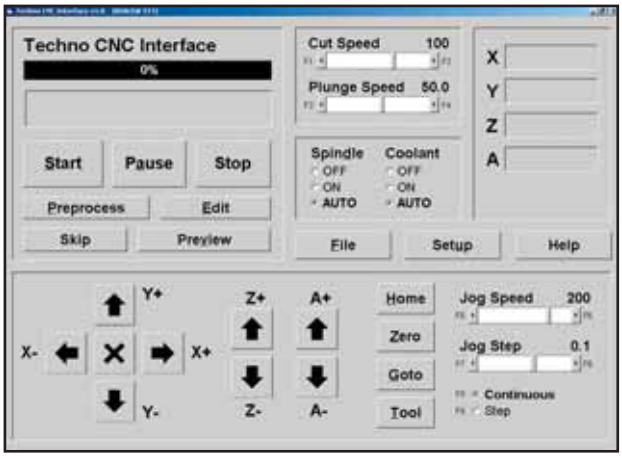
TECHNO CNC GLASS CUTTER

There will be two main sections to this basic setup guide. The first section contains the Software Setup information and the second contains Glass Cutter Maintenance.

Below is a Table of Contents:

I. SOFTWARE SETUP
1. ENROUTE3
2. TECHNO G-CODE INTERFACE
3. GLASS CUTTER
4. STORING THE OFFSETS

II. GLASS CUTTER MAINTENANCE
1. CHANGING THE BLADE
2. GLASS CUTTER OILING
3. GLASS CUTTING TIPS
4. ADDITIONAL GLASS CUTTER ORDERING INFO



SECTION I: SOFTWARE SETUP

STEP 1: ENROUTE3 SOFTWARE SETUP

- Copy ***Enroute3_G.exe*** into the Enroute3 folder.
- Copy ***Techno.ini*** into the Enroute3\pt folder.
- Copy ***Techno_G.cnf*** and ***Techno_G.dll*** into the Enroute3\post folder.
- Create a shortcut on your desktop to start ***Enroute3_G.exe***.
- In Setup>MachineSetup, load the Techno_G-3D driver as your current driver:
  Driver Units - Set units to desired units
  Driver Parameters - Set Z lift to desired value
  Toolchanger - OFF
  Driver Speeds - Spindle Speed: 0
  Advanced - Has Arcs: OFF, Has Drill Function: OFF

Techno_G.cnf : Note that Windows will often show this file without a file extension and with the file type: Speed Dial.

Techno.ini : This file has two settings (It may be edited with a text editor):

[**ANGLE**] The first setting is the angle tolerance. When cutting a corner, the cutter needs to retract and rotate before continuing the cut. If the change in angle between any two line segments is greater than the angle tolerance, the cutter will retract before repositioning itself.

When creating a curve, the curve is broken up into line segments. If there is a kink in a curve, this may cause the cutter to retract and reposition itself. A larger value for the angle will reduce these instances.

[**UNIT**] This setting indicates the number of degrees per unit. In this case, one revolution (360°) of the glass cutter is one unit. This corresponds to the scale factor below, of 4000.

STEP 2: TECHNO CNC INTERFACE SETUP

Use the following settings in the interface begining in the main menu:

Entering the M4 Scale and Rotary Option:

Setup>System>M4Scale = 4000, Enable the Rotary Option

Setting up the 4th Axis, A, Speed Limits:

Setup>Advanced>Speed Limits>A Axis = 300

STEP 3: GLASS CUTTING HEAD SETUP

Use the following settings in the Techno interface beginning in the main menu:

Home all Axes:

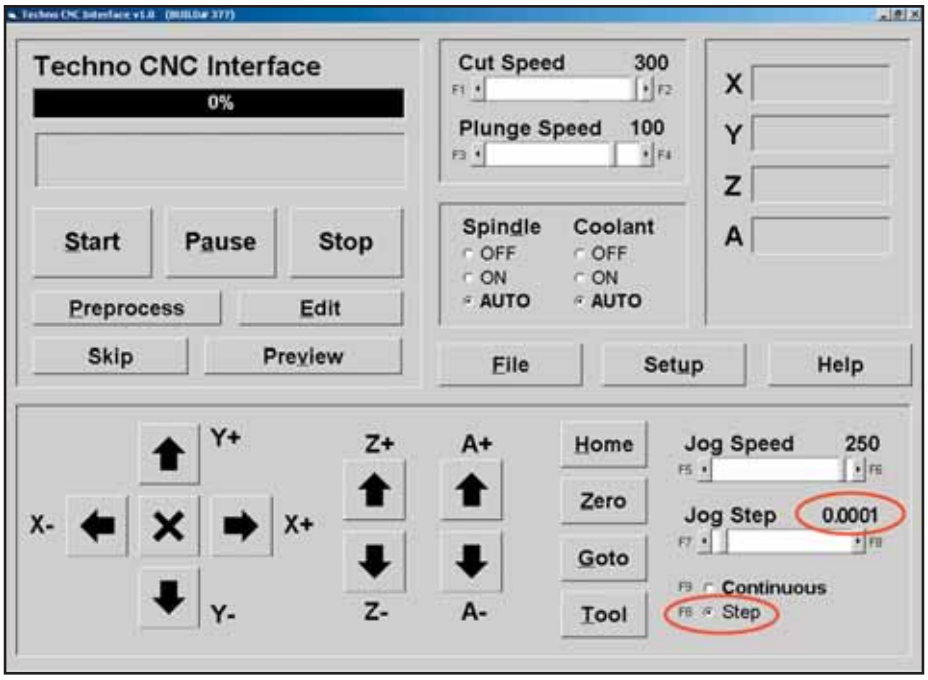
Home>All

Zero all Axes:

Zero>All

The glass cutting head will be facing an arbitrary direction. We need to align it so that it is facing towards the back of the machine.

- Set the interface to step mode, with a step size of .0001.



STEP 3: (cont.) GLASS CUTTING HEAD SETUP

- Attach a straight edge to the tip of the glass cutter like below:

- Use the A+ and A- arrows to rotate the head so that the straight edge is parallel to the T slots in the table. The "<" and ">" keys on the keyboard will also rotate the head.

- Record the A value. This will be the offset for the A axis.
- **Zero>A**

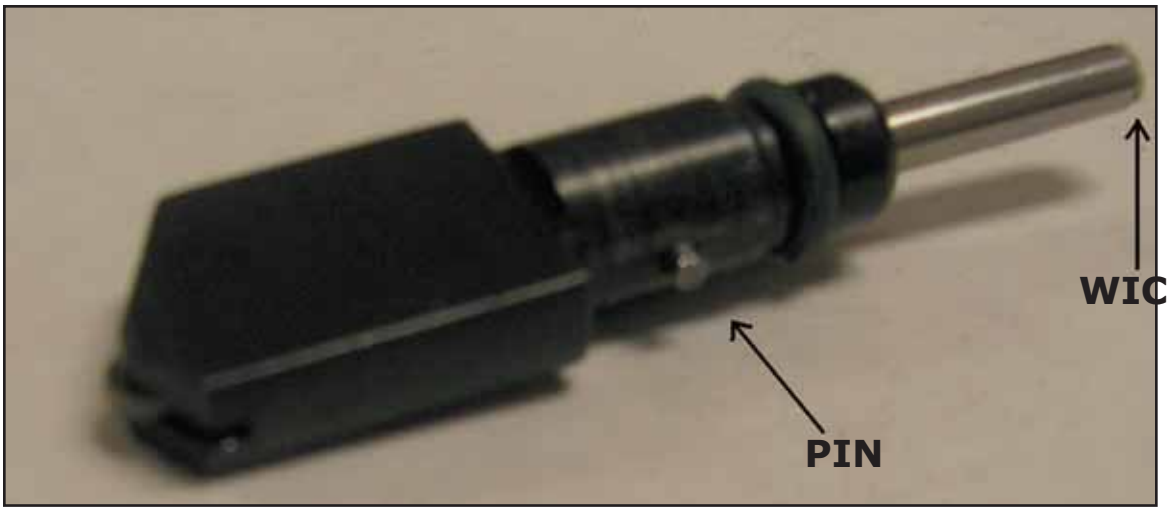
STEP 4: STORING THE OFFSET

Begin in Techno CNC Interface main menu:

- Go to **Setup>Offsets.**
  - · Next to offset 10, in the A column, enter the value you recorded.
  - · Put an X next to offset 10.
  - · Click on Auto.

From now on, when the machine is homed, the zero position of the head will be facing towards the back of the machine. Offset positions for XYZ may be stored later, but be sure to include the A offset.

SECTION II: GLASS CUTTER MAITENANCE



1. CHANGING THE GLASS CUTTER BLADE

The blade may be changed by loosening the socket head screw and firmly pulling the tip out When replacing the tip, be sure that the pin in the shaft goes into the groove.

2. GLASS CUTTER OILING

The cutting head may be oiled by removing the tip and applying oil to the tip of the wick. It may also be oiled by removing the Phillips head screw and o-ring, and injecting glass cutting oil into the hole until the cavity fills up high enough to reach the wick.

3. GLASS CUTTING TIPS

TIP 1: Be sure your work surface is very flat. If it is not, it could lead to uneven scoring, breaking the glass, or damaging the cutter. It is recommended that you use a router mounted to the spindle to fly-cut your surface.

TIP 2: The cutter is spring loaded. The further the Z-axis pushes down on the glass, the more pressure is applied to the glass. Approximately 15 pounds of pressure should be applied.

TIP 3: Avoid cutting to the edge of the glass to prevent dulling the cutter.

TIP 4: Avoid cutting over the same lines more than once. This may dull the cutter and prevent the glass from breaking correctly.

TIP 5: After you finish using the glass cutter, dip the tip of the glass cutter in oil to protect it.

TIP 6: Keep the cutter oiled. Oil helps the cutter cut, makes it last longer, and aids in breaking the glass.

4. ORDERING ADDITIONAL CARTRIDGES

The Techno CNC Glass Cutter comes with a 140° glass cutting cartridge. This glass cutting cartridge and a 154° cartridge are available from:

THE FLETCHER-TERRY COMPANY
65 SPRING LANE
FARMINGTON, CT 06032
TELEPHONE: 860.677.7331
FAX: 860.676.8858
E-MAIL: customerservice@fletcher-terry.com
WEB: http://www.fletcher-terry.com

REPLACEMENT WIDE HEAD 140°: Part#03-711

REPLACEMENT WIDE HEAD 154°: Part#03-713