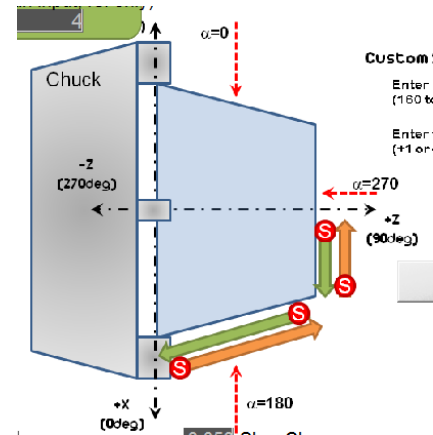


Installation / Setup

- Unzip 'probeitturn' file, Installation path relative to Mach3 directory:
 - C:\Mach3\turnaddons\probeitturn\
- Mach3 must be in 'radius' mode (working on diameter mode for future release)
- This version is a preliminary demo (and buggy?).
- This version will accept a license fil, common with Probelt (mill version)

Requirements

- Mach3 ver 3.043.19 or later
- Touch probe that activates 'probe' input to Mach3
 - Touch probe orientation will depend on lathe configuration and item being probed.
 - Tip ball center must be 'on center' for accurate results
- Lathe axis configuration: Z+ towards tailstock, X+ equals larger diameter.
 - Ref axis / angle definitions-->



Mach3 CNC Licensed To: Eric Brust

File Config Function Cfg's View Wizards Operator PlugIn Control Help

PROBE-IT!



TURN

Test Probe Before Proceeding

Probe Inactive

If this LED doesn't light when activating probe, do not proceed

Demo Mode, Limited tip correct, CSV and DXF writing

Demo Mode

Welcome to Probe-It TURN!version 1.0 Beta

Touchoff setup XZ Lathe Probing Setup/Calibrate [Intro page](#) [About/Help](#) Return Save **Reset**

Working Coord
ZeroX +0.5280
ZeroZ +0.7420

Machine Coord
-3.1355
+6.3985

Probe Inactive

Work Offset
-3.6635
+5.6565

G54	G55	G56
G57	G58	G59

Save Fixturing G54

Jog on / off

Jog Inc /Cont Inc. amount

Step +0.1000
Cont.

FRO Jog Rate Dn 58 Up **Reset**

Rapid Rat Dn 100 Up **Reset**

Write to file name:

DXF WRITE Close File
CSV Off

MDI

5.00 Init. Feed
 2.00 Slow Feed
 1.0000 Max Distance
 0.050 Slow Clear
 0.050 X-Y Clearance

Basic 'inputs' required to run. Units are entered in native units (inches or mm, depending on user's configuration)

Working Coord

ZeroX +0.5280
 ZeroZ +0.7420

Machine Coord

-3.1355
 +6.3985

Probe Inactive

Work Offset

-3.6635
 +5.6565

G54 G55 G56
 G57 G58 G59

Save Fixturing G54

Jog on / off

Jog Inc /Cont Inc. amount
 Step +0.1000
 Cont.

FRO Jog Rate Dn 58 Up Reset
 Rapid Rat Dn 100 Up Reset

Write to file name:

DXF WRITE Close File
 CSV Off

X Surface Value +1.100 X Not set
 Z Surface Value +1.000 Z Not set

Initial X Surface to set X OD
 Initial Z Surface to set Z Left
 Initial X Surface to set X ID
 Initial Z Surface to set Z Right

This is for initial 'touch off' to set probe ball tip center relative to central axis. Measure actual DIAMETER, and enter RADIUS in 'X surface value' dro, then position probe tip near surface and hit button. Routine will probe part, and adjust the working X-DRO. Repeat for Z if desired

Welcome to Probe-It TURN! version 1.0 Beta

Touchoff setup XZ Lathe Probing

Setup/Calibrate Intro page About/Help

Return Save Reset

Touchoff examples

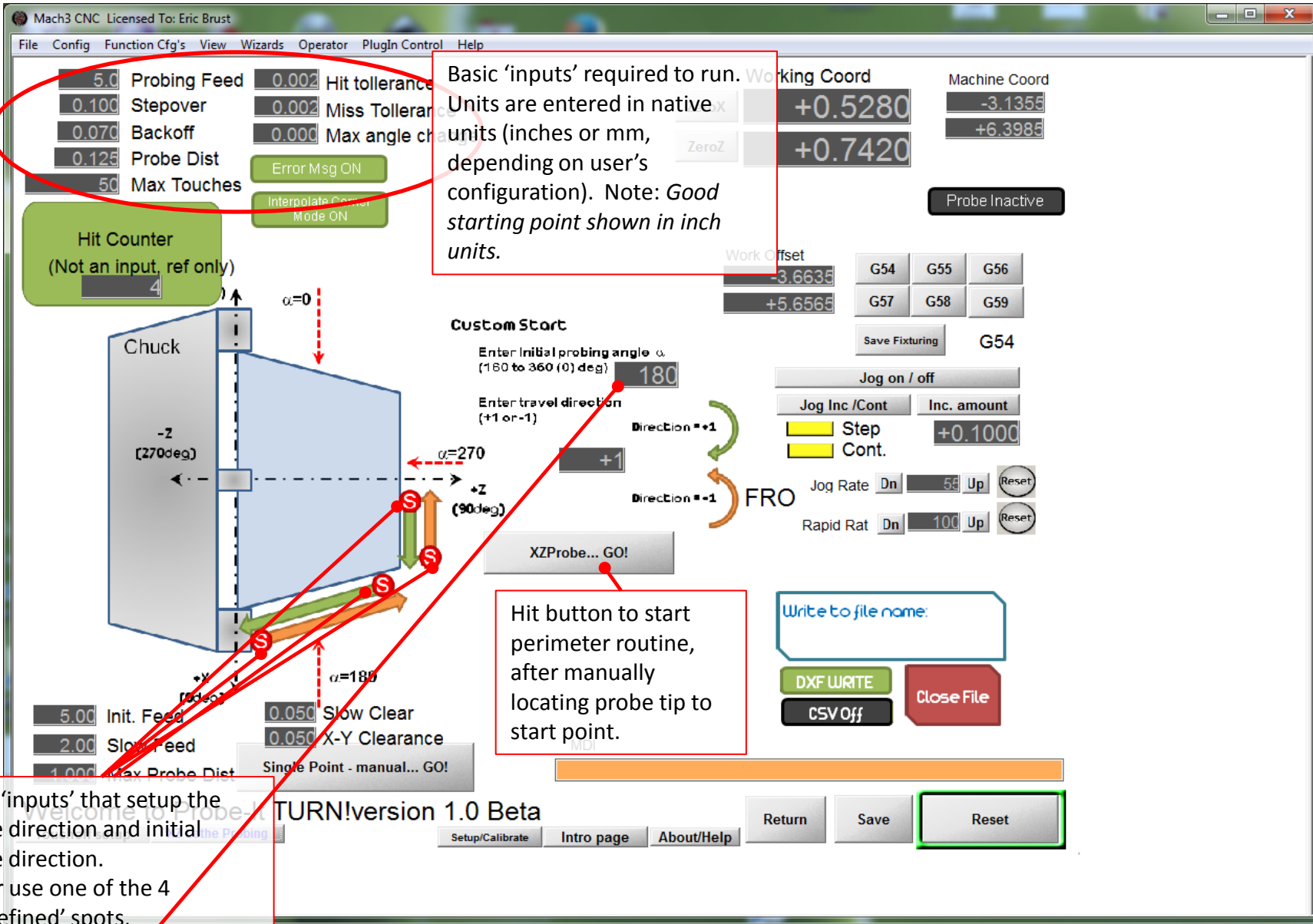
Use a gauge pin, or measure a specific diameter on part to be probed. Position probe tip manually near measured touchoff point (but not touching). Hit touchoff button desired, probe will touch, set DROs, then back off

X touchoff (OD)



Z touchoff (set Z left)





5.0 Probing Feed
0.100 Stepper
0.070 Backoff
0.125 Probe Dist
50 Max Touches

0.002 Hit tolerance
0.002 Miss Tolerance
0.000 Max angle change

Error Msg ON
Interpolate Corner Mode ON

Basic 'inputs' required to run. Units are entered in native units (inches or mm, depending on user's configuration). Note: *Good starting point shown in inch units.*

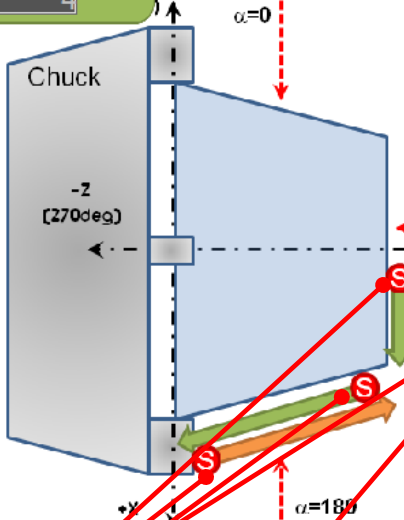
Working Coord
Machine Coord

+0.5280
-3.1355

+0.7420
+6.3985

Hit Counter
(Not an input, ref only)

4



Custom Start

Enter initial probing angle α
(180 to 360 (0) deg) 180

Enter travel direction (+1 or -1) +1

Direction = +1
Direction = -1

XZProbe... GO!

Work Offset

-3.6635
+5.6565

G54 G55 G56
G57 G58 G59

Save Fixturing G54

Jog on / off

Jog Inc /Cont Inc. amount

Step Cont. +0.1000

Jog Rate Dn 55 Up (Reset)

Rapid Rat Dn 100 Up (Reset)

Write to file name:

DXF WRITE
CSV Off
Close File

Hit button to start perimeter routine, after manually locating probe tip to start point.

Basic 'inputs' that setup the probe direction and initial probe direction. Either use one of the 4 'predefined' spots, or customize the start angle.

TURN! version 1.0 Beta

Setup/Calibrate Intro page About/Help Return Save Reset

5.00	Init. Feed	0.002	Hit Tolerance
2.00	Slow Feed	0.002	Miss Tolerance
1.0000	Max Distance		
0.050	Slow Clear		
0.050	X-Y Clearance		

Basic 'inputs' required to run. Units are entered in native units (inches or mm, depending on user's configuration). 'Avg Probe Dia' required. Cal table is not used in lathe version (to be deleted later)

Machine Coord	-2.4775
	+5.4940

Probe Inactive

This option, if turned on, will draw in a center line along the Z axis in DXF. Line will be drawn from -Z to + Z values (if values are both non-zero) or from -1000 to +1000 if values left zero.

DXF Options

Plot centerline

Draw DXF
Centerline OFF

Zmin -5.000
Zmax +2.000

These options allow recording of lines, points, or both in your DXF. Must have at least one on to record geometry.

DXF Options for Perimeter Trace

Lines On
Points On

Work Offset

-4.4010	G54	G55	G56
+5.6565	G57	G58	G59

Save Fixturing G54

Jog on / off

Jog Inc /Cont Inc. amount

Step +0.1000
Cont.

Jog Rate Dn 58 Up (Reset)

Rapid Rat Dn 100 Up (Reset)

Write to file name:

DXF WRITE
CSV Off
Close File

MDI

Welcome to Probe-It TURN!version 1.2 Beta

Touchoff setup XZ Lathe Probing

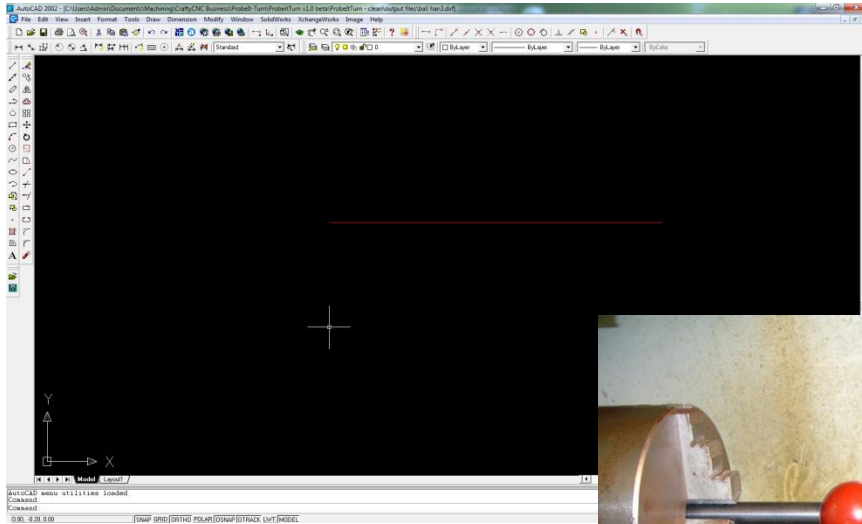
Setup/Calibrate Intro page About/Help

Return Save **Reset**

Output DXF

- Note: Geometry in DXF is drawn in X-Z plane.
 - Upon opening file, you will need to switch to a 'front' view to see geometry

Top view (as opened in Acad)



Front view

