
(USER MANUAL)

VER 1.07

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HYBRID D80 USER MANUAL VER 1.07

- EDGE GAS CUTTING M/C

-

-

- VER 1.07

- : 2006 5 21

- : KOIKE KOREA

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HYBRID D80 USER MANUAL VER 1.07

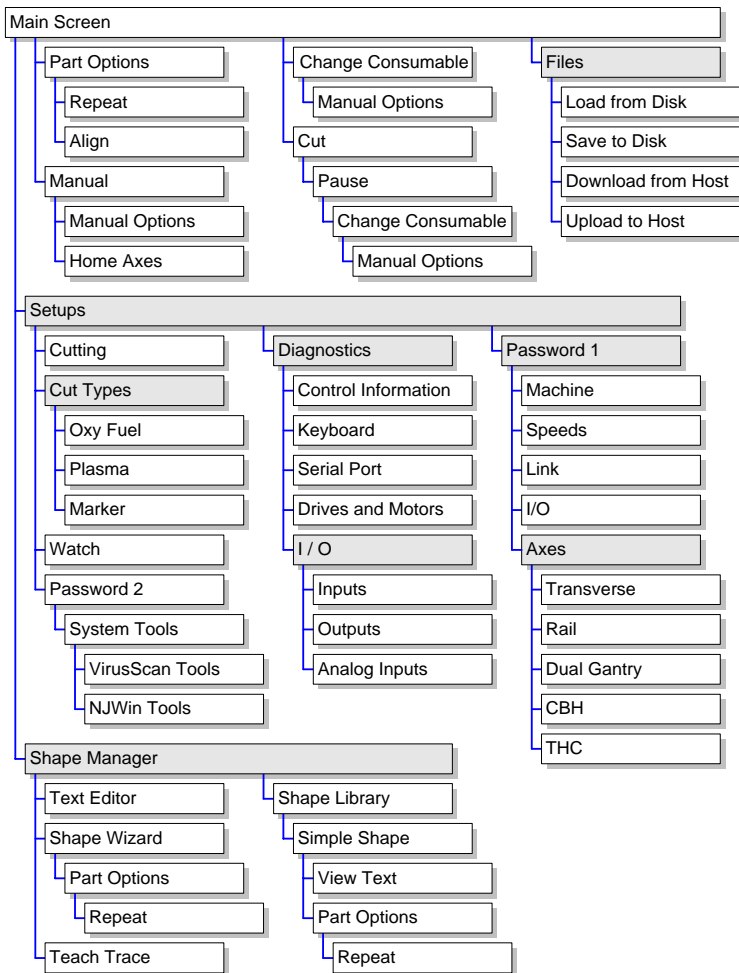
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1. _____

DONE
CANCEL

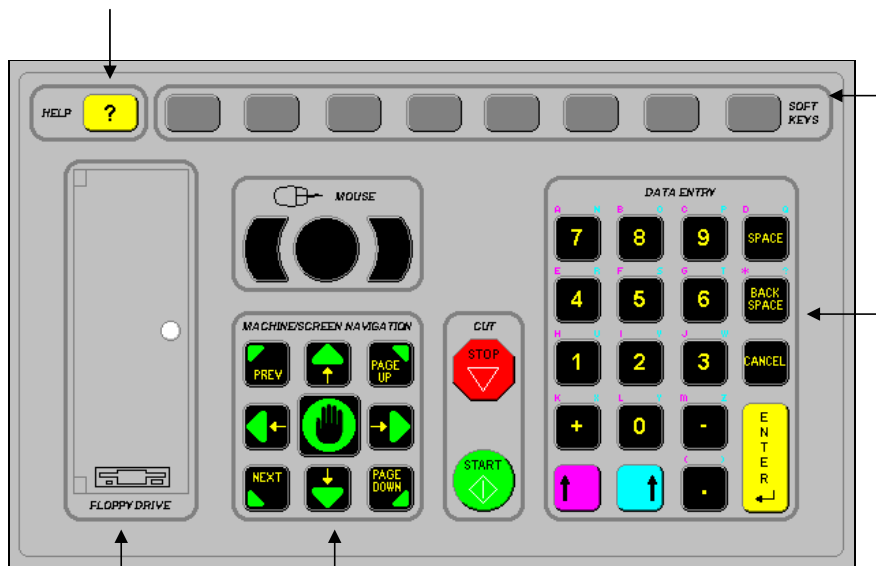
CANCEL

가



2. _____

가



FDD(USB)

JOG &

) EDGE

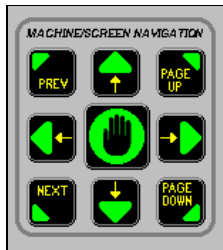
FDD USB가

가

3. KEY



-
(,)
+ -



가

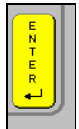
Prev/Next
Page Up/Down



.(가

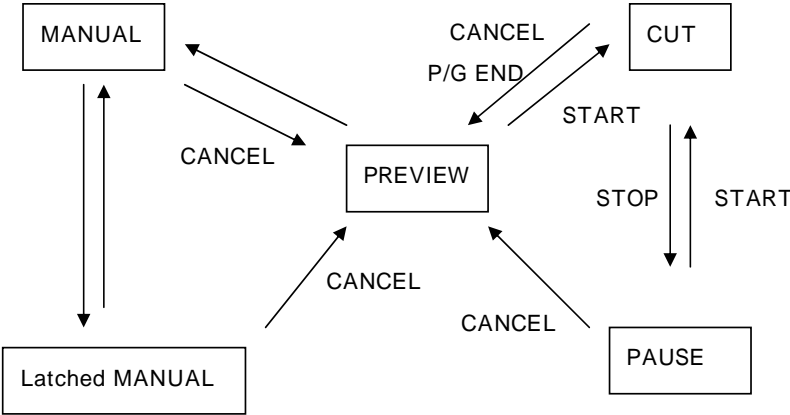


) .(

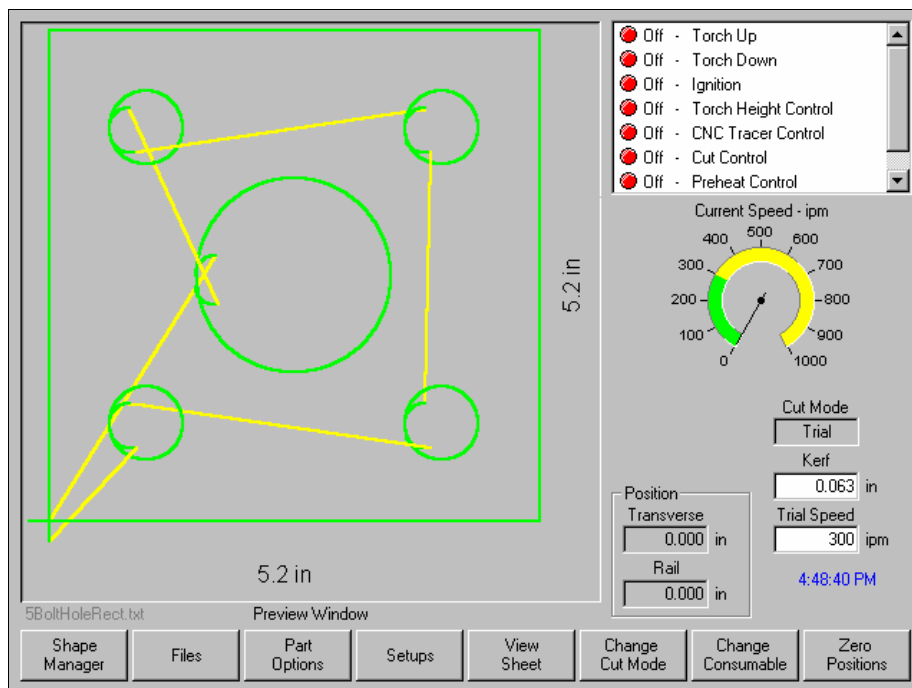


4. _____

- 1. 가 .
- 2. .
- 3. PREVIEW WINDOW
 -
 - , , , .
- 4. MANUAL WINDOW
 -
 - .
 - , , 가 .
- 5. CUT WINDOW
 -
 - .
- 6. PAUSE WINDOW
 -
 - STOP REMOTE PUSE가 .
 - , 가 .



5. PREVIEW WINDOW



1. Shape Manager

-
- Shape Library, Text Editor, Shape Wizard, Teach Trace

2. File

-
- File

3. Part Options

-
- , , ,

4. Setup

-
- , , , I/O ,

5. View Sheet

-
-

6. Change Cut Mode

-
- 가 .
- : PLASMA <-> TRAIL
- 가 : OXY FULE <-> TRAIL
- Trail .()

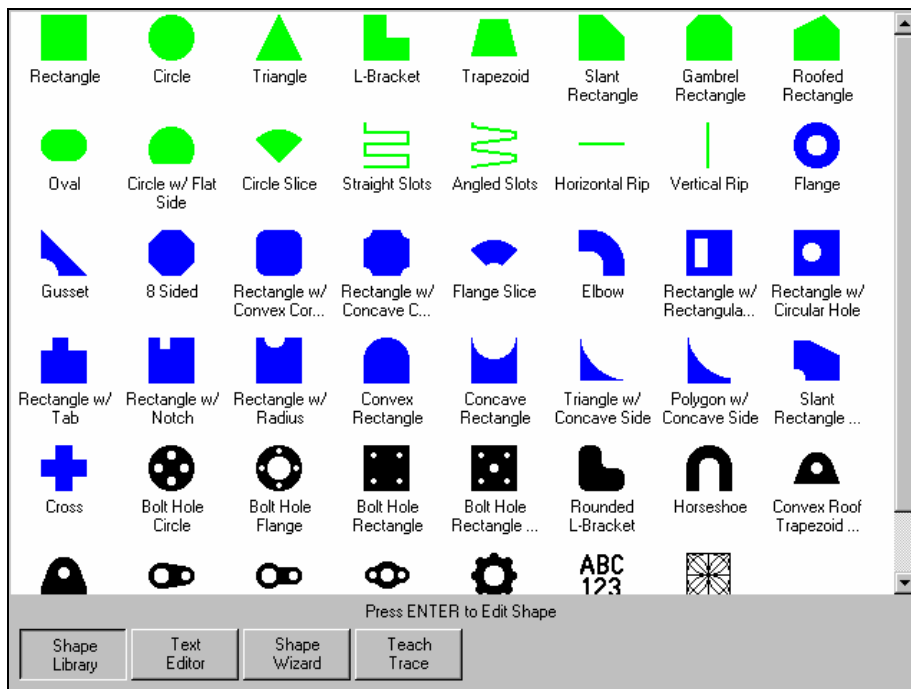
7. Change Consumable

- (RESET)
- PLASMA .

8. Zero Positions

- RESET
- X Y 0

5.1 Shape Manager



5.1.1 Shape Library

- 477 Enter
: Shape Manager Shape LIBRARY

(, , ,)

가

가 .

가 가 .

DONE .

1). Lead-In, Lead-Out(, - ,)
(lead-in) (lead-out)
Space() / 가 .

2). Overburn Length(-)
()
() 가 .

(underburn-)

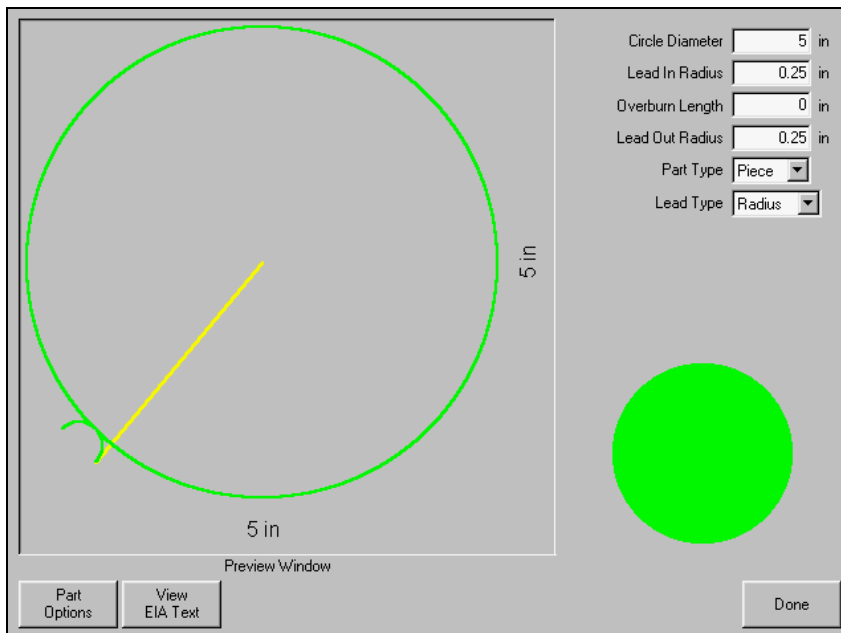
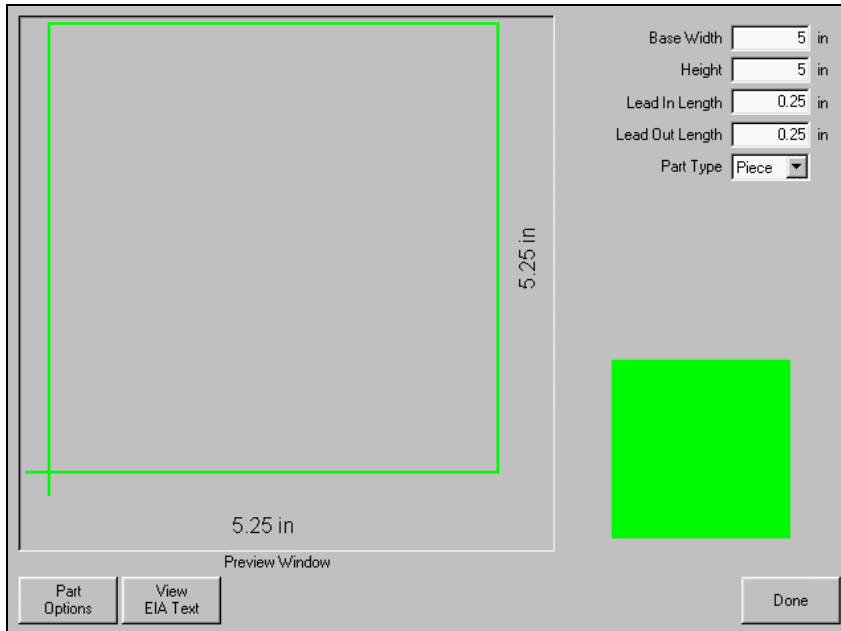
3). Part Type(-)
가 (piece-) , (hole-) 2
(chain) 가 .

4). Lead Type(-)
가 (, ,)
- / .

(LOCK) - 가 .

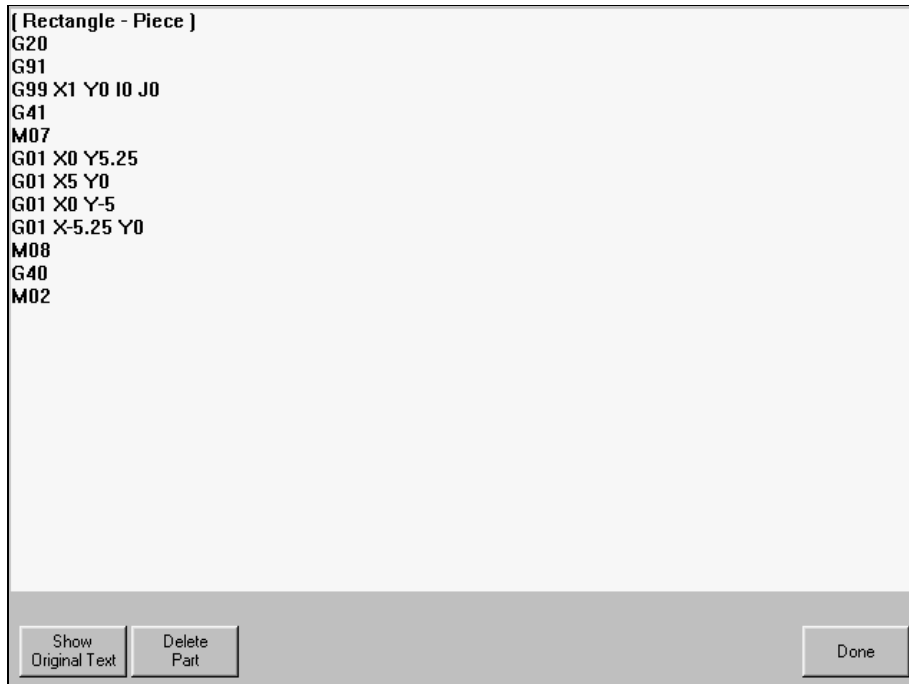
- / .

)



5.1.2 Text Editor

ESSI, EIA
: Shape Manager EEXT EDITOR



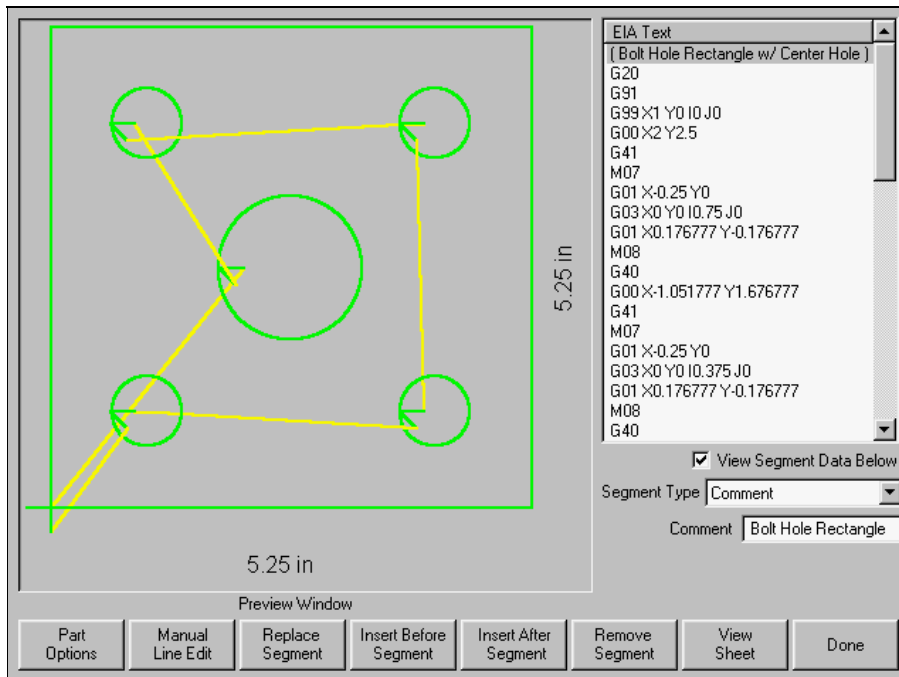
Show Original Text :

Delete part :

PC EDIT
(INSERT MODE)

5.1.3 Shape Wizard

: Shape Manager Shape WIZARD



Manual Line Edit :

Replace Segment :

Insert Before Segment : 가 가

Inster After Segment : 가 가 가

Remove Segment : 가

가

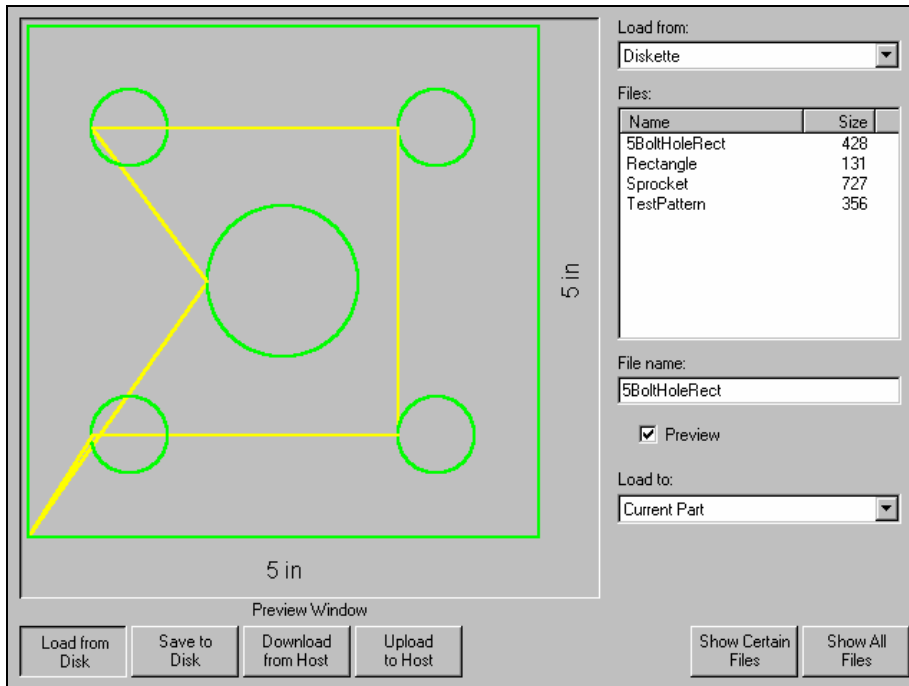
SEGMENT가

가 EDIT

5.1.4 Teach Trace ()

-

5.2. FILE



5.2.1 LOAD FROM DISK

- FILE FDD USB LOADING
: FILE - LOAD FROM DISK

- PREV NEXT load from
- PREV NEXT files

1. LOAD FROM (+)

2. Ok Enter

3. LOAD LOAD TO 가 CANCEL FILE

(-)

Load from : Enter
File name/Diskette File name :
Preview : 가 SPACE
Load to :
Hard drive file name :
Enter
Show Certain Files : (*),(?)
Show All Files :

5.2.2 Save to Disk

- FDD USB

: FILE – SAVE TO DISK

LOAD

Save to : save to File name
Enter

Diskette file name :

Save from :

File : Page Up, Down

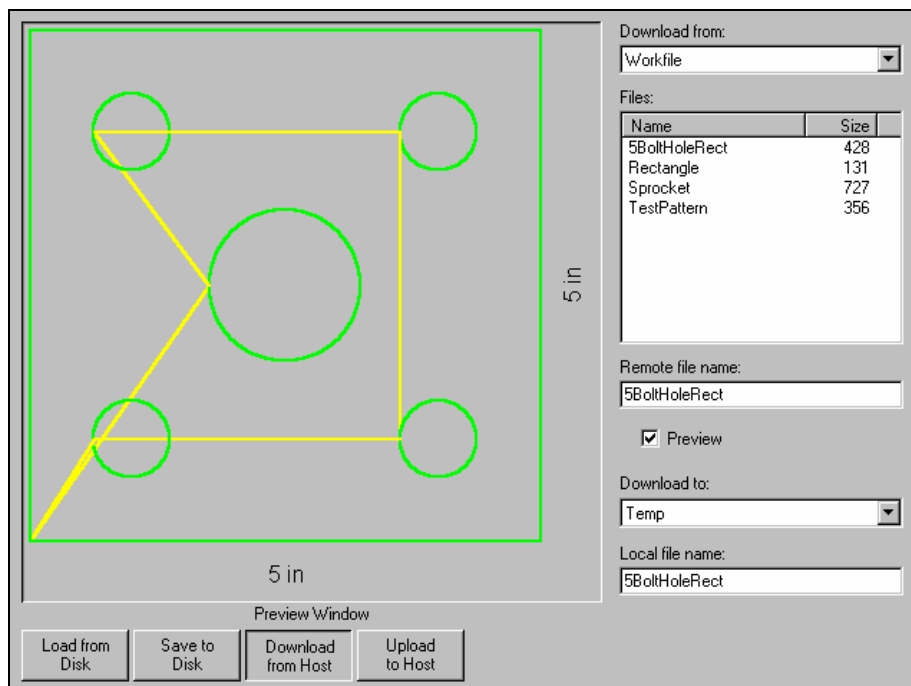
Hard drive file name :

Preview : SPACE

5.2.3 download from Host

-

: FILE – DOWNLOAD FROM HOST



Download from :

File : Page Up, Down

Remote file name :

Preview :

SPACE

Download to :

Local file name :

LOAD FORM DISK .

5.2.4 Upload to Host

-

: FILE – UPLOAD TO HOST

Upload to :

Remote file name :

Upload from :

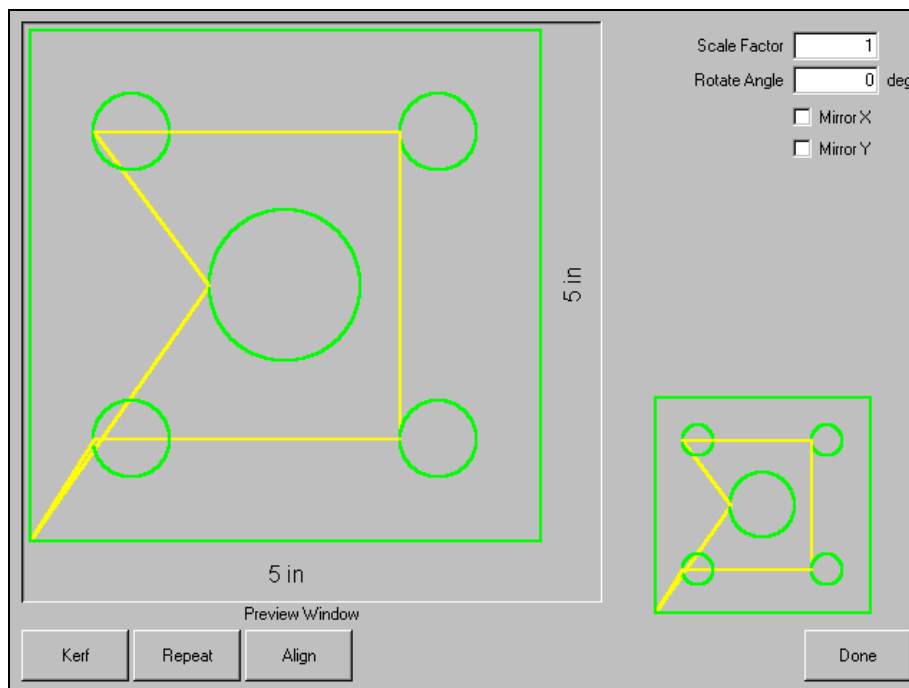
File : Page Up, Down

Local file name :

Preview : . SPACE

5.3 PART OPTION

: PART OPTION



5.3.1 Scale Factor

-
-
-
-
-
- 1
- 1 1:1 2 2:1
- 2:1 가 100mm 200mm
- 1

5.3.2 Rotate Angle

-
-
-
-
- 90
- 270 -90

5.3.3 Mirror X / Mirror Y

-
- -X -Y (SPACE)
-
- 180 (X & Y MIRROR)

5.3.4 Kerf

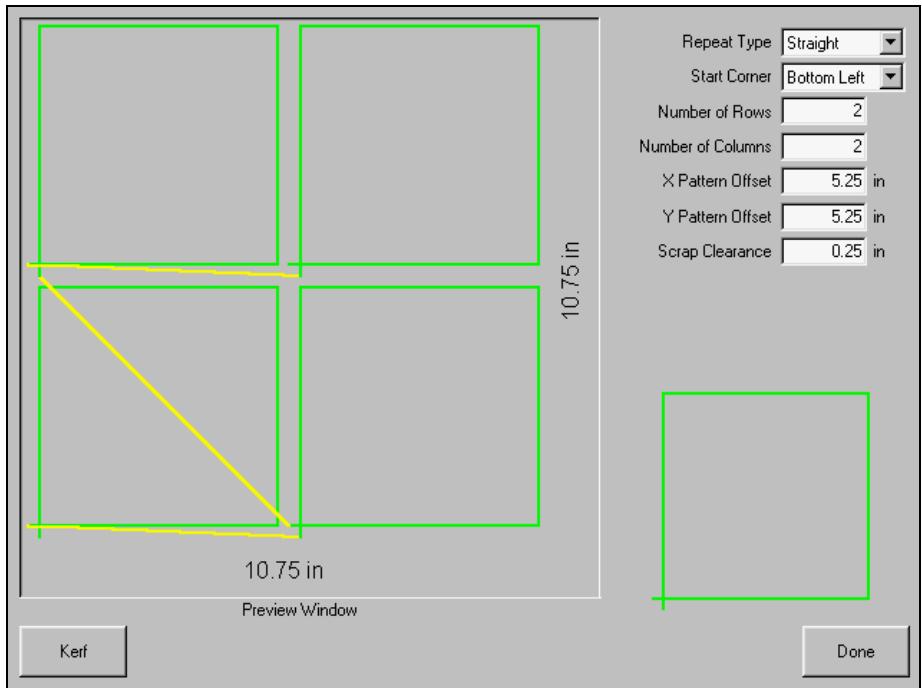
: PART OPTION - KERF

-
- 가
-

5.3.5 REPECT

: PART OPTION - REPECT

-
-
- Straight , staggered , nested
-



Repeat Type

- Straight () :
- staggered () :
- nested () :
- 가 가

Start Corner

-
- TOP RIGHT : (+X,+Y)
- TOP LEFT : (-X,+Y)
- BOTTOM RIGHT : (+X,-Y)
- BOTTOM LEFT : (-X,-Y)

Number of Rows

-
- 1

Number of Columns

-
- 1

X Pattern Offset/Y Pattern Offset

-
-
-
- , 가

Scrap Clearance

-
-
- X,Y

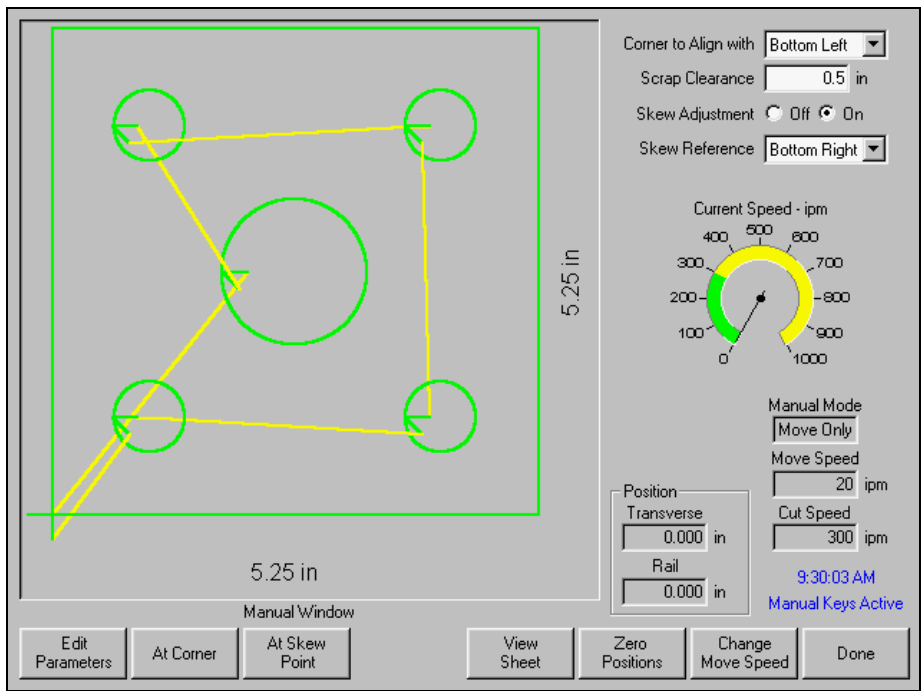
X Nest Distance/Y Nest Distance

-
- nested
-

5.3.6 ALIGN

: PART OPTION - ANIGN

-
-



Edit Parameters

-

At Corner

-

At Skew Point

- 가

PARAMETER ()

- **Edit Parameters** .

Corner to Align With :

- TOP RIGHT : (+X,+Y)

- TOP LEFT : (-X,+Y)

- BOTTOM RIGHT : (+X,-Y)

- BOTTOM LEFT : (-X,-Y)

Scrap Clearance : 가 가

Skew Adjustment :

Skew Reference : (Skew Adjustment 가 On)

-

- B.R(BOTTOM RIGHT) T.R(TOP RIGHT) B.L(BOTTOM LEFT)

5.3.7

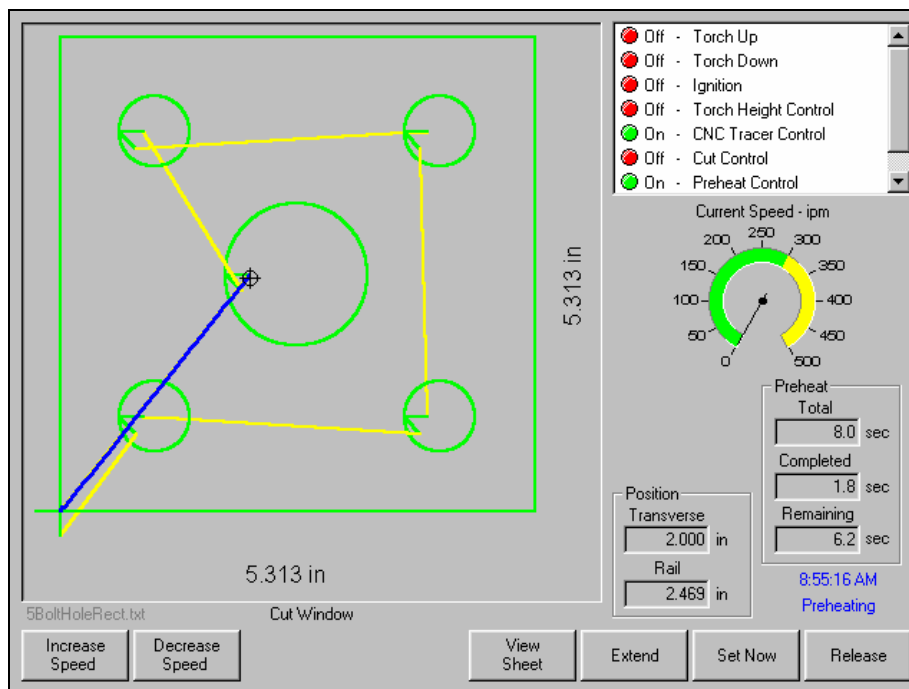
1. Edit , EDIT
2. (MANUAL MODE)
3. At Conner
- 4.
5. At skew Point
6. DONE YES .
7. 가 가 .
8. .

6. _____

START _____

- Cut Mode Trial

6.1



TOTAL :
COMPLETED :
REMAINING :

EXTEND

-
-

SET NOW

-
- 60 가 42 SET NOW
- 42 가
- UP/DOWN

RELEASE

-
-
- UP/DOWN

START

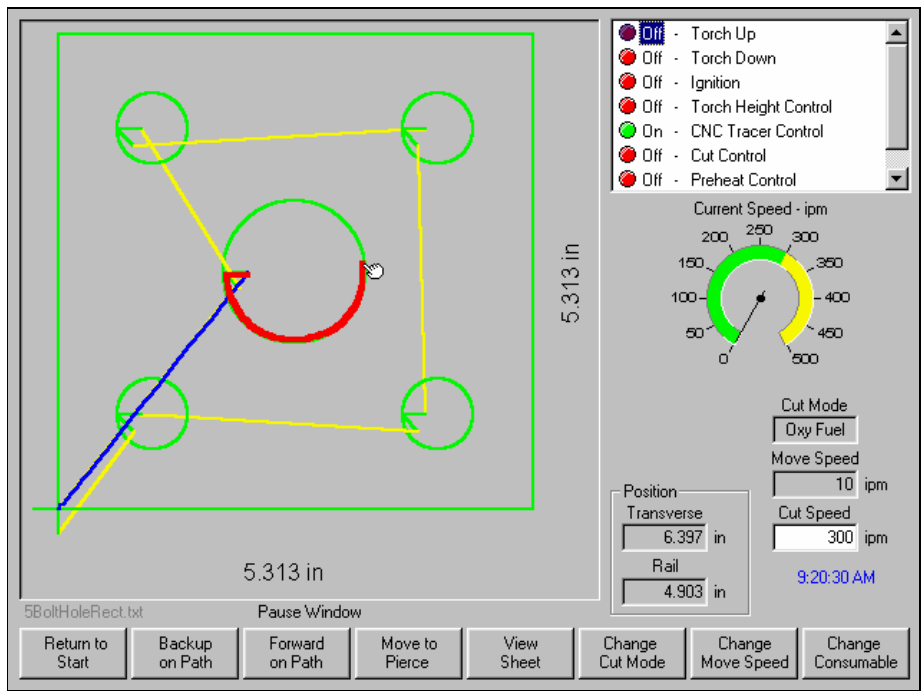
- RELEASE
- UP/DOWN

STOP

-

6.3 STOP

- 가 stop
- Cancel



Return to Start

- 가
-

Backup on Path

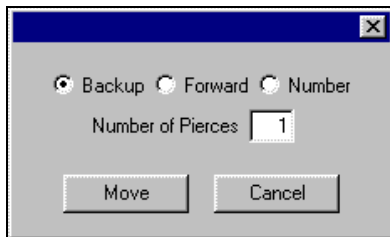
-
-
- (CUT SPEED)가 (MOVE SPEED) .

Forward on Path

-
-
- (CUT SPEED)가 (MOVE SPEED) .

Move to Pierce

-
- BackUP(), Foward(), Number()
- number of Pierces Enter



Change Cut Mode

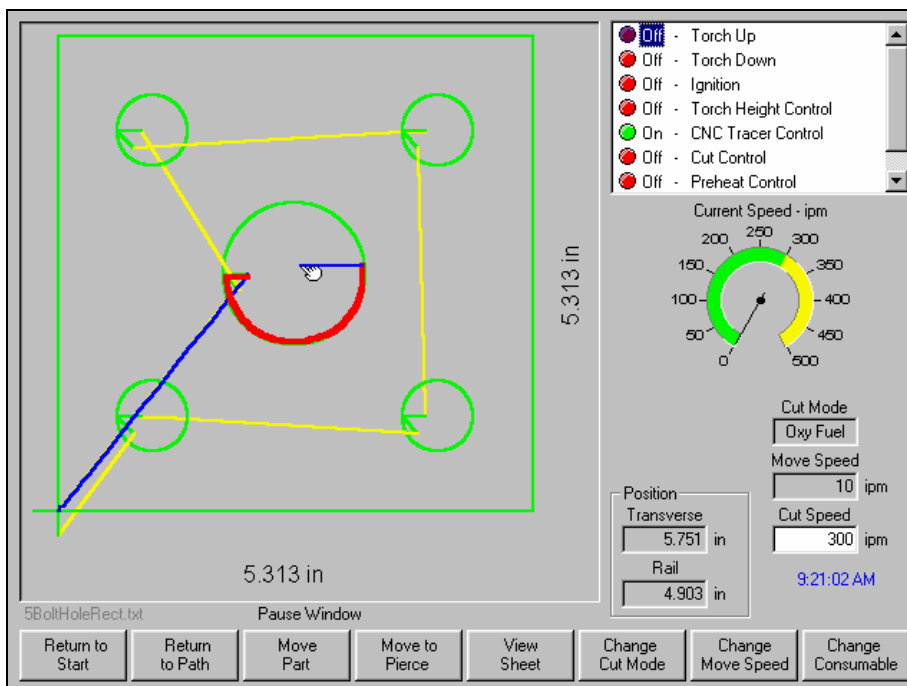
- .

Change Move Speed

- 가 .
- .

6.4 STOP

- STOP
- RETURN TO PATH MOVE PART가

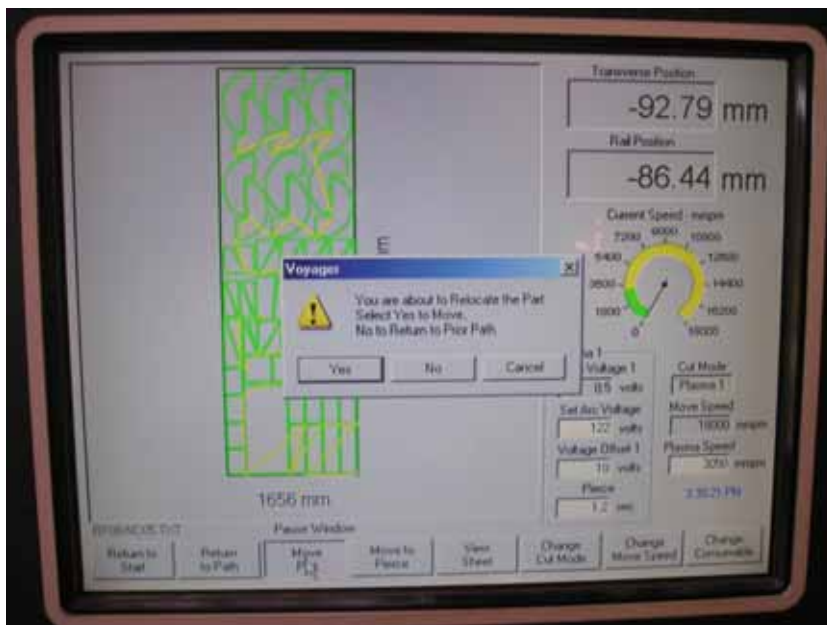


Return to Patch

-
- 가
- STOP

Move Part

-
- 가
- yes



7. CHANGE CONSUMABLE

- ,
- new Torch Tip New Electrode ()

The screenshot displays a software interface for managing consumables. It features three main data entry sections:

- Oxy Fuel - Torch Tip Life:** Includes a date/time field for 'Last Torch Tip Installed' (12 Jul 1999 2:08 PM) and three input fields for 'minutes' (289.2), 'pierces' (83), and 'inches' (4465.401).
- Plasma - Torch Tip Life:** Includes a date/time field for 'Last Torch Tip Installed' (28 Jul 1999 2:29 PM) and three input fields for 'minutes' (15.6), 'pierces' (38), and 'inches' (325.61).
- Plasma - Electrode Life:** Includes a date/time field for 'Last Electrode Installed' (28 Jul 1999 12:19 PM) and three input fields for 'minutes' (21.6), 'pierces' (132), and 'inches' (1202.697).

At the bottom, there are seven buttons: 'New Torch Tip', 'New Electrode', 'Manual Options', 'Reset Database', 'Upload Database', 'Save Database', and 'Done'.

Last Torch Tip Installed

-

Last Electrode Installed

-

Minutes

-

Pierces

-

Millimeters

-

New Torch Tip

-

New Electrode

-

Reset Database

-

Up lode Database

-

Save Database

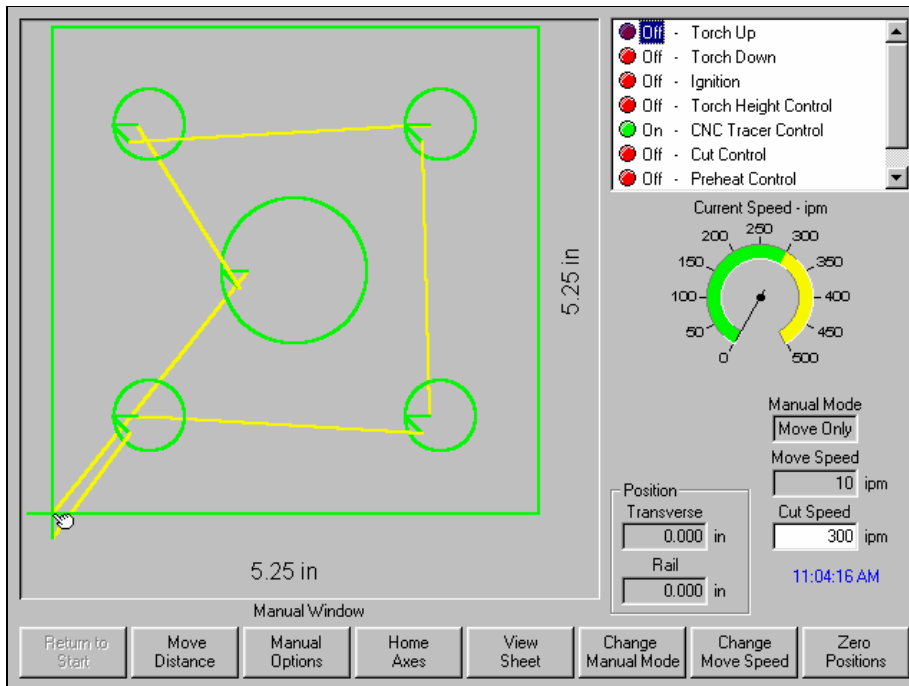
-

8. MANUAL WINDOW

: ()

- Latched Manual Key가 Manual Keys On 가 Cancel

Latched , Stop,



8.1 Return to Start

-
- 가
-

8.2 Move Distance

-
- Enter
- MOVE SPEED

Transverse in
Rail in

8.3 Manual Options

Manual Offset
Transverse in
Rail in

Transverse Position
 in
Rail Position
 in
Dual Gantry Position
 in

9. _____ (Phoenix Link) _____

9.1.

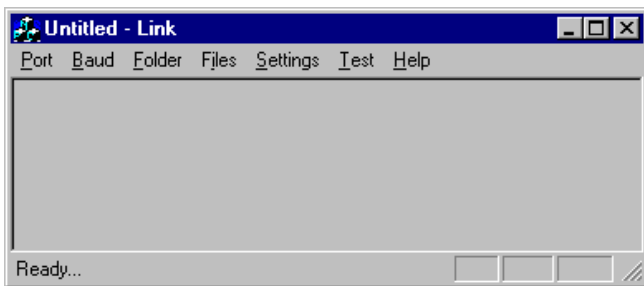
HYBRID-D80

HYBRID-D80

9.2.

Phoenix Link

가 , 가



가

1) Port()

가

“READY” 가

2) Baud()

9600 bps – 115,200 bps

D80

3) Folder()

4) Files()

가 가 가

5) Settings()

Reload(M65)

가 , D80

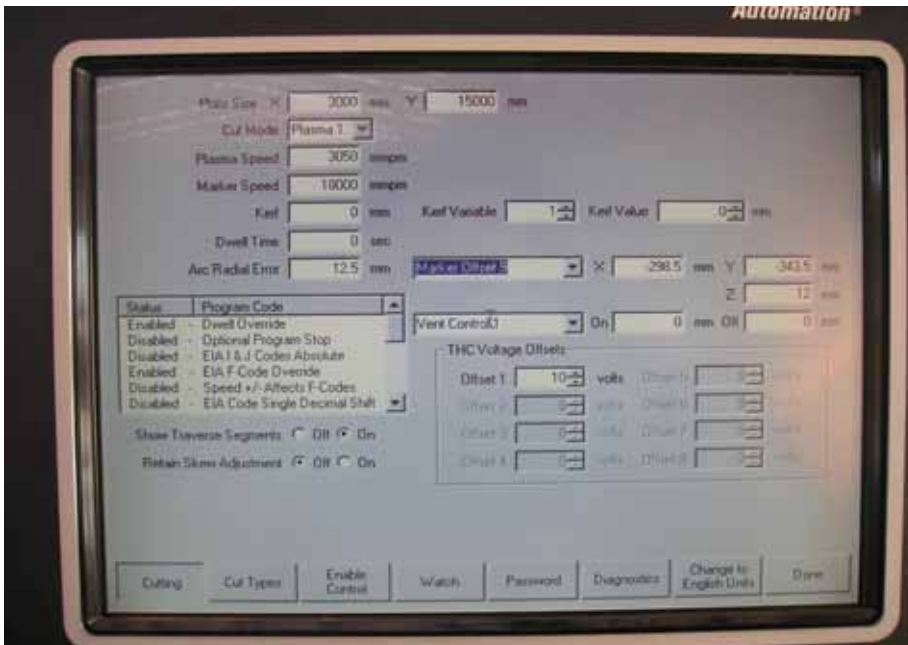
6) Test()

RS-232 2,3 SHOT

7) Help()

10. SETUP

: SETUP



10.1

1. CUTTING

- 가
- , , , ,

2. CUT TYPES

- A.
- B. , 가 ,

3. DISABLE CONTROL

- A.
- B. DISABLE CONTROL ENABLE
- C. ENABLE CONTROL DISABLE
- D. SERVO

4. WATCH

A.

B. , ,

5. PASSWORD

A. 가

6. DIAGNOSTICS

A. 가

B. , I/O , ,

7. CHANGE TO METRIC UNIT

A.

B. METRIC : mm

C. ENGLISH : inch

8.

A. DISABLE :

B. ENABLE : ,

C. PART :

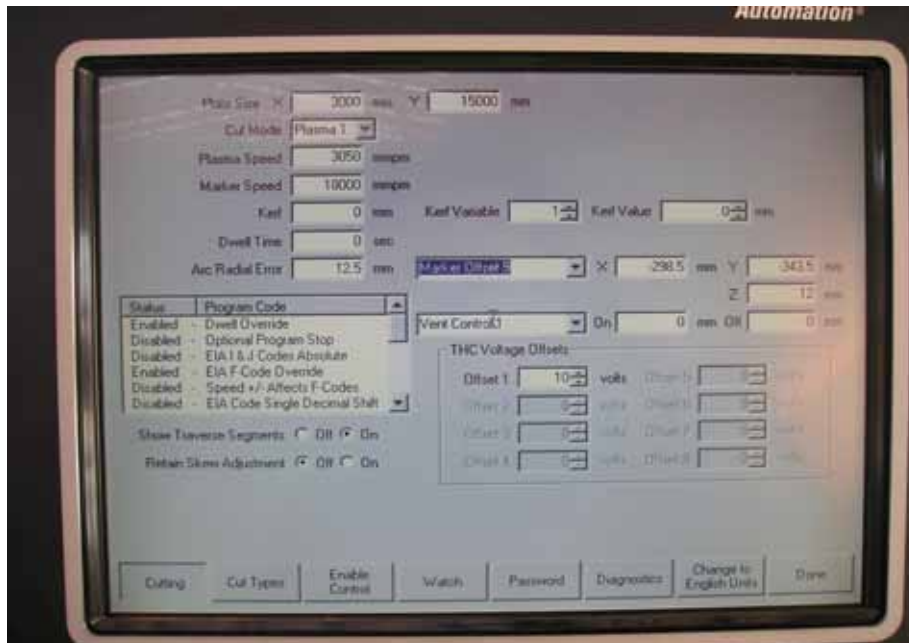
D. WATCH :

E. DIAGNOSTICS : 가

F. METRIC UNIT : mm

10.2 CUTTING

: SETUP – CUTTING



1. Plate size

-
- SETUP-MACHINE TABLE SIZE
- 가
-

2. Cut mode

-
- OXY FULE : 가
- Plasma1 :
- Trial :

3. oxy FULE Speed

- 가

- F

4. Marker Speed

-

- 18000 12000 – 18000

5. Kerf

-

- D80 2

6. Status Program Code

-

- Space Enabled ,Disabled 가

-

가. Dwell Time : Plasma ()

. Arc Radial Error : ()

. Dwell Override : (G04)

. Optional Program Stop : (M01, “/”),OFF

. EIA I&J Codes Absolute :

. Speed +/- Affects F-Code : Speed (Enable , Disable)

. EIA Code Single Decimal Shift : (Enable), (Disable)

7. Show Traverse Segments

-

가

-

8. Retain Skew Adjustment

-

9. OFFSET

-

-

가. Marker Offset 1 :

. Marker Offset 9 : IHS Z 12

. Marker Offset 10 : Laser

10.3 Cut Types

가 , (SPACE)

10.3.1 OXY FULE

: SETUP – CUT TYPES – OXY FUEL

가 가

/ -

Ignition Time	<input type="text" value="1"/> sec	Pierce Torch Up Time	<input type="text" value="1"/> sec
Low Preheat Time	<input type="text" value="1"/> sec	Pierce Torch Down Time	<input type="text" value="1"/> sec
High Preheat Time	<input type="text" value="1"/> sec	Cut Off Time	<input type="text" value="1"/> sec
Pierce Time	<input type="text" value="1"/> sec	Bleedoff Time	<input type="text" value="1"/> sec
Creep Time	<input type="text" value="1"/> sec	Ignitors	<input checked="" type="radio"/> No <input type="radio"/> Yes
Primary Torch Up Time	<input type="text" value="1"/> sec	Preheat During Cut	<input type="radio"/> Off <input checked="" type="radio"/> On
Primary Torch Down Time	<input type="text" value="1"/> sec		

Timing Diagram

The timing diagram shows the sequence of events for an oxy-fuel cut. It includes signals for Machine Motion, Torch Up, Torch Down, Ignition, Preheat Control, Pierce Control, Cut Control, and Bleedoff Gas. The diagram illustrates the timing of these events relative to each other during the cutting process.

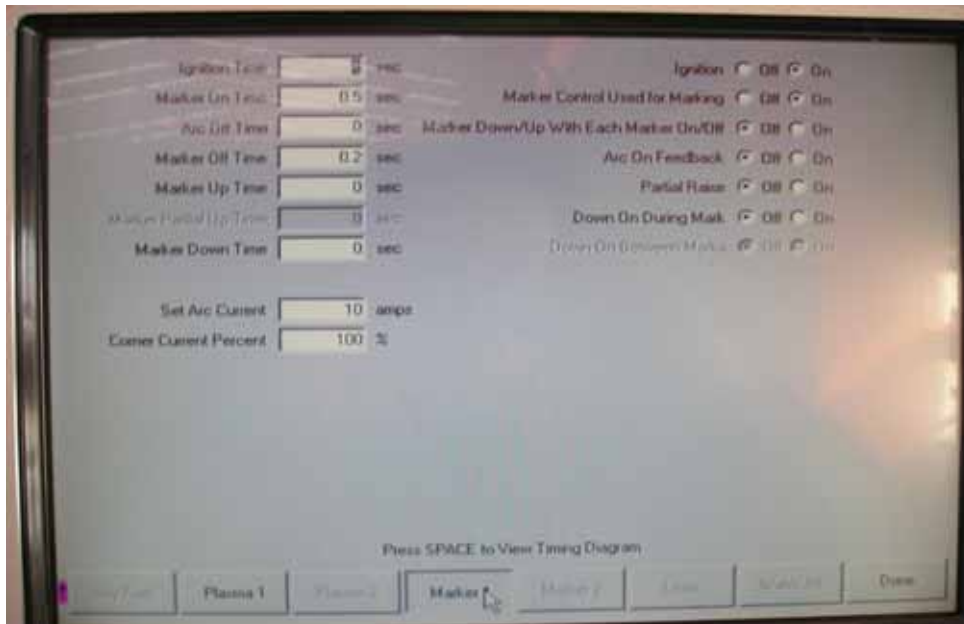
Oxy Fuel Plasma Marker Done

12). Igniters(-)
가 “ Yes ”

13). Preheat During Cut()

10.3.2 MARKER

: SETUP – CUT TYPES - MAKER



1. Ignition Time

-
- 3 5

2. Mark On Time

- 가
- .
- 0 – 0.5

3. Arc Off Time

- Plasma marking ARC OFF
-

4. Marker Off Time

- Marking Off 가
- 0 0.5

5. Marker Up Time

- Marking Off
-

6. Marker Down Time

- Marking
-
- UP/DOWN 가 가 /
- 0

7. Set Arc Current

- plasma Marking Amp()
- ZN

8. Corner Current Percent

-
-

9. Ignition

-
- OFF

10. Marker Control Used For Marking

- Marking Control ON
-

11. Marker Down /Up With Each Marker On/Off

- Marker On/Off
- I/O OFF .

12. Arc On Feedback

- plasma Marking
- .

13. Partial Raise

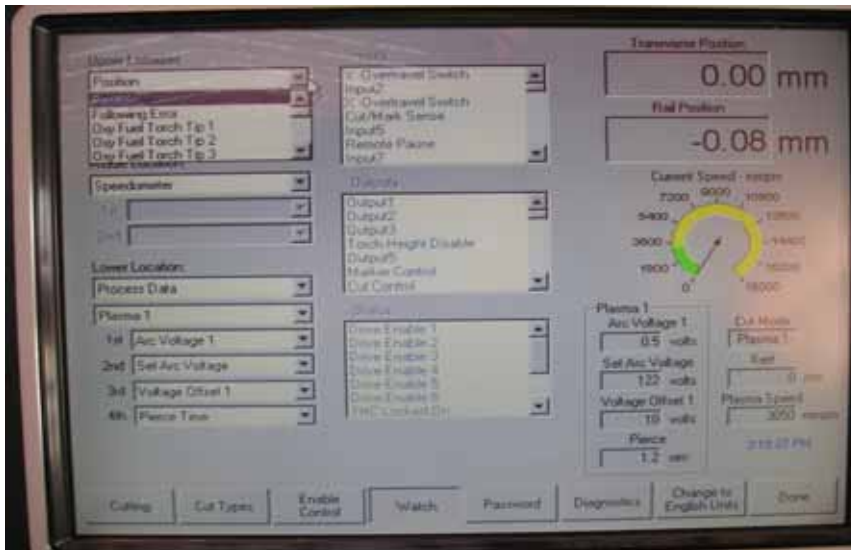
-
- .

14. Down On During Mark

- DOWN ARC
- .

10.4 WATCH

: SETUP – WATCH



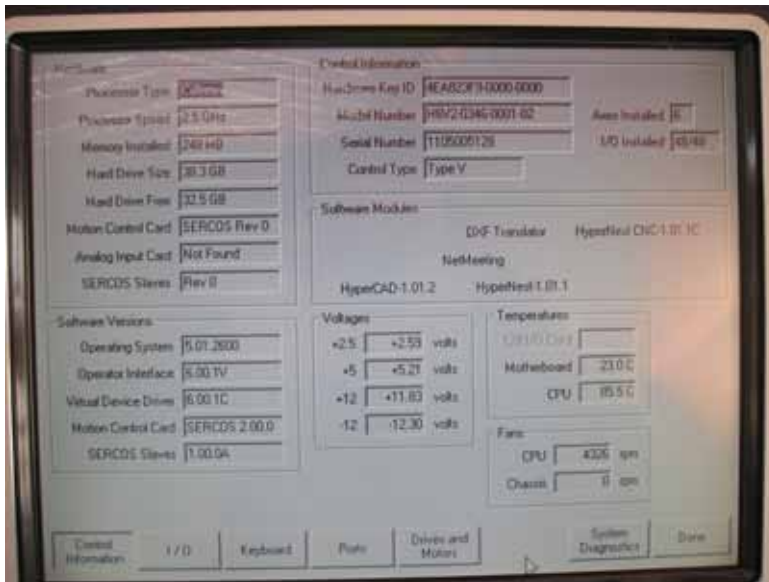
1. Upper Location
 - Main
 - POSITION
2. Middle Location
 - Main 가
 - SPEED METER
3. Lower Location
 - MAIN
 - PROCESS DATA
4. INPUTS & OUTPUTS
 - UPPER MIDDLE INPUT/OUTPUT 가
 - + & -
5. LOCATION 가
 - NONE :
 - INPUT/OUTPUT : I/O
 - POSITION : 가

- FOLLOWING ERROR : D80 MOTOR
- TEMPERATURE : D80
- SPEEDMETER :
- PLASMA(GAS) TORCH DATA : (가)
- PROCESS DATA :

6. DATA가

10.5 DIAGNOSTICS

: SETUP - DIAGNOSTICS



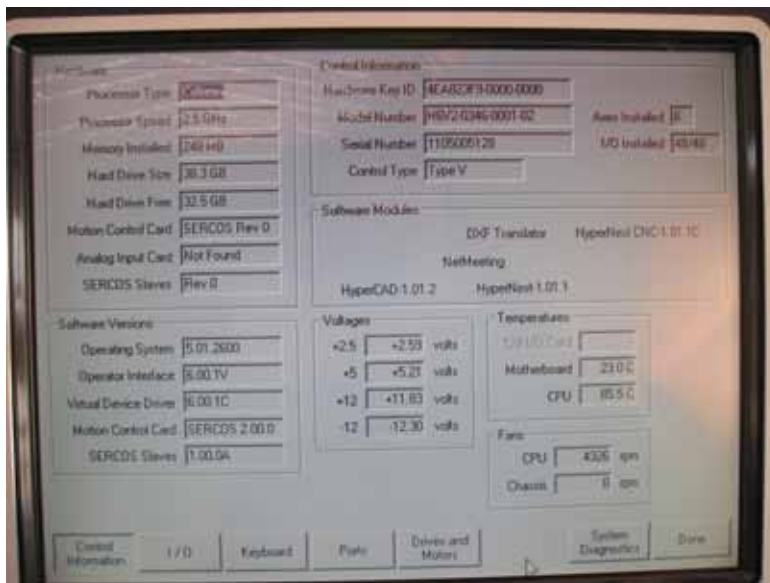
1. CONTROL INFORMATION

- PC
- 가

- 2. I/O
 - D80
 - 가 SPACE 가
- 3. KEYBOARD
 -
 - TEST ENTER, SHIFT + CANCEL
- 4. PORTS
 - D80
 - JUMP
- 5. DRIVES AND MOTORS
 - D80
 - D80
 - 가 가
- 6. SYSTEM DIAGNOSTICS :
 -
 - 가
 -
 - 가

10.5.1 CONTROL INFORMATION

: SETUP – DIAGNOSTICS - CONTROL INFORMATION



10.5.2 KEY BOARD

: SETUP – DIAGNOSTICS – KEY BOARD



1. ENTER TEST .
2. 가 .
3. SHIFT + CANCEL .

11. D80 ERROR

Error Messages ()

1). No Part Loaded()

-
-

2). Part Larger than Plate(가)

- 가
- SETUP

3). Kerf too Large, Arc/Line has Disappeared. Abort Cut?

(가 / ?)
- 가
-
-

4). Cut Sense Lost()

-
- Arc ON Feedback ARC On 가
가

5). Communications Time Out()

-
- Link Time Out 가
가

6). Host Not Responding(가)

-
-
-

가

7). Scale Factor must be between .001 and 1000(/)

-
-

/ 0.001 1000

8). Radius at Arc Beginning and Radius at Arc End are not within the Arc Radial Error Tolerance

()

-
-

가

가

Arc Radial Error

9). Transverse Position Error Exceeded()

-
-
-

가

Servo Error Tolerance Setup

가

가

가

Servo Error Tolerance Setup

가

10). Rail Position Error Exceeded()

-
-
-

가

Servo Error Tolerance Setup

가

가

가

Servo Error Tolerance Setup

가

11). Dual Gantry Position Error Exceeded()

-
-

가

Servo Error Tolerance Setup

가

가

가

- , Servo Error Tolerance Setup 가
가 .

12). Transverse Positive Hardware Overtravel Reached(+)

- + 가 가 .
- - .

13). Rail Positive Hardware Overtravel Reached(+)

- + 가 가 .
- - .

14). Transverse Negative Hardware Overtravel Reached

- - 가 가 .
- + .

15). Rail Negative Hardware Overtravel Reached

- - 가 가 .
- + .

16). Transverse Positive Software Overtravel Reached

- 가 Maximum Travel Limit .
- .

17). Rail Positive Software Overtravel Reached

- 가 Maximum Travel Limit .
- .

18). Transverse Negative Software Overtravel Reached

- 가 Minimum Travel Limit .
- .

19). Rail Negative Software Overtravel Reached

- 가 Minimum Travel Limit .
- .

20). Dual Gantry Skew Error Exceeded()

- 가 가 가
- 가 Skew Error Tolerance Setup 가
- 가

21)

가
1) Unable to Open Port (control)- 가 .(D80)

가

2) Unable to Open Port (host))- 가 .()
가

가

3) Unable to Initialize Port- 가

가

4) Port Failed-

가 Port Failed 가
/

5) Host Not Responding-

가

6) Communication Failed-

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7) Communications Time Out-

Link 가 .

8) Checksum Error-

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9) Warning: The Master Folder Selected does Not Contain any Folders

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