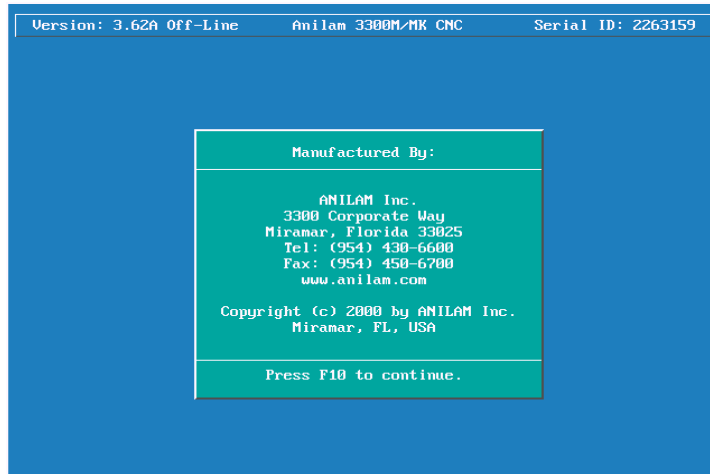


3300M CNC Control Training Guide



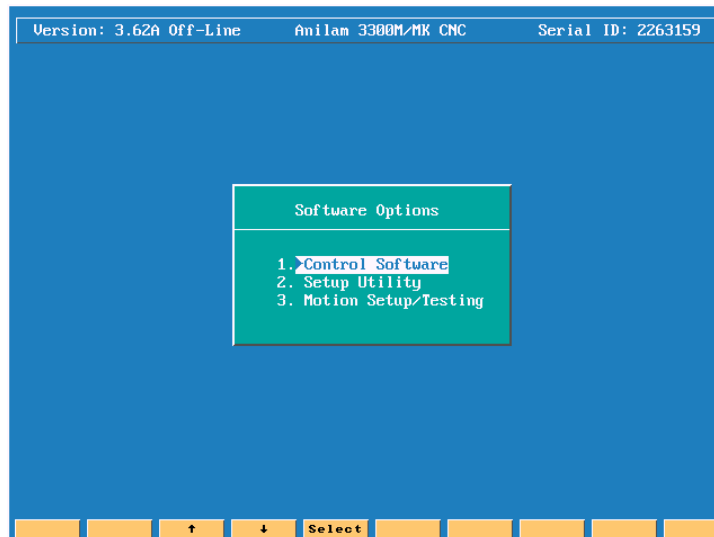
Turning the Control ON



After the control has been turned ON press F10



to continue.

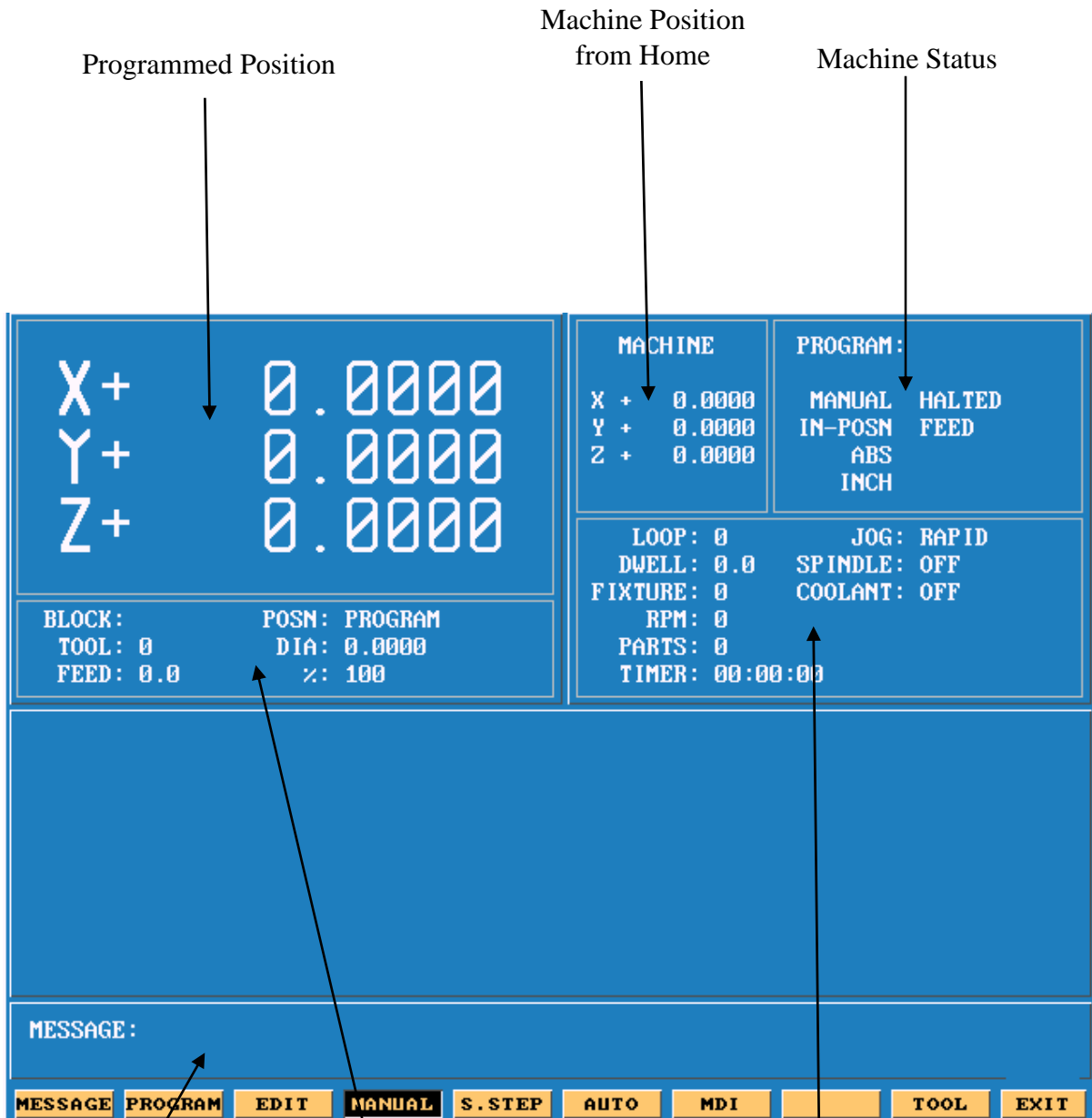


Then press



to select next page

Main Areas of the Display

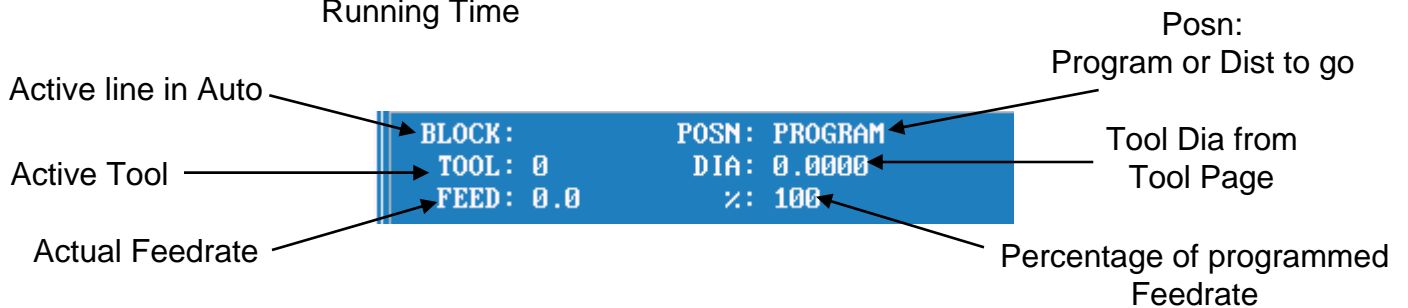
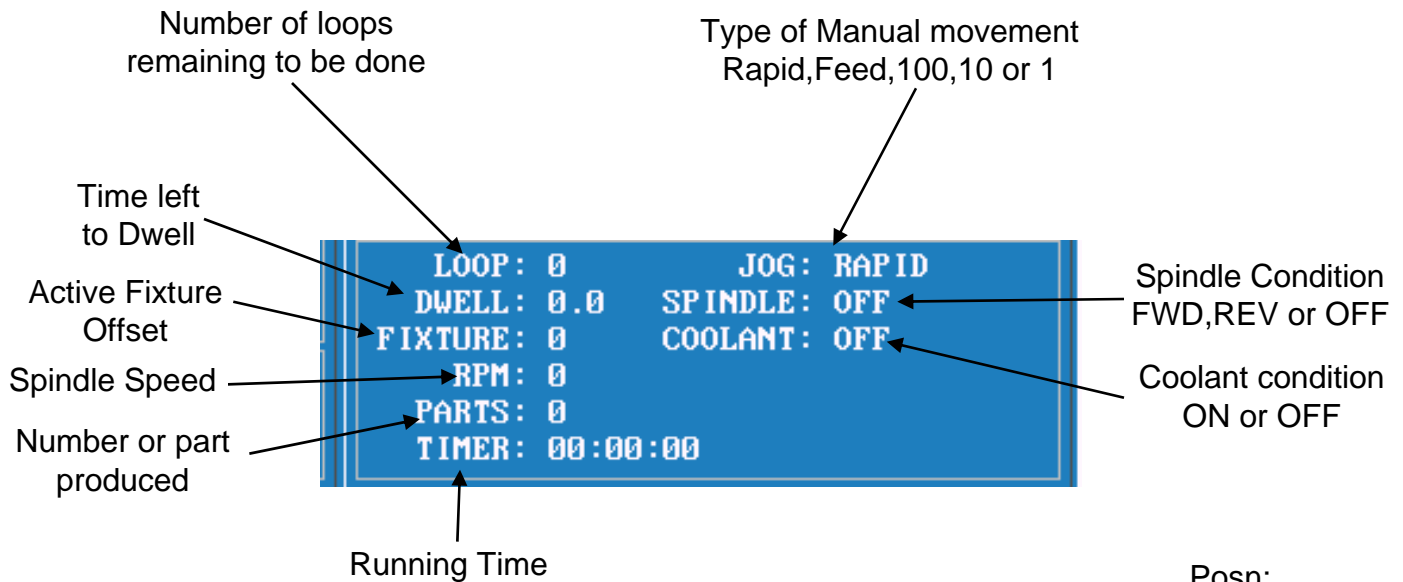
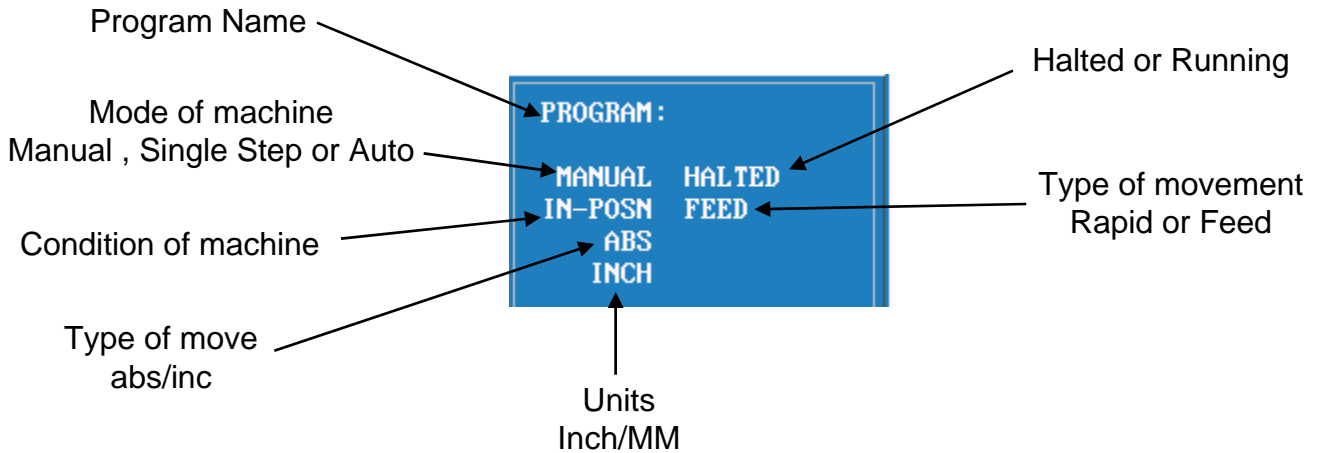


Message Area

Program & Tool information

Auxiliary Functions Information

Areas of Main Screen



Keyboard



All the number key and the decimal point have dual functions as show above.

Along with the above we have “Hot Keys”

- | |
|-------|
| 1 |
| Rapid |

 Accesses Rapid menus.
- | |
|------|
| 2 |
| Line |

 Accesses Line menus.
- | |
|-----|
| 3 |
| Arc |

 Accesses Arc menus.
- | |
|------|
| 4 |
| Feed |

 Input feedrate.
- | |
|------|
| 5 |
| Tool |

 Tool mount.
- | |
|-------|
| 6 |
| MCode |

 Mcode inputs.
- | |
|------|
| 7 |
| Unit |

 Inch/MM
- | |
|-------|
| 8 |
| Dwell |

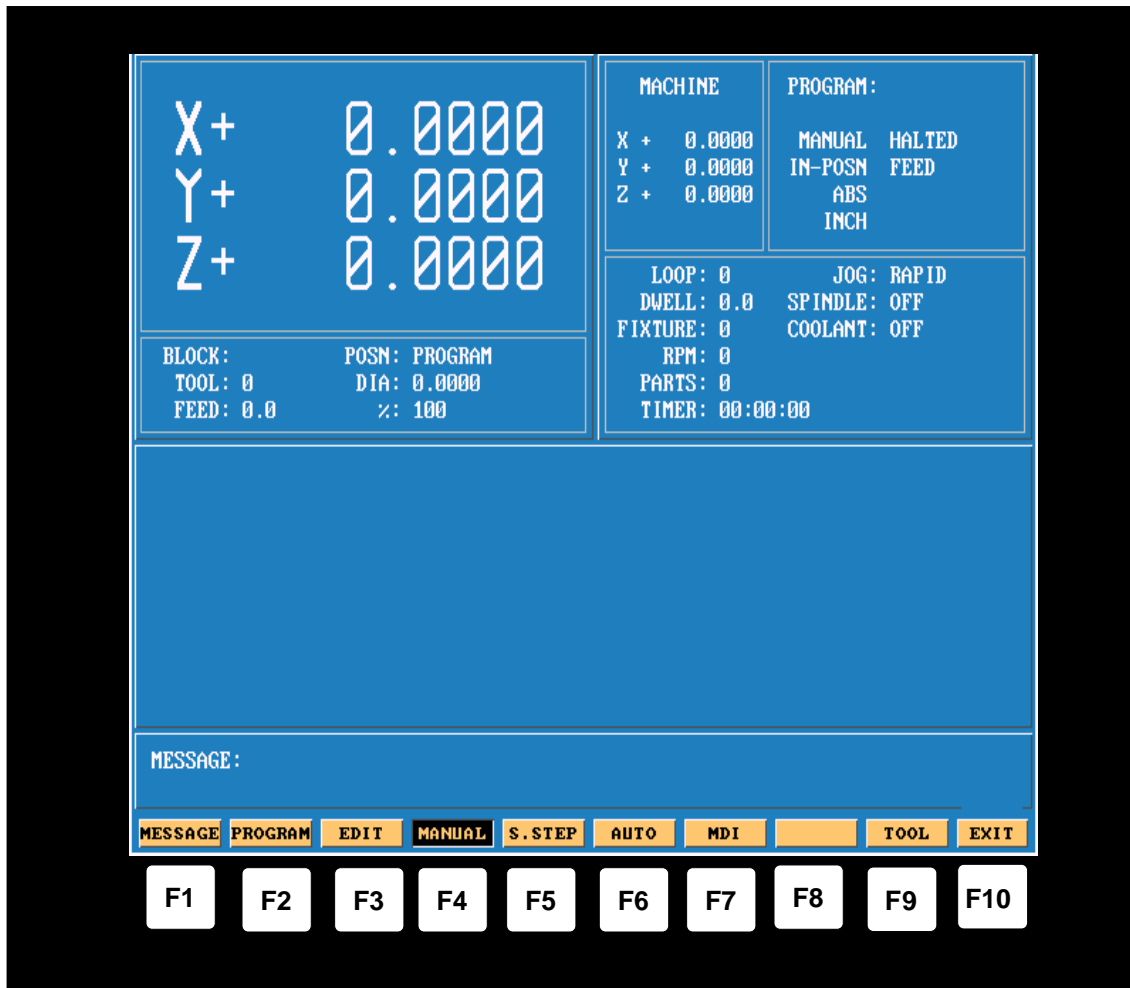
 Dwell in seconds
- | |
|-------|
| 9 |
| Plane |

 Changes from XY,XZ or YZ.
- | |
|---|
| 0 |
| * |

 If * put in front of line in program ignores that line.
- | |
|-----|
| ● |
| RPM |

 Input for spindle speed if available.

Function Keys



The Function (or F keys) activate the Mode shown directly above on the Display screen. The meaning of F keys change, depending upon what Mode of operation is selected.



An example of how F keys is shown above, this is how it would change when going from Manual to in Single Step or Auto.



F1	Message	Display last 8 messages that have appeared
F2	Program	Page at which program files are displayed
F3	Edit	Go to EDIT from Manual
F4	Manual	Manual mode of operation
F5	S.Step	Single step mode of operation
F6	Auto	Auto mode of operation
F7	M D I	Manual data input,allow operation without writing a program
F8		Not used
F9	Tool	Tool page and Fixture offsets can also be accessed from Edit
F10	Exit	Exits control software

F1 Message Page

To enter message page press



This is how the messages will appear on the screen .
When control is turned off the messages will be erased.

This is useful to tech's when trouble shooting problems on the control

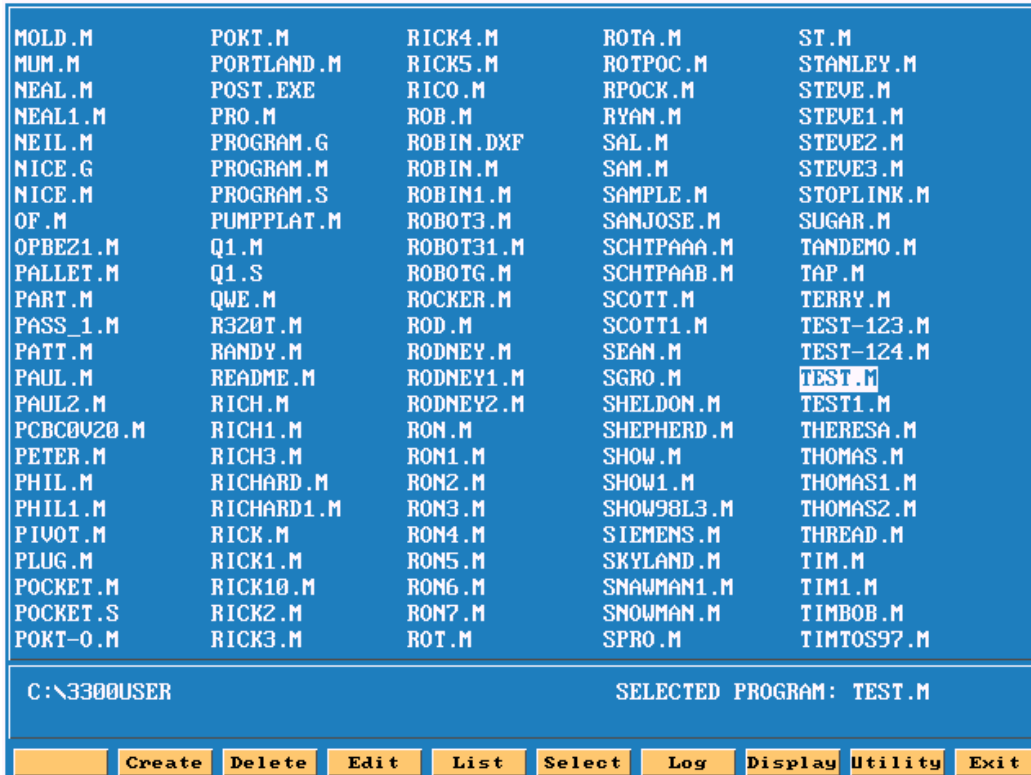
```
Illegal program name!  
Illegal program name!  
Illegal program name!  
Press START to execute or MANUAL to Cancel.  
WARNING [Block 35]: Circle adjusted beyond maximum adjustment!
```

Program Page

To enter page Press F2 **Program**



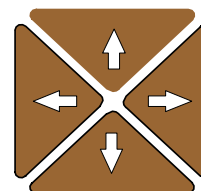
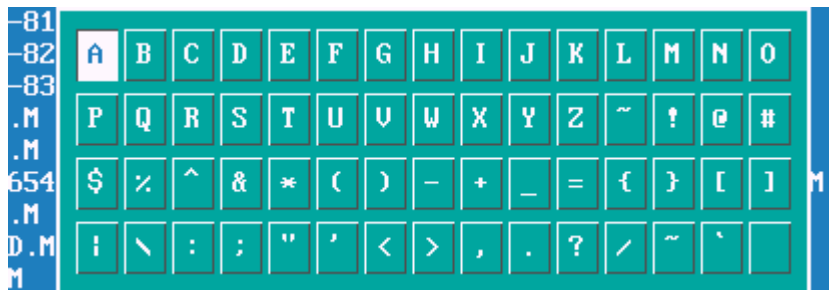
F1		Not used
F2	Create	This where new program names are type in.
F3	Delete	Delete an existing program.
F4	Edit	Programs are written and changed.
F5	List	Allows you to look at program but no Editing .
F6	Select	Picks program to be run.
F7	Log	Changes disk drive.
F8	Display	Changes how program page display program list
F9	Utility	Contains such utility as Copy ,Rename etc.
F10	Exit	Return to main screen in Manual Mode



Create




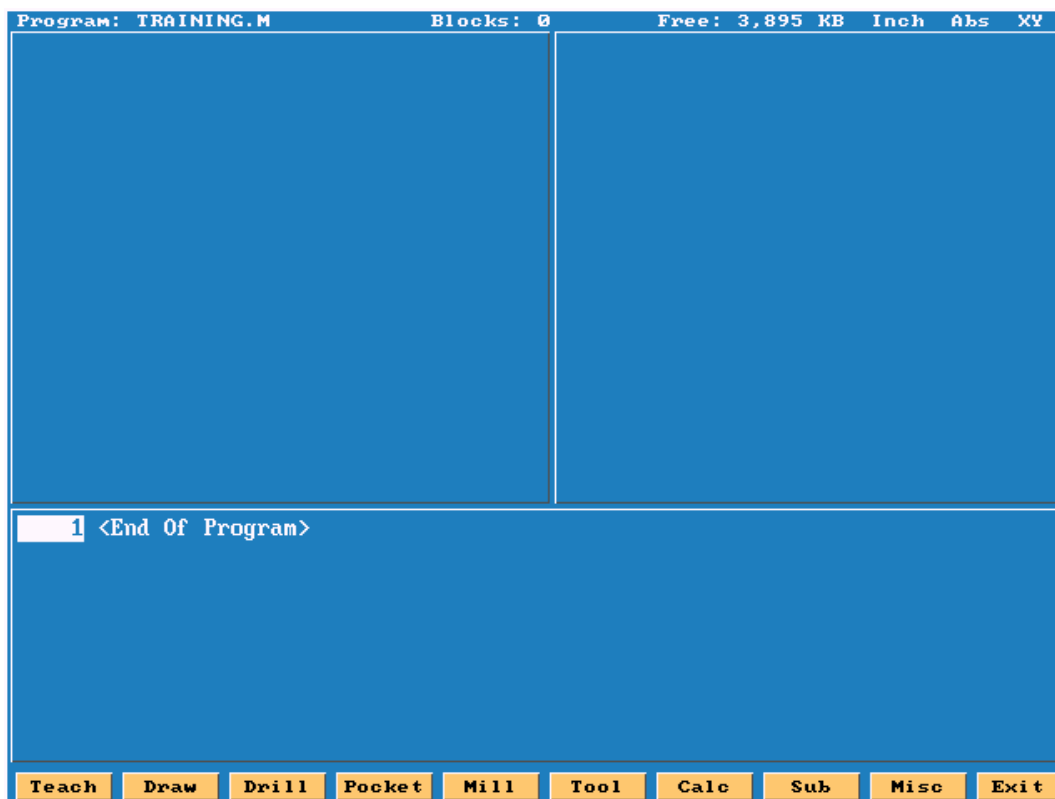
When ASCII is pressed, this how the soft keys will look and a table will appear as show below
 Using the arrow keys pick the letters then press the enter key. When complete press ASCII again and press enter, this will put program into the list of programs with .M extension and highlight will be on program that was just created.




**E
N
T
E
R**

Edit

When  is press, the screen appear as shown below.



Pressing  allows user to look you to look at program only.

Select

MOLD.M	POKT.M	RICK4.M	ROTA.M	ST.M
MUM.M	PORTLAND.M	RICK5.M	ROTPC.M	STANLEY.M
NEAL.M	POST.EXE	RICO.M	RPOCK.M	STEVE.M
NEAL1.M	PRO.M	ROB.M	RYAN.M	STEVE1.M
NEIL.M	PROGRAM.G	ROBIN.DXF	SAL.M	STEVE2.M
NICE.G	PROGRAM.M	ROBIN.M	SAM.M	STEVE3.M
NICE.M	PROGRAM.S	ROBIN1.M	SAMPLE.M	STOPLINK.M
OF.M	PUMPLAT.M	ROBOT3.M	SANJOSE.M	SUGAR.M
OPBEZ1.M	Q1.M	ROBOT31.M	SCHTPAAA.M	TANDEMO.M
PALLET.M	Q1.S	ROBOTG.M	SCHTPAAB.M	TAP.M
PART.M	QWE.M	ROCKER.M	SCOTT.M	TERRY.M
PASS_1.M	R3Z0T.M	ROD.M	SCOTT1.M	TEST-123.M
PATT.M	RANDY.M	RODNEY.M	SEAN.M	TEST-124.M
PAUL.M	README.M	RODNEY1.M	SGRO.M	<u>TEST.M</u>
PAUL2.M	RICH.M	RODNEY2.M	SHELDON.M	TEST1.M
PCBC0U20.M	RICH1.M	RON.M	SHEPHERD.M	THERESA.M
PETER.M	RICH3.M	RON1.M	SHOW.M	THOMAS.M
PHIL.M	RICHARD.M	RON2.M	SHOW1.M	THOMAS1.M
PHIL1.M	RICHARD1.M	RON3.M	SHOW98L3.M	THOMAS2.M
PIVOT.M	RICK.M	RON4.M	SIEMENS.M	THREAD.M
PLUG.M	RICK1.M	RON5.M	SKYLAND.M	TIM.M
POCKET.M	RICK10.M	RON6.M	SNAWMAN1.M	TIM1.M
POCKET.S	RICK2.M	RON7.M	SNOWMAN.M	TIMBOB.M
POKT-0.M	RICK3.M	ROT.M	SPRO.M	TIMTOS97.M

C:\3300USER SELECTED PROGRAM: TEST.M

Create	Delete	Edit	List	Select	Log	Display	Utility	Exit
--------	--------	------	------	--------	-----	---------	---------	------

Program that is highlighted and then selected will shows up in this area. A program may be edited without being selected , but not run in Single step or auto.

Display

```

054FIN.M    ARIEL.M      DALE.M      DELTA.M      FIL.M
054_CH1.M  BACKPUT.M   DALE1.M    DELTA1.M    FIX.M
123.M      BANTUM.M    DALE2.M    DELTA2.M    FORGE.M
221061A.M  BARNES.M    DAN.M      DENIS.M     FP.M
22PRGM1.M  BEN.M       DAN1.M     DIM.M       FRANK.M
2PRGM1.M   BERN.M     DANIEL.M   DON.M       FRANK1.M
321.M      BILL.M      DAREN.M    DOUG.M      FRED.M
3300LET.M  BOB.M      DAREN1.M   DOUG1.M     FRED1.M
442-B.M    BRIAN.M    DARRELL.M  DOUG2.M     FRED2.M
442-B1.M   BUTISL.M   DARRELL.M  DOWNING.M   FTR.M
442-B2.M   CHEVSHOW.M DARRELL1.M EARNST.M    FX303.M
442-B3.M   CHIP.M     DAVE.M     ED.M        GARY.M
456.M      CHRIS.M    DAVE1.M    ED2.M       GENE.M
543.M      CHUCK.M    DAVE10.M   ED3.M       GEORGE.M
789654.M   CHUCK1.M   DAVE11.M   ED4.M       GEORGE1.M
963.M      CHUCK2.M   DAVE2.M    EDDIE.M     GEORGE2.M
ABCD.M     CIR.M      DAVES.M    ELBOW.M     GEORGE3.M
ACCURACY.M CIRPOCK.M  DAVE6.M    ELL.M       GEROTECH.M
AL.M       CONCORD.M DAVE7.M    ERU.M       GLORIA.M
ALAN.M     CP.M       DAVE8.M    ERU1.M      GLORIA1.M
AMT.M      CPU1.M     DAVE9.M    EXAM7.M     GOOFY.M
AMT2.M     CRAIG.M    DAVIS.M    FACE.M      GORDON.M
ANILAM.M   CRP.M     DD150CU.M FCP.M       GREG.M
APM42.M    CURT.M    DEAN.M     FEATHER.M   GREG1.M

C:\3300USER                               SELECTED PROGRAM:

Create Delete Edit List Select Log Display Utility Exit
  
```

Normal screen only show .m files

```

054FIN.M    730,530  04/09/2001  02:38 pm
054_CH1.M   1,643,679 04/09/2001  01:13 pm
123.M       1,049    04/18/2001  03:38 pm
221061A.M   5,506    05/15/2001  02:18 pm
22PRGM1.M   60,626   05/15/2001  02:03 pm
2PRGM1.M    60,626   05/15/2001  02:03 pm
321.M       550      04/20/2001  03:07 pm
3300LET.M   8,991    11/18/1993  04:16 pm
442-B.M     699,105  12/13/2000  05:21 pm
442-B1.M    666,091  12/13/2000  05:21 pm
442-B2.M    697,377  12/11/2000  07:45 am
442-B3.M    664,450  12/13/2000  05:21 pm
456.M       360      02/08/2001  09:45 am
543.M       121      11/29/2000  10:15 am
789654.M    257      01/16/2001  03:15 pm
963.M       279      10/25/2000  02:02 pm
ABCD.M      592      01/19/1999  03:14 pm
ACCURACY.M  772      05/15/2001  08:52 am
AL.M        540      11/25/1998  10:03 am
ALAN.M      374      07/07/2000  10:05 am
AMT.M       720      05/08/1997  09:15 am
AMT2.M      671      05/08/1997  01:56 pm
ANILAM.M    3,339    11/17/2000  09:50 am
APM42.M     702      04/03/1998  04:28 pm

C:\3300USER                               SELECTED PROGRAM:

Create Delete Edit List Select Log Display Utility Exit
  
```

Show all in program files but show size of page program,date and time written

```

<DIR>      05/28/1998  11:06 am
11002AX\   <DIR>      05/28/1998  11:06 am
HYBCON     <DIR>      01/04/1999  02:29 pm
RICHARDN   <DIR>      09/19/2000  09:50 am
054FIN.M   730,530  04/09/2001  02:38 pm
054FIN.S   1,207,006 04/20/2001  09:27 am
054_CH1.M  1,643,679 04/09/2001  01:13 pm
054_CH1.S  2,074,788 04/20/2001  00:00 am
123.M      1,049    04/18/2001  03:38 pm
123.S      1,440    04/18/2001  03:38 pm
221061A.M  5,506    05/15/2001  02:18 pm
221061A.S  8,512    05/15/2001  02:30 pm
22PRGM1.M  60,626   05/15/2001  02:03 pm
2PRGM1.M   60,626   05/15/2001  02:03 pm
321.M      550      04/20/2001  03:07 pm
3300LET.M  8,991    11/18/1993  04:16 pm
485AXIS.DOC 1,508    04/20/2001  02:31 pm
442-B.M    699,105  12/13/2000  05:21 pm
442-B.S    1,268,388 04/12/2001  07:48 am
442-B1.M   666,091  12/13/2000  05:21 pm
442-B2.M   697,377  12/11/2000  07:45 am
442-B3.M   664,450  12/13/2000  05:21 pm
456.M      360      02/08/2001  09:45 am
543.M      121      11/29/2000  10:15 am

C:\3300USER                               SELECTED PROGRAM:

Create Delete Edit List Select Log Display Utility Exit
  
```

Show only .m files but show size of program, date and time written

```

789654.M    CHIP.M      DAREN1.M    DOUG.M
963.M       CHRIS.M    DARRELL.M   DOUG1.M
HYBCON     ABCD.M     CHUCK.M     DARRELL.M   DOUG2.M
RICHARDN   ACCURACY.M CHUCK1.M    DARRELL1.M  DOWNING.M
054FIN.M   ACCURACY.S CHUCK2.M    DAVE.M       EARNST.M
054FIN.S   AL.M       CIR.M       DAVE1.M     ED.M
054_CH1.M  ALAN.M    CIRCLES.DXF DAVE10.M    ED2.M
054_CH1.S  AMT.M     CIRPOCK.M  DAVE11.M    ED3.M
123.M      AMT2.M    CLOVER.DXF DAVE2.M     ED4.M
123.S      ANILAM.DXF COMPLEX.DXF DAVES.M     EDDIE.M
221061A.M  ANILAM.M  CONCORD.M  DAVE6.M     ELBOW.M
221061A.S  APM42.M   CP.M       DAVE7.M     ELL.M
22PRGM1.M  ARIEL.M   CPU1.M     DAVE8.M     ERU.M
2PRGM1.M   BACKPUT.M CRAIG.M    DAVE9.M     ERU1.M
321.M      BANTUM.M  CROSS.DXF  DAVIS.M     EXAM7.M
3300LET.M  BARNES.M  CRP.M     DD150CU.M   FACE.G
485AXIS.DOC BEN.M     CURT.M     DEAN.M      FACE.M
442-B.M    BERN.M    DALE.M     DELTA.M     FACE.S
442-B.S    BILL.M    DALE1.M    DELTA1.M    FCP.M
442-B1.M   BOB.M    DALE2.M    DELTA2.M    FEATHER.M
442-B2.M   BRIAN.M  DAN.M      DENIS.M     FIL.M
442-B3.M   BUTISL.DXF DAN1.M     DIM.M       FIX.M
456.M      BUTISL.M DANIEL.M   DOC1.DOC   FORGE.M
543.M      CHEVSHOW.M DAREN.M    DON.M       FP.M

C:\3300USER                               SELECTED PROGRAM:

Create Delete Edit List Select Log Display Utility Exit
  
```

Press display one time it will change to display all files in directory

F keys there different functions.

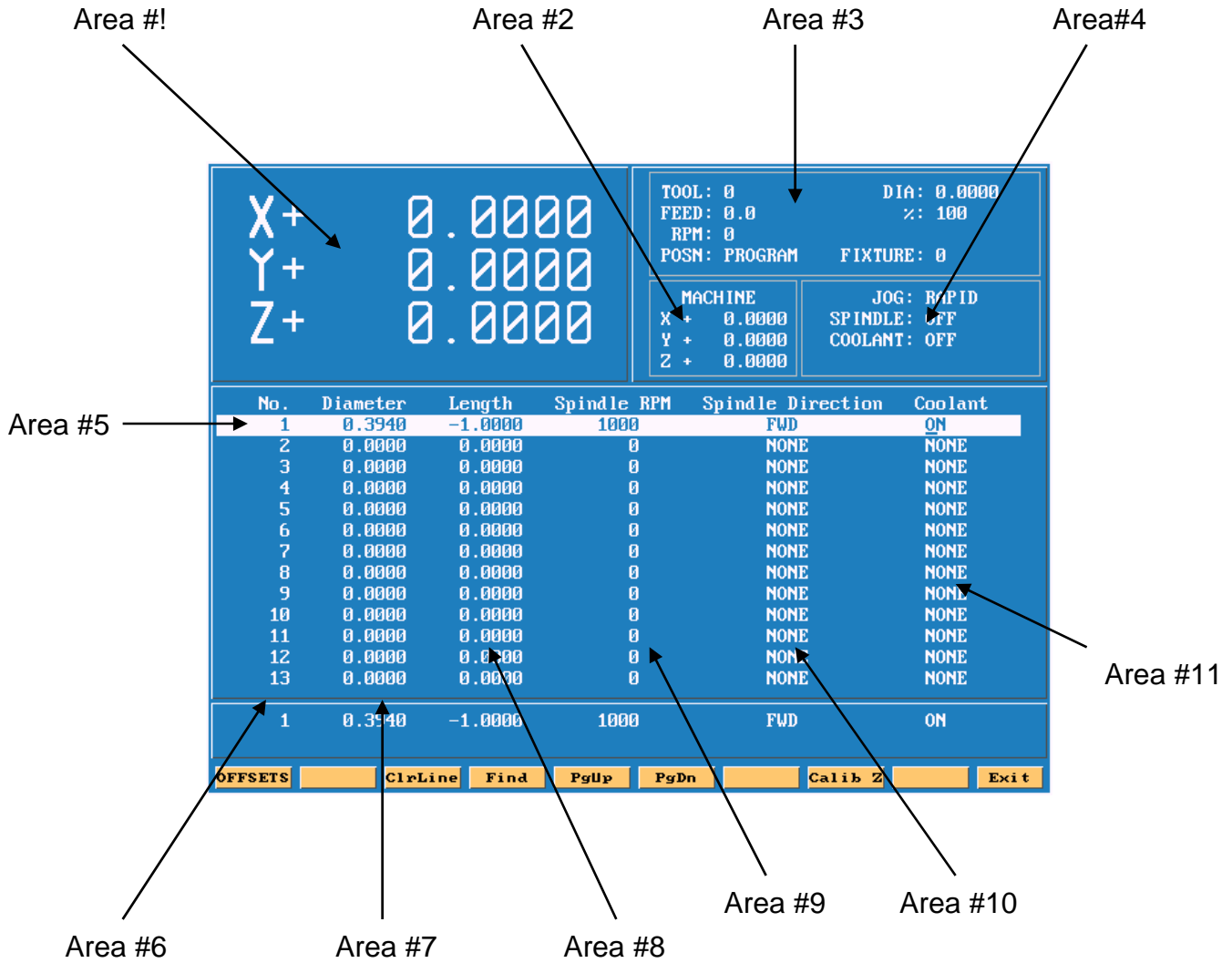
First press **Create** type in a program name or number.

High light will be on program just created press **Edit**



F1	Teach	Let user move machine around and record positions.
F2	Draw	Draws program be running to see that it is correct.
F3	Drill	Access to drilling canned cycles.
F4	Pocket	Access to pocketing canned cycles.
F5	Mill	Access to milling features.
F6	Tool	Go to tool Page.
F7	Calc	Go to calculators.
F8	Sub	Sub more editing features.
F9	Misc	More editing features.
F10	Exit	Exits editing.

Press **F6** **Tool** This will bring up the **Tool Page**.



- Area #1** Machine position relative to part Zero.
- Area #2** Machine position relative to machine zero.
- Area #3** Tool information , Feed , RPM and Fixture offset.
- Area #4** Jog , spindle and Coolant condition.
- Area #5** Active line.
- Area #6** Tool number.
- Area #7** Tool diameter.
- Area #8** Tool length offset.
- Area #9.** RPM's only input if M-Functions or an inverter is installed.
- Area #10** Spindle forward or reverse same conditions as above apply.
- Area #11** Coolant on or off must have M-Functions.



F1	OFFSET	Go to FIXTURE OFFSET page
F2		Not used
F3	ClrLine	Clear highlighted line info.
F4	Find	Search for a tool.
F5	PgUp	Page up
F6	PgDn	Page down
F7		Not used
F8	Calib Z	Calibrate Z axis offset.
F9		Not used
F10	Exit	Exit to edit page when entered from edit page.

If entered from **MANUAL** page

F10

Exit

will exit to **MANUAL** page .

Press **F1** **OFFSET** this will take you to offset page.

X+ 0.0000 Y+ 0.0000 Z+ 0.0000			TOOL: 0 DIA: 0.0000 FEED: 0.0 %: 100 RPM: 0 POSN: PROGRAM FIXTURE: 0		
			MACHINE X + 0.0000 Y + 0.0000 Z + 0.0000	JOG: RAPID SPINDLE: OFF COOLANT: OFF	
No.	Diameter	Length	Spindle RPM	Spindle Direction	Coolant
1	0.3940				NONE
Fixture Offsets					
			X	Y	Z
1.			0.0000	0.0000	0.0000
2.			-20.0000	-6.0000	0.0000
3.			-9.0000	-6.0000	0.0000
4.			-6.0000	-6.0000	0.0000
5.			-3.0000	-6.0000	0.0000
6.			0.0000	-6.0000	0.0000
7.			0.0000	0.0000	0.0000
8.			0.0000	0.0000	0.0000
9.			0.0000	0.0000	0.0000
10	0.7500				NONE
11	1.0000				NONE
12	0.2180				NONE
13	0.0000				NONE
1	0.3940				NONE
			CalibX	CalibY	CalibZ
Exit					

All entries are taken from **Machine Home**.

Entries may be entered manually or by using **CalibX** or **CalibY**.

When doing manual input , select axis you wish to enter a value , by pressing that axis key and input number require press **ENTER**.

Using the **Calib** key move to required position and press desired calib axis key.

Press **F10** **Exit** to return to **Tool Page**

Press **F10** **Exit** to return to **Manual Page**

Enter adjustment value is an added feature that allows altering of existing values in the tool page or fixture offsets display. Use the **ABS/INC** Key to activate this feature.

No.	Diameter	Length	Spindle RPM	Spindle Direction	Coolant
1	* 2.0000	-2.0000	0	NONE	NONE
2	0.2500	-2.0000	0	NONE	NONE
3	0.1600	-2.0000	0	NONE	NONE
4	0.1400	-2.0000	0	NONE	NONE
5	0.1200	-2.0000	0	NONE	NONE
6	0.1000	-2.0000	0	NONE	NONE
7	0.0800	-2.0000	0	NONE	NONE
8	0.0600	-2.0000	0	NONE	NONE
9	0.0400	-2.0000	0	NONE	NONE
10	1.2500	-2.0000	0	NONE	NONE
11	1.0000	-2.0000	0	NONE	NONE
12	0.0000	0.0000	0	NONE	NONE
13	0.0000	0.0000	0	NONE	NONE

1 2.0000 -2.0000 0 NONE NONE
Enter adjustment value: -.125_

ASCII Ins Del ← → BkSpace Cancel

Example: Altering tool diameter using **Enter adjustment value**.

* Asterisk highlights the selected value.

No.	Diameter	Length	Spindle RPM	Spindle Direction	Coolant
1					ONE
2	Fixture Offsets				ONE
3					ONE
4		X	Y	Z	U
5	1.	* 0.8000	1.3000	-19.0000	0.0000
6	2.	2.6000	1.1750	0.0000	0.0000
7	3.	0.8000	0.9000	0.0000	0.0000
8	4.	0.0000	0.0000	0.0000	0.0000
9	5.	2.8750	0.9250	0.0000	0.0000
10	6.	0.0000	0.0000	0.0000	0.0000
11	7.	0.0000	0.0000	0.0000	0.0000
12	8.	0.0000	0.0000	0.0000	0.0000
13					ONE

1 Enter axis and adjustment value: X-1.250_

ASCII Ins Del ← → BkSpace Cancel

Example: Altering fixture offsets using **Enter axis and adjustment value**