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Did You Know?
Shortcuts on Citizen & Miyano Lathes

There are "shortcuts" on Citizen & Miyano controls that can make the lives of programmers and operators easier. **This Tech Tip will cover machine axes in Manual Mode, radii & chamfer comma features, addition & subtraction functions, and program synchronization.**

Axes in Manual Mode: New to swiss lathes? Not sure which axis is which or the direction it moves? Manual Mode provides an image of the machine axes (below) and indicates which direction is positive or negative.

| Handle Feed | | | 0 | 2305 | Comment | RFS-B0SS-G3-G42-IJ |

Axis	MC COORD	Operation Range	
X1	9.96045	−0.07874 −	10.03937
Z1	5.07088	−0.01969 −	8.09055
Y1	1.24524	−0.03936 −	26.18110
X2	24.88182	−0.07874 −	24.96063
Z2	0.00002	−0.03937 −	8.11024
Y2	0.00039	−4.80315 −	0.07874

Axis Feed Direction

Tricky workpiece? Send our engineers a challenge here

Radii & Chamfer Commas: When programming radii and chamfers, add ',R' or ',C' to a linear line of code for the desired feature. The code below - with a
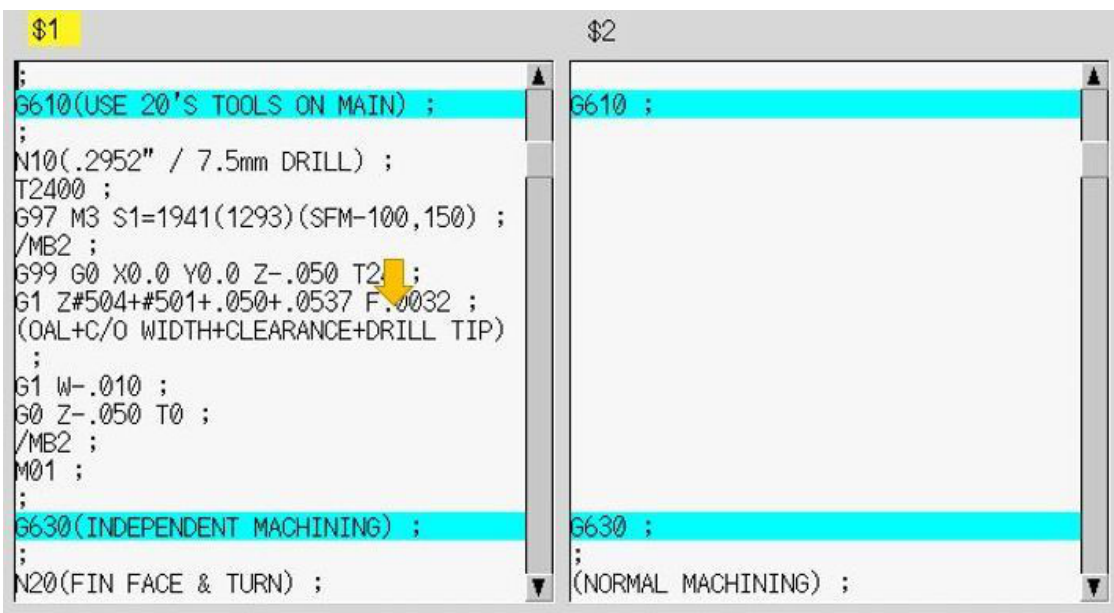
.008"cr insert - would produce a .018" radius at the end of the Z.500 line:

- **G1 Z.500 F.004,R.010**

Addition & Subtraction Functions: Save time and perform arithmetic within your program. The code below shows an adjustment to a diameter that may be cutting differently than programmed due to tool pressure:

- **G1 X.500+.002 F.004 - G1 Z.500 F.004 - G1 X.600 F.004**

Synced Program Operations: While in EDIT mode, press "SYN DISPLAY" and the control will sync all machining patterns and wait codes. The code below shows that while N10 operation is completed on Channel 1, nothing is happening on Channel 2.


```
$1                                              $2
;
G610(USE 20'S TOOLS ON MAIN) ;                  G610 ;
;
N10(.2952" / 7.5mm DRILL) ;
T2400 ;
G97 M3 S1=1941(1293)(SFM-100,150) ;
/MB2 ;
G99 G0 X0.0 Y0.0 Z-.050 T24 ;
G1 Z#504+#501+.050+.0537 F.0032 ;
(OAL+C/O WIDTH+CLEARANCE+DRILL TIP)

G1 W-.010 ;
G0 Z-.050 T0 ;
/MB2 ;
M01 ;
;
G630(INDEPENDENT MACHINING) ;                   G630 ;
;                                               ;
N20(FIN FACE & TURN) ;                          (NORMAL MACHINING) ;
```

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