

Here are the changes from Au to new **X Controller** sign-on, I J, v, and ? commands. Most commands are now capital letters. The sign-on message shows revision, Controller name, home counter, °C, and supply voltage:

```
Excitron v5.00 X42-33M    0000000 +16°C 24v
```

X> (indicates the Slave address and it is Motion Profile Mode)

The **I** command (now capital I) shows less information than before. The new Motion Profile has no **f**, **Fnum**, **mmps**, **DU**, or **e** commands. Now all Motion Profiles are automatically set for start running at minimum speed for Fnum steps. Only Fnum is adjustable, and it is now global--use the **c** menu to view and change other Controller parameters. The **pin** and **Mode** commands are now separate--you may change either independently. The **pin** and **Mode** commands are not checked for validity, you must only use valid pin and mode values. A **pin** value of zero ignores any pin action and any Mode set.

```
X>I
Excitron v5.00 X42-47M    0000000 +16°C 24v
```

```
P# D G A Brk  Number Repeat Vsps Trq% ±msec pin Mode  K
01 C G 1 000 0000400 00000 01200 055 +00050 0  00 100
X>
```

The **J** command shows 2 or 4 (X86 and X110) input pins with 8 bit analog values (the **I** Input Trigger command is now in **c** menu):

```
X>J
In2 In3          In2 In3 In5 In6 (these are for X86 and X110)
  1           1  1  1  1
```

```
X>v
P# D G A Brk  Number Repeat Vsps Trq% ±msec pin Mode  K
01 C G 1 000 0000400 00000 01200 055 +00050 0  00 100
02 C G 1 000 0000020 00000 01000 055 +00600 0  00 100
03 W G 1 000 0000020 00000 01000 055 +00600 0  00 100
04 C G 1 000 0010000 00000 03000 055 -00050 0  12 100
05 W G 1 000 0000880 00000 01600 055 -00050 0  12 100
06 C G 1 000 0000880 00000 06000 055 +00050 2  12 100
07 C G 1 000 0000880 00000 06000 055 +00050 0  00 100
08 C G 1 000 0000880 00000 06000 055 +00050 0  00 100
...
30 C G 1 000 0000880 00000 06000 055 +00050 0  00 100
(X Controller has 30 Motion Profiles)
```

X>? (this ? displays the basic Profile help)

```
Profile#
C=CW      W=CCW
Accel
Brake
G,g,S run, D/U sps, O/o stop
Number-steps
Repeat
Vsps
Torque %
time msec +pre -post
pin
Mode, ex. 12=run til pin high
K In2
```

```
Home--run Profiles 02-05
view all
) 1 step CW      ( 1 step CCW
Info      J pins
X ±Position    x Position
```

```
# Scope
c menu
Quit      ATsign=Reset
```

```
X>Q          (this quits Profile Mode and goes to CNC/Gcode Mode)
X 0001>     (indicates the Slave address, Gcode line number, and it is CNC/Gcode Mode)
X 0001>?   (this ? displays the basic CNC/Gcode help)
```

```
Axis:Dir 0=CW 1=CCW
Dir
Go         go
Load      Read      Save      View
! erase G/C
^ =>Axis    _=Quit
```

```
Suported Gcodes, all are modal:
F Feedrate 244-16,383 hsps
G00 rapid movement, treated as G01 since Feedrate is modal
M06 pause until '~'
M30 EOFILE
N codes applies to last Axis
N00 pin=0 (no Modes)
N01 pin=3 & Mode=12
N02 pin=3 & Mode=13
N06 acceleration low
N07 acceleration hi
P Pause 0-2.047 sec
```

```
future
G01 linear interpolation
G02 arc CW*, 2 axis letters then I & J, ex: X300 Y-120 I-200 J900
G03 arc CCW*, X,Y = finish point, I,J is relative to X,Y
M03 Spindle ON CW
M04 Spindle ON CCW
M05 Spindle OFF
M07 Mist Coolant ON
M08 Flood Coolant ON
M09 Mist coolant OFF
M10 Flood Coolant OFF
T Tool=0-6 codes
```

```
) 1 step CW      ( 1 step CCW
Info      J pins
X ±Position
x Position
# Scope
c menu
Quit
ATsign=Reset
```

```
X 0001>
X 0001>Q          (this quits CNC/Gcode Mode and goes to Profile Mode)
```

You can select which Mode the X Controller starts with, by setting the **C** bit in the c menu.