

There is a parameter that can be changed to correct this problem. The parameter is the amount of "blade offset" or the distance from the tip of the blade to the center of rotation. The distance of the offset is listed as "mils", or 1/1000 of an inch. The blade offset for knife blades from Ioline is marked on the package in which they are shipped. IOLINE products typically use knife blades with two different offset, 47 mils and 15 mils. However, due to variances in the blades, these numbers are not absolute.

If your plotter does not have the Artpro ROM, most sign making software packages have blade offset as a parameter.

If your plotter has the ARTPRO ROM installed, the offset can be changed through the keypad by using the following keystrokes:

ALT . n . (ALT dot {number} dot) where the {number} is the offset distance, to turn correction on and set the offset distance. The default is set at 15. If the cuts are not closing, the number should be changed (18 would be a good choice).

If you will be pen plotting, the knife correction must be turned off with the following key strokes: ALT 0 . 0 . (ALT Zero dot Zero dot).

Using a computer, the offset can also be changed through the Utility disk. For non-PC applications, or to execute changes to these functions from your device driver, build a function that sends the following commands to the plotter, or use a utility to send the commands from a system shell:

;;! Begins a command series
! Ends a command series

KE*n* Knife Enable
n=0(zero) disables offset correction for pen plotting mode.
n=1(one) enables offset correction for the Artpro cutting system.

KO*n* Knife Offset
n=a distance in mils (.001 inch units) that represent the offset between the tip of the Artpro blade and it's center of rotation.

KA*n* Knife Angle
Sets the amount of direction that will force a correction. If the angle is set higher, the plotter will perform fewer corrections, causing a gain in speed and throughput, but a loss in accuracy. If the angle is set lower, the accuracy is greater.

Example: The blade being used in the Art Pro cutter is a 15 mil (.015 inch) offset, the offset correction is to be enabled, and the customer wishes to set the minimum correction angle to 45 degrees so that the characters have sharp corners even at small direction changes. The following string, sent to the plotter as ASCII plot data, will configure it:

```
;;! KE1 KO15 KA45 !
```

In the Art Pro cutter, the plotter test plot is replaced with a small square to test the blade depth. The test plot can be executed from the plotter keypad by pressing ALT 7 or sending the ASCII string `;;T@` to the plotter from the host computer.

Additional notes:

With the Art Pro ROM:

1. Default pen speed is 8 ips.
2. Default acceleration is .5g.
3. HyperBUFFER is always disabled.
4. When knife corrections are enabled, dashed lines are disabled.
5. When knife corrections are enabled, pen changes are ignored.
6. An initialization cut is made to set the starting blade position if the plotter receives a `;; DMPL` file start, or an HPGL "IN" command.