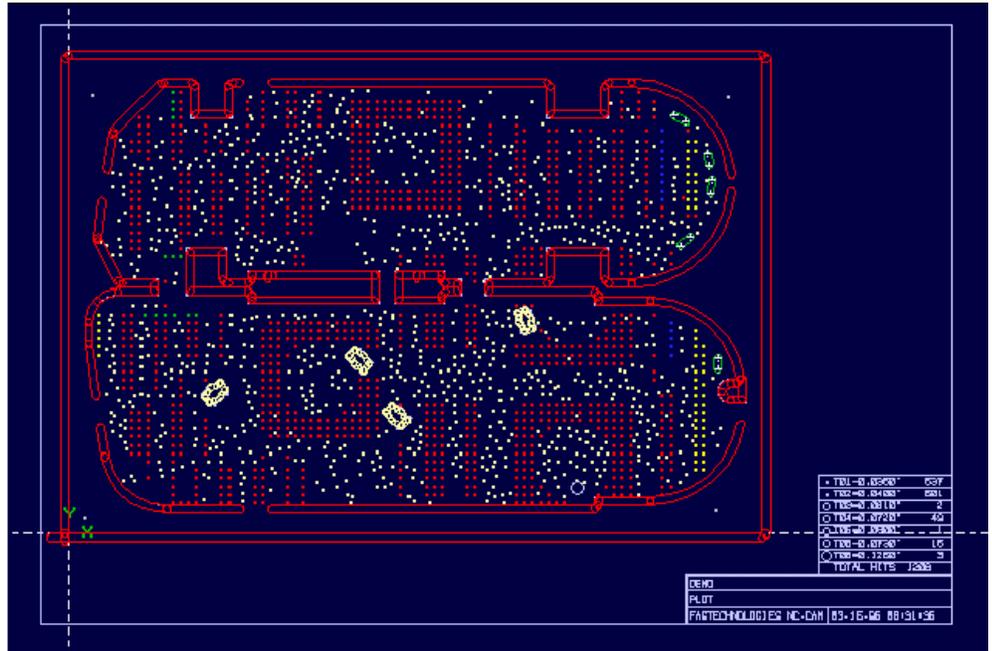# FASTechnologies, Corp.
your drill & rout technology experts

FAPlot
Drill-Rout First Article Plotting Software

speeds production sign-offs

FA/Plot is a complete quality control system for CNC drill and router programs. With FA/Plot, you prove out drill and router programs in the programming department, not on the production floor. Machine time once wasted making first articles is turned into valuable production time. Engineering lead-times are cut, because jobs don't sit waiting to be test-drilled or test-routed.

eliminates first articles

Can a penplot or photoplot be trusted as a first article? Yes, if it's made by FASTechnologies FA/Plot. FA/Plot uses FASTechnologies' well-proven drill and rout software simulation technology. The software accurately simulates all functions of Excellon Format 1 and Format 2 drill and router programs. Routing cutter compensation is executed just as it is by a router. Step-and-repeats behave exactly as on real machines. The plots are good first articles because they accurately represent what the actual machines will do.

accurately simulates CNC machine behavior

FA/Plot allows multiple CNC programs to be executed on a single plot, even when the CNC programs require handling of different zero locations, axis directions, and default conditions. This allows you to fully simulate the different machines involved in processing a panel, from the first drilling operation through the final rout, all on one, easily inspected pen or photoplot.

reports hit counts and path lengths

FA/Plot also provides a comprehensive hit count and path length report, either as a print-out, or in import-ready spreadsheet form. This provides spreadsheet users the data needed for run-time, tool consumption, and cutter life estimates.

Smart drilling and routing from FASTechnologies

FAPlot
Condensed
Specification

Input

Medial: Any MS-DOS diskette or hard disk file.
Code: ASCII

Format

Drill Format: Most drill data, with comprehensive support for Excellon Format 1 and Format 2 commands

Rout Format: Most router data, with comprehensive support for Excellon Format 1 and Format 2 commands

Orientation: Any axis version, with any datum zero offset, correction, and command locations.

Syntax Analysis

Process: Evaluates individual data blocks for conformance to experience file. Failing blocks are logged to an error report file.

Analysis Technique: Blocks are parsed into strings of code letters and numeric values. Values are categorized by existence of leading zeros, trailing zeros, explicit decimals, etc. Values following letter codes "M" and "G" are categorized for conformance to absolute values. All others are range-checked. Learned syntax is sequence specific (e.g. "X1Y1" is noncompliant with "Y1X1").

Learning: Experience file is built on user command (with security password). Experience file contains hand-editable examples of blocks defining the current syntax.

Run-Time Estimation

Method: Examines program actions in three classes; head motion, table X/Y positioning, and tool changes. Each class uses customer-supplied timing data to arrive at final estimate. (Default timing data is supplied for typical Excellon Mark-VI Driller/Router).

First-Article Plotting

Drill Holes: In pen-plot mode, drilled holes are plotted as circles with diameters matching those reported in the drill program. In photoplot mode, holes are represented as flashed pads of apertures numbered "D10+diameter", thus the aperture wheel is the same from plot to plot. When programs not containing diameter information are plotted, the usermust supply the sizes at run-time.

Rout Kerfs: Rout kerfs are plotted as lines outlining the kerf cut by each move of the router bit. Path compensation is applied as instructed by the rout program.

Rout Programmed Paths: Optionally, the system may be configured to represent the router paths as single drawn lines indicating the programmed router path disregarding cutter size and compensation.