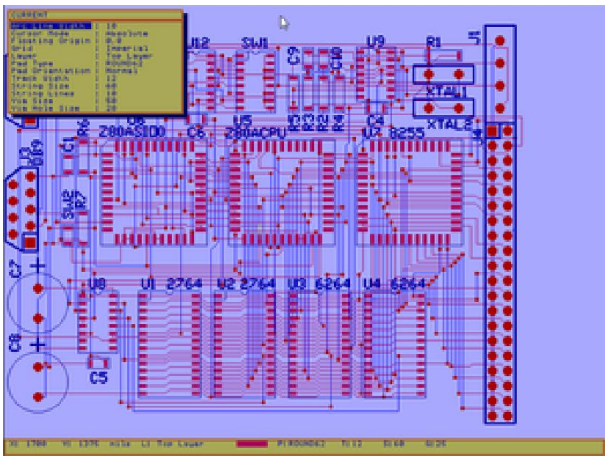
Autotrax

Protel Autotrax



Autotrax freeware versions 1.61ND running in a VM on Windows 7

Original author(s)	Protel International Pty. Ltd. (now Altium Ltd.)
Initial release	1985 (as Protel PCB), 1988 (as Autotrax)
Stable release	1.61
Operating system	DOS
Platform	IBM PC and compatible
Type	EDA
License	Commercial proprietary software
Website	techdocs.altium.com/display/ALEG/Legacy+Downloads

Autotrax is the name of one of the first professional printed circuit board CAD applications available for personal computers. It ran on DOS on an IBM or compatible PC.

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History

In 1985 Protel Systems Pty Ltd originally developed the DOS-based PCB design tool **Protel PCB**,[1] which was sold only in Australia.[2][3] Protel PCB was marketed internationally by HST Technology Pty Ltd. since 1986.[3] In October 1986 the San Diego-based ACCEL Technologies,

Inc. acquired marketing and support responsibilities of the PCB program for the USA, Canada and Mexico under the name **Tango PCB**.[3] combining it with their own *Tango Route*. In 1987, Protel launched the circuit diagram editor **Protel Schematic** for DOS.

In 1988 Protel launched **Autotrax** for DOS in the USA as well.[1] A stripped-down version of Autotrax was marketed as **Easytrax**.

Autotrax was sold throughout the world until Protel International Pty. Ltd. ported the application to Windows 3.1 to create the first Windows-based PCB CAD tool, *Protel Advanced Schematic/PCB 1.0 for Windows* in 1991.

Since then Protel International became Altium Ltd. after a successful IPO and later on made Autotrax and Easytrax freeware downloads on their web site.

Overview

Protel Autotrax runs under DOS. It will run under Windows 98 and XP but only as a console window. It does not run on Vista or Windows 7.

The program is primarily keystroke driven but to aid memorization a menu appears in the upper left corner of the screen whenever a command is issued. Selection of elements within the circuit board is accomplished almost exclusively by using the mouse. These apparent limitations mean that users quickly became good at driving the program and disinclined to change to anything newer and, in practice, slower.

The native file format for Autotrax is PCB File 4. Protel also produced a less expensive, cut-down package called Easytrax. This was later made available free, while Autrotrax still required a license; now both are free. Easytrax is identified by "PCB File 5" in its file headers and differs primarily in not allocating hole sizes to pads. The native file format for Autotrax and Easytrax is based on 1 mil (0.001") increments, although the package shows measurements in millimetres if metric is selected. The native file format allows for most of the information needed to manufacture basic PCBs except that it does not allow for non-plated-through holes. This is because a *de facto* industry standard has emerged which assumes that if a pad is smaller than its associated hole, the hole is not plated through, while Autotrax will only permit pads that are at least 2 mil larger than the hole diameter.

Two bugs in the Protel Autotrax format have to do with octagonal pads, which on inspection can be seen to be not quite regular octagons, and string sizes. In Autotrax, string sizes are only ever displayed in multiples of 12 mil, so specification of a string size as something other than a multiple of 12 mil may lead to incorrect import into another package.

Many PCB manufacturers in Australia and some PCB manufacturers in Asia will still accept boards in native Protel Autotrax format rather than requiring export to PCB industry standard Gerber format.

Autotrax will run in a DOS window under Windows 9x and Windows NT up to XP. It does not run on Windows Vista and later,[*citation needed*] but can be run successfully using generic VESA video drivers in a DOS virtual machine.