

VR CNC Milling 5

CNC MACHINE CONTROL SOFTWARE

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Virtual Reality (VR) CNC Milling 5 is an improved and updated version of our CNC machine control software incorporating Denford PCB Manufacturing Software and 2D DXF import facilities, together with USB connectivity, delivering machining times up to 40% faster than before. Enhanced features provide the user with new machining capabilities, simplified options in datum setting, improved tool and work offset features and a new, powerful, virtual reality 3D simulation engine.

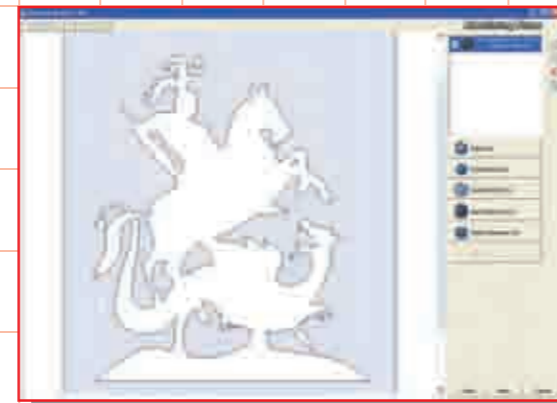
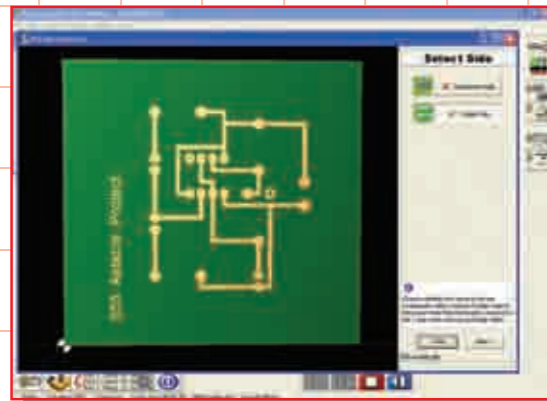


Tool and Offset Editor

Work Offsets: Tooling Data Tool Library

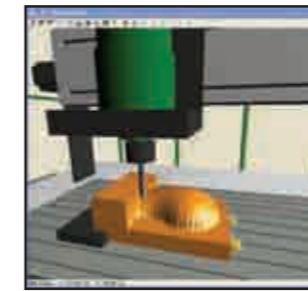
No.	Description	Z Offset	Diameter	Type	Length	Flute Len
1	Slot Drill 8 mm	0.000	8.000			
2	Slot Drill 6 mm	0.000	6.000			
3	Slot Drill 5 mm	0.000	5.000			
4	Slot Drill 4 mm	0.000	4.000			
5	Slot Drill 3 mm	0.000	3.000			
6	Slot Drill 2 mm	0.000	2.000			
7	Slot Drill 1.5 mm	0.000	1.500			
8	Face Mill 25 mm	0.000	25.000			

AB Offsets: MDF Machine Read



PROGRAMMING FEATURES

Program information screen provides fast interactive 3D depiction of tool path.
Powerful NC code editing options.
Program pre-scan checks for syntax errors and invalid codes prior to machining.
Utilities toolbar provides seamless integration with other Denford applications.
Simplified tool editing with multiple tool types.



VR SIMULATION FEATURES

Simulate real machining with highly detailed Virtual Reality.
Actual cutting of the virtual material in jog mode or program cycle.
Tables, bases and workholding fixtures are simulated.
Collision detection: objects change colour when cutter comes into contact with billet, workholding or tables.
Virtual feed & speed overrides can control the virtual machine.
Auto datum facility: Program can run without having to set the VR offsets.

MACHINE CONTROL FEATURES

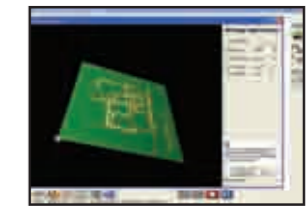
USB connectivity – Faster Data Transfer.
Continuous Path Manufacturing system pre-examines CNC moves to determine optimum change of direction.
One click datum positioning.
Material override mode – Automatically adjusts program feeds & speeds from a pre-set menu.
Intelligent program restart window allows restart of program from any line.
Denford Post Processor allows translation of NC programs between different controllers.

SYSTEM REQUIREMENTS

Please refer to page 13.

VR MILLING PCB IMPORT

Simple "Wizard" program with 3D Graphics.
Imports Gerber files from all major PCB design packages.
Imports Drill files from all major PCB design packages.
Multi pass machining strategy increases clearance around tracks.
Option to create drilling plan from pad hole diameters.
Option to centre pads, pilot holes or drill all holes.
Handles double sided boards.
Toolpath simulation.



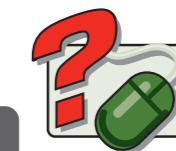
VR MILLING 2D DXF IMPORT

Simple "Wizard" program with 2D Graphics.
Integrated Material and Tool Library.
Imports DXF and DWG files from all major CAD packages:- TechSoft, Pro/DESKTOP, ArtCAM, AutoCAD, CorelDraw etc.
Multiple cutter path strategies including:
Follow Path.
Inside Offset (cutter path offset by radius).
Outside Offset (cutter path offset by radius).
Area Clearance (Offset by outline) with programmable step-over.
Area Clearance (Raster) with programmable step over and angle.
Drilling cycles.
Intelligent selection of Islands.
Toolpath simulation.

IMPORTING TECHSOFT 2D DESIGN FILES

A key feature of VR Milling Version 5 is a DXF / DWG file import facility which is far more advanced than the Techsoft post supplied with Techsoft Version 1, and is far simpler to use.
This import routine works with all major CAD packages and applies to both Techsoft Versions 1 and 2.

As a result, all Denford machines supplied within the last 3 years are able to import designs drawn in Techsoft Version 1 or 2 without any additional software or post processor being required. DXF import allows 6 cutting strategies to be selected, and it uses the tooling and material library from within VR Milling 5 whilst selecting the correct feeds speeds and depths of cut. As a result it does not require the user to use colour, fill or line width to define tool paths.



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