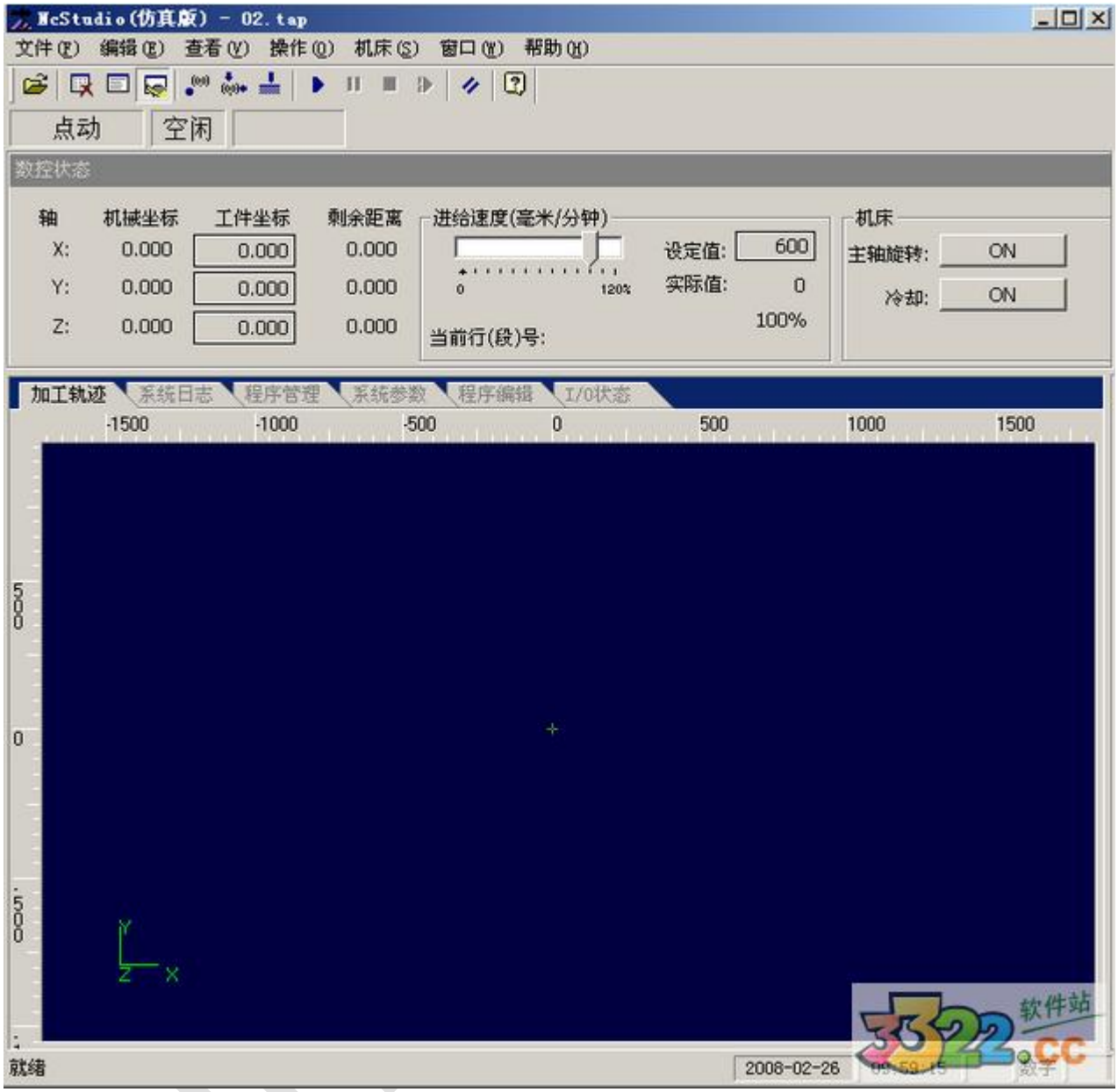
Victoria macro control system ncstudio v5.4.49

ncstudio Victoria macro control system is the most widely used motion control system operating system, mainly for computer control processing, in order to achieve numerical control system.

ncstudio is based on the control program stored in memory, the implementation of some or all of the numerical control functions, and is equipped with interface circuits and servo drives for the control of automated processing equipment dedicated computer system. ncstudio has many practical features, including arc speed limit function, can help users effectively prevent the emergence of over-cutting, when the centripetal force to exceed the maximum centripetal force, the processing speed of the arc will be subject to the necessary restrictions, thus ensuring the processing quality.

At the same time ncstudio uses a new adaptive forward looking algorithm, the algorithm is also known as the first control, ncstudio will be based on the need to automatically calculate the number of forward-looking program segment, and in the process will not be due to insufficient number of forward-looking segments caused by the relevant speed mutation. In addition, ncstudio has a high degree of automation, where users can customize M commands, auto-reverse and time-due management functions. Among them, the custom M command can set the M command according to the user's needs. The user can map the M command to different functions, and can also map a subroutine to the set M command, and can also expand or delete M instruction. No Victoria macro control system registration code

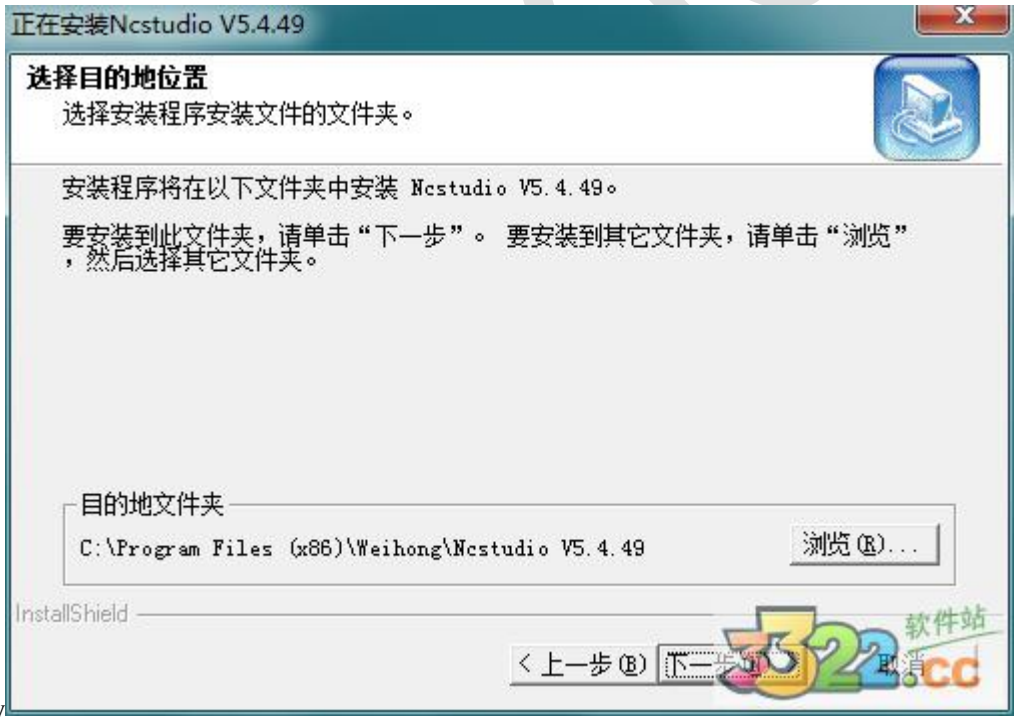


ncstudio Victoria macro control system installation tutorial

1, click "Setup.exe" to start a formal installation, click on the next step in the pop-up

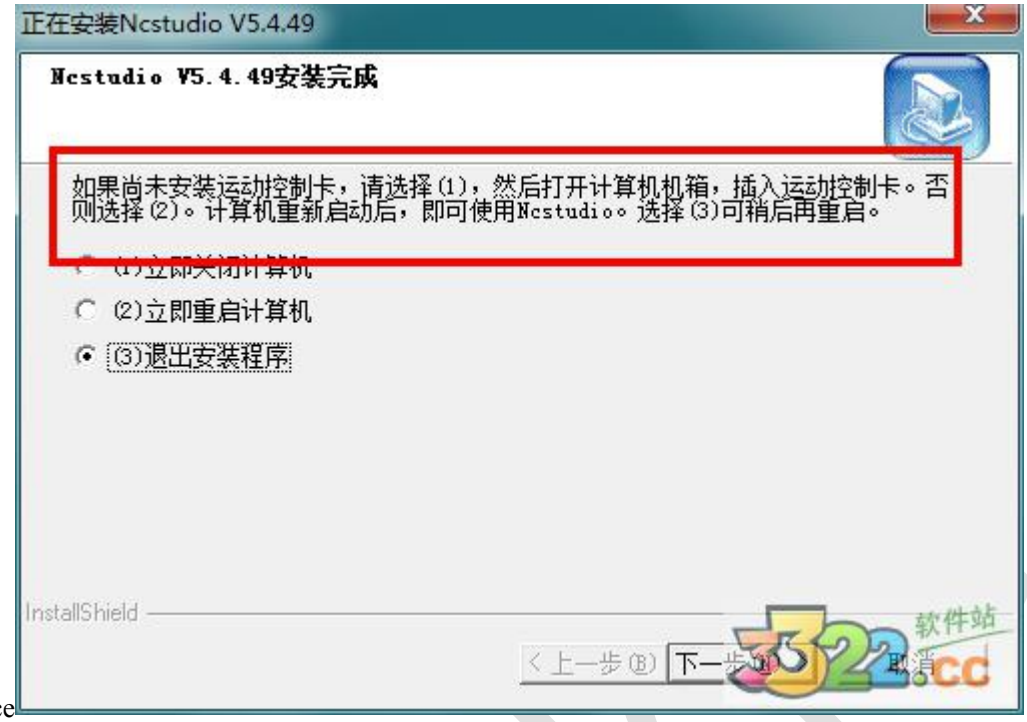
interfac

2, choose the software installation path, where users have their own choice, but suggested that the c drive to install the other system



tray

3, until the installation is complete, after the completion of the user can follow the prompts on the following figure indicate the appropriate



choice

Victoria macro control system tutorial

1) ncstudio Victoria macro control system parameter settings

System parameters: processing parameters

About 4000 low-speed manual, manual high-speed is generally 5000-6000

The value of empty speed is generally 4000-5000

The processing speed of the value is generally around 4000

Note that the value of the processing speed is less than the value of the empty speed, the following small box hit the first seven check mark, lift the knife height of 10.

Note: The value of the feedrate at the beginning of the machining is adjusted to a smaller value, the spindle speed is between 18000

Manufacturer parameters: password ncstudio

The motor parameters need to be modified is 0.0119763 x-axis, 0.0119763 y-axis, z-axis

2) ncstudio Victoria macro control system installation settings

3) ncstudio Weihong control system hardware operation failed

1, may be 360 and other security software to be isolated, the solution is to open the antivirus software, and then find the recovery area, view the isolation list, find a WHNC software, add trust, and then restart the computer just fine

2, May Wei macro driver is not automatically installed, the solution to the right-click My Computer - Properties - Device Manager - NC Adapter - Display NC adapter card, here will display an exclamation point or cross symbol Driver does not automatically install, you need to manually install, then easy to handle, according to step by step on the line, and then restart the computer, you can open the software

Victoria macro control system shortcuts

ESC toggles between windows

TAB toggle between controls

Ctrl + TAB to switch before folding the window

Ctrl + 1 to display the auto window

Ctrl + 2 to display the manual window

Alt + 1 / F4 Displays the machining path window

Alt + 2 Displays the system log window

Alt + 3 displays the program management window

Alt + 4 Displays the system parameters window

Alt + 5 Displays the program editing window

Alt + 6 Displays the IO status window

Ctrl + Enter full screen

Ctrl + Del clear machining path window

Ctrl + O open and loaded

Ctrl + N new processing procedures

Ctrl + E open and edit

Ctrl + P to edit the current machining program

Ctrl + S save
Ctrl + I processing program information

F5 direct positioning

F6 Set current point workpiece coordinate

Shift + F6 to set the current point as the workpiece origin

F7 back to the origin of the workpiece

Ctrl + F7 floating knife

Shift + F7 fixed knife

F8 Enter (Exit) Simulation

F9 start

Ctrl + F9 advanced start

Shift + F9 breakpoint to continue

Ctrl + Shift + F9 to execute machining instructions

F10 / Pause Break pause

F11 stops

F12 reset

4 (keypad) X-direction manual (including jog, increment)

6 (keypad) X + direction Manual (including jog, increment)

2 (keypad) Y-direction Manual (including jog, increment)

8 (keypad) Y + direction Manual (including jog, increment)
1 (keypad) Z-direction Manual (including jog, increment)

9 (keypad) Z + direction Manual (including jog, increment)

+ (Keypad) Increase depth (enter number)

- (keypad) smaller depth (enter number)

Home center

End shows the current machining point

+ (Keypad) zoom in

- (keypad) zoom out

* (Keypad) adjust to the window size

5 (keypad) front view

8 (keypad) top view

2 (keypad) Bottom view

4 (keypad) left view

6 (keypad) right view

1 (keypad) South-west isometric side view

7 (keypad) isometric northwest side view

3 (keypad) southeast isometric side view

9 (keypad) northeast isometric side view

Alt + → or Alt + ← rotate around the Z axis
Alt + ↑ or Alt + ↓ rotate around the X axis

Alt + PgUp or Alt + PgDn rotates around the Y axis

ncstudio Victoria macro control system part of the function

Adaptive look-ahead algorithm

Forward control is also referred to as advance control. Weixin CNC system will automatically calculate the number of forward-looking blocks without causing any sudden change in speed due to insufficient number of look-ahead segments. When the outline is simple, the number of look-ahead segments is small and the system is more efficient .

Curvature rate of short segment cluster

Short-term segment of the curvature of the speed limit function, will be calculated in real time the local curvature of short segments, to achieve the necessary speed limit, to ensure the quality of processing.

Trajectory preprocessing algorithm

Victoria macro system uses advanced trajectory preprocessing algorithm, effectively eliminating the processing of the road due to the quality of the document damage.

Arc speed limit function

Circular speed limit function effectively prevent the emergence of over-cutting, when the centripetal force to exceed the maximum centripetal force, the machining arc speed will be subject to the necessary restrictions, thus ensuring the quality of processing.

S-type acceleration and deceleration control

S-type acceleration and deceleration, also known as bell-shaped acceleration and deceleration. Through this speed planning algorithm, the acceleration is a continuous trapezoid, to ensure that the machine tool in the movement process uniform force, effectively preventing machine shake during processing, making the machine tool movement during machining more stable, higher processing quality.

Breakpoint to continue

The system saves the current processing position and line number information in permanent memory in real time. Even if a sudden power failure occurs, the system can resume execution from the last interruption after the system is restarted. For a variety of long-time processing occasions, this feature will give the operator a great help.

Custom M instruction

Victoria macro system according to customer needs, easy to set the meaning of M commands, the user can map the M commands to different functions, you can also map a subroutine to set the M command, you can also expand or delete the M command .

Automatic backwashing

At any position of the machining path, the hand wheel, keyboard or other operation panel can be used to switch between forward traveling and reverse traveling arbitrarily. Widely used in a variety of cutting control occasions, in the case of three-axis and multi-axis linkage is also used to exit safely from the processing breakpoint.

Support PLC

Through the ladder view online, monitoring component status, support for on-site editing applications; provide large-scale PLC programming tools, instruction set rich, simple and flexible operation.

Processing information statistics

In Weihong system, as long as the user performs high-speed simulation, the system immediately counts the processing time, processing range, machining path length, tool usage and other valuable information for the user's reference.

3D dynamic display of machining trajectory

Weihong system has a powerful three-dimensional machining trajectory dynamic display.

Time expired management function

Weihong system for each vendor to specify a unique customer code, code and registration code generator software, manufacturers can set the system to run due time.

Tool radius compensation

Through the tool radius compensation, the operator can program the workpiece outline size, the system automatically calculates the tool position, and automatically adjusts to the tool movement path.

Quadrant compensation

Weihong system allows to set different quadrant compensation parameters for different axes, so as to minimize the error caused by the friction of each axis.

Rotate mirror function

Directly set processing parameters to achieve the processing of document rotation and mirroring. Of course, the G code can also be programmed to embed the rotation and mirroring functions into the machining file.

Tool management

Including: tool geometry, wear management, tool magazine and virtual magazine, tool life management, etc., to support fixed-point tool change strategy and random tool change strategy.

Pitch error and backlash compensation

The comprehensive compensation mechanism of Weihong system allows to set different backlash at each point of the coordinate system, so it can compensate the backlash error in the whole process.

Processing restricted area
By setting the forbidden area, the tool can be automatically prevented from entering the protection zone to prevent the tool from colliding with the fixture or other components and interfering with the tool.

ncstudio Victoria macro control system features

1, the basic configuration for the three axes, and can be further expanded

2, CNC turntable support

3, automatic processing. Full support for ISO standard G commands, HP plotter (HP PLT) format and Engraving (ENG) format.

4, manual function. Both support through the machine input devices, such as handheld devices, such as manipulating machine tools, but also embedded support through the computer input devices, such as keyboard, mouse to complete manual operation

5, incremental feed function. Convenient for users to accurately set the feed, and the pace can be flexibly adjusted.

6, user data input (MDI) function. The user can enter the G command online and execute it immediately.

7, advanced processing instructions. Just enter a few parameters, you can complete the milling, hook edge and other functions.

8, single-step mode. Users can set the processing tasks to be performed in single-step mode, providing good support for error diagnosis and recovery.

9, breakpoint memory, skip the implementation of advanced automatic features.

10, save / restore the workpiece origin function.

11, the feed axis precision back to the mechanical origin (reference point) function.

12, automatic knife function. These features provide users with great convenience.

13, feed override online adjustment. The user can adjust the feed override at any time in the process. The smallest to 0, phase

14, when suspended processing; up to 120%.

15, high-speed smooth speed connection characteristics. In a typical CNC system, the connection speed between two G instructions is usually a fixed value (eg equal to zero or a small value). In the new version of CNC system, using a unique processing speed adaptive prediction algorithm. According to the size, direction, maximum acceleration and forward predictive function of the connection speed, the algorithm adaptively determines the speed of convergence between the current instruction and the next instruction. Not only greatly improve the processing efficiency (about 30% to 300%), but also to improve the processing performance, eliminating the speed in the processing surface of the vibration profile.

16, three-dimensional simulation display. Three-dimensional machining results can be observed from all angles through a simple operation, so that you can understand the machining results more accurately and more intuitively.
17, simulation function. Can process the rapid simulation processing, can be completed in a very short period of time, at the same time check the processing program is wrong, the processing results are satisfactory, and can accurately calculate the actual processing time required.

18, powerful, flexible keyboard support. The new version of the keyboard support is very powerful. To meet the needs of users in the operation.

19, log function. The system provides powerful logging capabilities to help users view detailed processing information and system diagnostics.

20, built-in processing file manager. As long as the user saves the machining program file to the designated directory, Ncstudio ™ can manage the files in a built-in manager.

21, built-in file editor. Users can at any time transferred to the processing of documents editing editor, modify.

22, file processing information. Through simulation or actual processing, file processing information window can help users to statistics file execution time, processing range and other important information.

23, PCI bus motion control card.