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1. the operation panel introduction

3.1 ADTCNC49 Series System LCD / Keypad



3.2 System Menu

CNC4696 system uses a cascading menu structure , press the Menu button to enter the corresponding menu. System Menu key operation by the following :



To display the contents of the corresponding key on the lowest end of the LCD display . The leftmost button : Returns to the previous menu from a submenu

Rightmost button : Cycle flip key at the same level menu to display additional menu content

The main menu includes [operating system], [Edit], [parameters], [coordinates], [diagnosis] . Each main menu is subdivided into a number of sub-menus , detailed framework as shown below:

3.3.1. Automatic operation submenu



3.3.1. **Program editing submenu**





3.3.2. Working coordinate submenu





ADTECH4 系列 CNC 维护手册

3.3.1. Diagnostics submenu





(输入诊断)





3.2 operating buttons

Key Name	Use
(RESET)	Disarm the alarm , CNC reset
Address / key figures	Enter letters, numbers and other characters
【EOB】、【CAN】	Used to confirm or cancel the operation
【EOB】、【CAN】、【DEL】	Program editing (insert, delete, modify)
Operating mode switch key	Selecting the operation mode
Cursor movement keys	There are four cursor keys: up, down : adjust
	the magnification , move the cursor to the
	partition between left, right : move the cursor
	left and right
Page button	Up, Down
Display menu key	Select various display
Spindle Forward	Press the spindle forward , press again to stop
	the spindle
Spindle reverse	Press spindle reversal, press again to stop the
	spindle
Coolant	Coolant ON / OFF
Lubricating oil	Lubricant ON / OFF
(BDT)	Jigging on / off
(SBK)	Single block on / off
(PAUSE)	Automatic operation temporarily stops
[START]	Automatic operation start

3.3 CNC4 series of system-defined keys as follows :

2. Manual Operation

4.1 Manual reference position return

CNC machine tools have specific mechanical position , in this position tool changer and set the coordinate system , this position is called the reference point . After the general power supply is turned on, the tool needed to move the reference point. Operation , also known as zero reference point operations, is to make the CNC system to determine the origin of the machine operation .

There are procedures and mechanical zero zero zero two ways:

Procedures for the exercise machine coordinate zero zero zero to complete the action , does not check the origin switch is in place ;

Zero Zero is to rely on an external mechanical switch sensor to locate the machine home position , there are two detection methods :

Rely on external sensor switch, when the sensor in place, repeat the success that is considered zero induction is complete.

Do rely on external sensor switch gear switch, after induction to enable the servo zero as zero signal sensor stops. The specific choice of the Parameters [Comprehensive Parameters set ' zero mode ', the program is set to 0 is zero , set a mechanical zero , the default is 0 . You also can click a single button to quickly switch segment in the zero mode "Mechanical Zero - Zero program - mechanical zero ... " fast switching , the method and parameter settings are not in conflict , can choose according to their preferences. To be used as a servo- zero -zero signal , you need to zero in the mechanical mode Parameters [in] the axis configuration settings corresponding " Z axis relative to zero enable" as a detection take effect at the next zero .

The tool returns a reference point there are several ways the steps are as follows : (1) reference point for each axis separately

Press the \neg operating mode button [zero] , select zero operations ;

respectively \neg multiplexing key figures zones [X +], [X-]; [Y +], [Y-]; [Z +], [Z-]; [A +], [A-]; [B +], [B-]; [C +], [C-] key once , the corresponding axis reference point return .

(2) each axis while the reference point

Press the operating mode \neg button [zero] , select zero operations ;

Press the [START] key is pressed \neg , Z -axis reference point while the rest of the axis reference point . About Auto zero sequence can be configured by parameters. (3) machine position is cleared

Press the operating mode button \neg [zero] , select zero operations ;

In [absolute position] and [\neg coordinates] screen respectively [X +], [X-]; [Y +], [Y-]; [Z +], [Z-]; [A +], [A-]; [B +], [B-]; [C +], [C-] key , the corresponding axis position values flashing , then press the cancel button , the machine can be cleared in the current axis position values . That is the current point as the machine zero position. After this operation is completed the system considered to have completed a zero action, so the program is running, the alarm does not occur is not zero . If by mistake , then switch the screen automatically deselected .

(4) relative position manually cleared

Press the operating mode- button [Manual], select manual operation;

In [relative position] and \neg [coordinates] screen respectively [X +], [X-] ; [Y +], [Y-] ; [Z +], [Z-] ; [A +], [A-] ; [B +], [B-] ; [C +], [C-] key , the corresponding axis position values are displayed , and then press the cancel button , the value can be cleared by the relative position of the current axis.

Description

According to program instructions may also make the tool returns a reference point , that automatically returns a reference point .

●[™] Note

Under normal circumstances the system after power we must first return to zero , if a sudden power failure , power on again after the reference point must also be operating when the machine moves . Should first back to X, Y -axis tool and workpiece in order to avoid a collision , damage the tool, workpiece and fixture.

4.2 manual continuous feed

Use the keys on the front panel operation or MPG tool can move along each axis . Method of operation is as follows :

 $(1)\,$ Press the operating mode button [manual] , select the manual mode of operation ;

(2) and hold the digital area multiplexing key [X +], [X-]; [Y +], [Y-]; [Z +], [Z-]; [A +], [A-]; [B +], [B -]; [C +], [C-] the tool along a selected axial movement. Button as shown below:



In manual mode , the 5th key to switch between manual and rapid traverse rate for each axis rapid traverse speed depends on integrated parameters 009-012 (rapid traverse rate setting). After switching to the fast moving speed, manual rate position of the picture displayed in inverse color. The actual rate of the current position of the screen is moving shaft speed time sampling, the value can be a true reflection of the current axis speed value, the unit is mm / min;

Description:

Only single-axis motion, not linkage manual mode.

4.3 Single- stepping to

Single-step mode is similar to manual mode , and manual modes, but only one set each button to move good pulse increments.

Specific steps are as follows:

(1) Press the operating mode button [MPG / step], (the key is a composite key , repeat button to switch between the two modes .) Choose single-step mode of operation ; (2) Press Digital Zone multiplex key [X +], [X-]; [Y +], [Y-]; [Z +], [Z-]; [A +], [A-]; [B +], [B -]; [C +], [C-] is the tool moves along a fixed distance from the axis selected . The distance from the (1.000,0.100,0.010,0.001) magnification control four millimeters . Select the desired pulse increment in [location] screen using the arrow keys 'Up' button to do incremental +, 'Down' do incremental - .

4.4 handwheel feed

Handwheel work, turn the hand dryer sheets can handle step or continuous motion . By detecting the signal MPG handheld box to determine the feed rate. Under feed axis hand wheel mode the unit by hand and feed axis select signal box decision . Handwheel infeed steps:

(1) Press the operating mode button [MPG / step] , select the handwheel operation ;

(2) spin shake hands on the wheel shaft selection of new switches select handwheel axis (X, Y, Z, A);

Shake hands on the wheel spin

 $(3)\,$ DIP switch incremental amount of movement ($0.1,\,0.01$) ;

 $^{(4)}$ shake hands grip the wheel , so that the machine movement , every turn a hand wheel scale , the tool is moved a certain distance. (For example, when selecting X -axis step $^{(2)}$ step $^{(3)}$ select 0.01, a scale every turn , the tool moves 0.01mm). Continuous rotation of the handle is moved continuously in the machine axis .

Note:

Handwheel feed mode you can only control one axis hand wheel speed faster, the machine moves faster.

4.5 Manual operation of the auxiliary function

Coolant ON / OFF

H.

Under the handwheel / single step / manual mode , press this button , the cooling liquid 'on - off - on ... ' switch .

Key indicator: No matter what , as long as the coolant open key indicator light, otherwise light off .

Lubrication ON / OFF

Under the handwheel / single step / manual mode , press this key , lubricating switch 'on - off - on ... ' switch .

Key indicator: No matter what , as long as the lubricating fluid opening , the key indicator light, otherwise the light off .

Spindle Forward / stop

Under the handwheel / single step / manual mode , press this button , the spindle forward rotation start. Press the button to stop the spindle rotation .

Key indicator: In no way , as long as the spindle is rotated clockwise , the key indicator light, otherwise the light off .

Spindle CCW / stop

Under the handwheel / single step / manual mode , press this button , the spindle reverse rotation start. Press the button to stop the spindle rotation .

Key indicator: No matter what , as long as the spindle reversal, the key indicator light, otherwise the light off .

General description of the manual operation key

Cooling, lubrication , spindle reversing and other keys in the hand wheel, single-step , manual work , etc. ;

Spindle rotation , rotation button is pressed in the opposite direction , the spindle will be stopped , and then a rotation in the opposite direction before ;

When the auxiliary output is turned on, as the system is switched to another mode, the output remains unchanged , adjustment shall be ' reset ' button to turn it off , you can also perform the appropriate M code to close the corresponding output in automatic mode or MDI mode MDI interface to perform the appropriate M code to close the corresponding output ;

Spindle forward / reverse , the direct execution M04/M03, the system first stop forward / reverse , and then execute M04/M03 instruction ;

Emergency stop when you close the spindle forward / reverse, the other output can be set according to the system parameters.

4.6 pairs of knife operation

knife is the main operating CNC \neg machining and important skills. Under certain conditions, the knife can determine the accuracy of precision parts, meanwhile, has a direct impact on the efficiency of the knife CNC machining efficiency. The machine uses a trial cut blade.

Lathe version of the knife using trial cutting , so-called trial cutting refers to the cutting tool to be able to move to the first tool file and do the cutting action, and then measure the value entered into the system after cutting , to complete the center point of the knife . Trial cutting will need to enter the trial cutting screen.

press [Coordinate], [the knife] into the trial cutting the screen ;

 \neg Move the cursor to the needs of the knife blade number, and select the type of the current trial cut diameter or length ;

Select the hand wheel, ¬ single-step, or manual mode

Press the spindle is turned on, press $[X +], \neg [X-]; [Y +], [Y-]; [Z +], [Z-]; [A +], [A-]; [B +], [B -]; [C +], [C-] keys to control axis movement, try cutting the workpiece;$

 \neg test cut is completed, switch off the spindle , the axis can not be moved ;

 \neg Select the input mode to measure the corresponding data and display data, press number keys to enter , press [EOB] is automatically calculated to keep the press Cancel to exit the revocation ;

🕈 note

 ${\bf 1}$, trial cutting is the measured value plus the current input is entered automatically after the machine coordinate calculations, so the machine current position must be true .

2 , when measuring the diameter of the workpiece , the first cutting of the workpiece table interview outer layer , after cutting is completed, the shaft can only exit along the opposite direction . X -axis can not be moved , once moved, means that the measured diameter value is invalid .

3 , measure the length of the value of the workpiece , the tool can touch the end face of the tool to cut to prevail , enter the length value of 0 indicates that the current point as the Z -axis of the workpiece zero.

4.7 System shortcuts

Numeric input dialog has direct assignment and incremental assignment two input methods , direct assignment refers directly to the number assigned to the specified input parameters , the incremental assignment refers to the current value of the specified

number of input parameters and the added results and then give the parameters ; incremental input and direct input box on the left there is a prompt that the '= ' represents a direct input , '+ ' represents incremental input , the default mode is always direct assignment , the assignment to change increments way , you need to press the " down arrow " key.

In [Operation] screen, [position] under the menu, you can press the 'O' key to bring up the G-code program number O box, you can quickly switch O block. Press the "EOB" OK , "Cancel" to return.

In [Operation] screen, [position] under the menu , in the " manual mode " , press ' \leftarrow ', ' \rightarrow ' fast trimming spindle speed, if you press and hold the speed is fast incremental value . Note that this feature must be turned on in order to operate in the spindle , and the current spindle speed is not 0 , if the current speed is 0 , please first set in MDI mode to turn a nonzero number , and then make the shortcut to .

3. The automatic running operation

Depending on how the machine is called a good preparation program sport automatic operation , the system automatically runs 4960 following ways :

Memory operations running , MDI operation running , U disk DNC operation running.

5.1 memory operation

Machine according CNC4960 program in the memory operation, which is called a memory operation .

Program stored in the memory , when a program is loaded successfully selected through the operation panel , and then ' Start ' button , the automatic operation starts . After pressing the ' pause ' button to run the pause, press the ' Start ' button the program continues to run again ; run when you press the ' reset ' button to terminate the program immediately .

Memory operations run as follows:

 $\left(1\right)$ the program stored in memory (see 8.1) ;

(2) by operating the menu select [Edit], [file] file operations into the picture , but also from the panel [file] to quickly switch to a file operation screen ;

⁽³⁾ left and right arrow keys to move the cursor up and down , [EOB] key to select the program will load the file into the work area ;

(4) Press the operation mode selection key [Auto], switch to automatic mode of operation;
(5) the {Start} key to run the program, starting lights, run the program began.

5.2 MDI operation

[Operation] in the next screen switches to [MDI] screen , keyboard input program later, the machine can be operated in accordance with the program , enter the block does not exist only in system memory , power and memory can not be maintained , which is called MDI operation . MDI operation steps are as follows :

(1) Press the operating mode selection key [entry] ;

(2) Operation menu, select [operation], [MDI] to enter the MDI operation screen ;

(3) instruction manual input block ;

 $^{(4)}\,$ press the [START] key [EOB] key to start the implementation of the program segment .

5.3 U disk DNC

The machine can be operated directly from the external U disk motion reads the program without the need to program stored in the CNC memory , this operation is called U- DNC operation .

U disk DNC steps are as follows :

(1) insert U disk ;

(2) Operation menu followed by pressing the [operation], [file] , enter the file operation screen ;

 ${\scriptstyle (3)}$ select U disk , U disk into the [EOB] ;

(4) move the cursor to select U disk file ;

- (5) [EOB] key will load the file into the workspace (system buffer) ;
- (6) operation mode selection button Press [Auto];
- (7) the {Start} key to run the program , starting lights , run the program began .

●[™] note

The system does not record the path of U disk , U disk DNC processing if a sudden power failure , the program again after power loss of information .

5.4 speed ratio adjustment Feed Override

Automatic mode , the [position] screen, press the up and down arrow keys to adjust the feed rate , each press of the increase or decrease of 10 % up to 150 %, the lowest 10%.

Manual override

In manual mode , the [position] screen, press the up and down arrow keys to manually adjust the magnification , each press of the increase or decrease of 10 % up to 150 %, the lowest 10%. If you press the fast forward button, the up and down arrow keys to adjust the fast forward speed ratio , press of the increase or decrease of 10% and a maximum of 150% , the minimum is 10%.

Spindle speed

Automatic or manual mode , the left and right arrow keys to adjust the spindle speed , each press of the increase or decrease 100r/min, the highest spindle parameters set by the system , a minimum of 16r/min. If you hold it down , have detected three seconds after a rapid increase or decrease the effect.

5.5 idling

(Escrow)

5.6 Single-stage function

Automatic mode , press the [] button to start single-stage single-segment feature. After the implementation of the current block to stop , press the [START] key again , then finished the next block is executed after the stop . Single block can run for some period of inspection procedures.

1 G28-G30 in , in the middle point , also the single block stop ;

(2) fixed cycle single block stop point as shown in (1), (2), (6) end point , (1), (2) after single block stop , feed hold , suspended lights.



5.7 to skip function

Automatic mode , press the [Select] key to jump start jumping selected features that make the program in '/' when the line behind the block command is invalid .

5.8 Automatic operation is stopped

Stop the automatic operation , there are two methods, one program in advance where you want to stop the input stop command (M00, M01), the second is press the button on the control panel so that the machine stops.

Program stops

Block containing M00 or M01 after the execution , automatic operation is stopped, and the same single block stop all modal information is saved . Start with CNC , automatic operation can begin again .

After a post-processing parts , automatic operation stops.

End of program

After the block containing M30 is executed automatically stop running into the reset state, the program returns to the starting point .

Feed pause

Automatic operation , press the control panel [Pause] key to enable automatic operation temporarily stop, pause indicator light, press the [START] key again to continue to operate the machine , suspended lights off .

Reset

Automatic operation, the operation [Reset] key is pressed , the system emergency stop on the panel. At this time [Reset] key function with emergency stop button.



4 safe operation

6.1 Emergency

Press the stop button on the machine , the machine immediately stops moving , all output such as spindle rotation , coolant , etc. are all closed. After the lifting of the emergency stop button clockwise rotation , but all outputs must be restarted.

When an emergency stop , the motor will cut off the power supply is not necessarily specific to refer to the machine manufacturer's electrical configuration instructions ; Before the lifting of the emergency stop , you need to clear the machine abnormal factors .

6.2 hard limit overtravel

Hit limit switch system alarm if the tool is running. Axis corresponds to the direction can not move , can only move in opposite directions , the system does not disarm the alarm before automatic operation can not normally enter . After the investigation and the reasons need to press the alarm button to [Reset] clear alarms.

6.3 soft limit overtravel

If the tool into the prohibited area required parameters (stroke limit), overtravel alarm is displayed, the tool decelerates to a stop. At this point can be manually moved to secure the tool direction. Then press the [Reset] key to disarm the alarm.

●[™] note

When the automatic mode operation , when the tool touched an axial limit switch , the tool decelerates and stops the movement of all axes , only one overtravel alarm .

When manual mode operation, when the tool touched an axial limit switch , the tool only in the axis deceleration and stop motion , still along the other axial movement.

After the tool to a safe position, press [Reset] key to clear the alarm . With specific reference to the machine manufacturer's instructions .

Soft limit alarm limit alarm and a deceleration stop there , so the limit of the sensing range to have enough space , or because the overshoot and unlimited digital protection.



5. alarms and self-diagnostic function

Alarm system is divided into multiple levels , so there are different alarm number is classified . As follows :

0 ~ 1023: G -code program running alarm

1024 to 2048 : alarm system environment

7.1 NC program execution alarm

0000	:	Please reset
0001	:	End of program
0004	:	ATC failure
0005	:	Tool invalid
0006	:	G block repeat errors
0007	:	G Block Program number error
0008	:	G7x8x complex instruction code does not work properly
0009	:	Abnormal program termination error
0010	:	M01 code specifies the procedures to suspend
0011	:	M98 malformed
0012	:	Call the motion fails
0013	:	This paragraph does not require compensation
0014	:	G block invalid format
0015	:	M99 command invocation exception , the current situation calls ban M99
0016	:	Motion abnormalities alarm
0017	:	Illegal characters
0018	:	Annotation format error or no symmetry annotation
0019	:	Illegal G code
0020	:	Radius compensation G code number or value error
0021	:	Undefined radius compensation G code error
0022	:	Arc programming error
0023	:	Specified unlawful plane , beyond the G17, G18, G19 outside
0024	:	M98 call errors that may exceed the maximum
0025	:	Spindle axis number specified hardware error

0026	:	M code execution error
0027	:	Specify spindle failure
0028	:	Motion repeat request
0029	:	Specify arc does not exist
0030	:	Missing X command error
0031	:	Missing Y command error
0032	:	Missing Z command error
0033	:	Missing A command error
0034	:	Missing B command error
0035	:	Missing C command error
0036	:	Missing D command error
0037	:	Missing R command error
0038	:	Missing F command error
0039	:	Missing T command error
0040	:	Missing S command error
0041	:	Missing P command error
0042	:	Missing M command error
0043	:	Missing G command error
0044	:	Missing I command error
0045	:	Missing J command error
0046	:	Missing K command error
0047	:	Missing Q command error
0048	:	Repeat the pitch value specified error
0049	:	An alarm system abnormal exit
0050	:	Human intervention exit
0051	:	No parameters specified G code source
0052	:	No specified G code program memory address FORM

7.2 Alarm System Environment

1024	:	Controller is not zero
	-	1. Zero action is not performed after the system starts.
1025	:	A axis negative direction soft limit
1026	:	A -axis positive direction soft limit
1027	:	z axis negative direction soft limit
1028	:	z -axis positive direction soft limit
1029	:	Y axis negative direction soft limit
1030	:	Y -axis positive direction soft limit
1031	:	X axis negative direction soft limit
1032	:	X -axis positive direction soft limit
1033	:	A hard limit axis negative direction
1034	:	A hard limit axis positive direction
1035	:	z hard limit axis negative direction
1036	:	z hard limit axis positive direction
1037	:	Y hard limit axis negative direction
1038	:	Y hard limit axis positive direction
1039	:	X hard limit axis negative direction
1040	:	X hard limit axis positive direction
	1	The system prompts the corresponding limit alarm occurs , check the
		corresponding limit sensing point or argument.
		If there is a hard limit, and the sensing point visual inspection without
		problems, then manually entered in the diagnostic mode, enter the
		out in turn, is pulling off the input IO line, check whether the sensor
		disappear if you check the lines disappear if persists it may destroy the
		internal optocouplers, please contact the supplier.
1041] :	Emergency stop
	1	Handheld box interfaces emergency stop button is valid.
		2 external emergency stop input is active , to detect whether there is a conflict
		or interfere IO assignment .
		Find the corresponding functions in the IO port configuration, and then view
		the input diagnostics.
1042	.	Servo X driver alarm
1043	:	Servo Y driver alarm
1044	:	Servo Z driver alarm
1045	:	Servo A driver alarm

Servo alarm , servo if no alarm could be set with the parameter P2.001 \sim 004 servo actual alarm level contrast , correction parameters .

Corresponding function mouth is IN34 \sim 37, can be viewed in the input



diagnostics.

1046 :	Axis duplication error numbers defined interfaces
	Interface parameters P2.45 ~ P2.49 axis number specified set of duplicate
1047 :	The spindle is not zero
1048 :	Mold unlocked
1049 :	System security error signal is not in place
1051 :	Insufficient air pressure system
1052 :	Alarm System Folder feed signal is invalid

7.3 alarm processing

When abnormal alarm, the alarm code to– determine the cause of the malfunction reference .

alarm occurs ,¬After regardless of whether the alarm persists, reset the system in the absence of treatment , the alarm would have been prompted to avoid some false alarms cause the system to abort , but no effect from the investigation.

If the data set \neg is the wrong aspects , first modify the correct data , and then clear the alarm press [Reset] key.

alarm occurs , please exclude the cause of the–After alarm, attention may have occurred at the same time a few alarms , specifically the alarm message in the diagnostics menu to see that after one investigation disarm the alarm , press the [Reset] to eliminate the alarm ringing .

7.4 Self-diagnosis function

CNC system is sometimes the case in the absence of the police to stop the following information, which may be because the system is running a number of processes; self-diagnostic function can then be checked by the system.

Self-diagnosis system as follows:

(1) under the main menu by pressing [diagnosis] into the diagnostic screen ;

(2) select [Enter] to enter the diagnostic screen input , or select the [output] into output diagnostics screen ;

(3) output Diagnosis: In entry mode, press the up and down arrow keys to select the output port , press [EOB] corresponds to the output port can be switched to control the output level ;

⁽⁴⁾ input Diagnosis: When a valid input signal , the screen displayed at the corresponding flashing.



6. Program storage, editing

8.1 program stored in the memory

8.1.1 Keyboard Input (New Program)

Through the new program into memory, keyboard , follow these steps :

Under the main menu by pressing [EDIT] to enter the program edit screen ;

Press [file] file operations into the picture ;

Select [New] New File ;

Enter the file name and press [EOB] key to determine the current directory in the memory to establish a new program , and the default load into the system ;

Select [Close] to return [Edit] screen ;

Enter the MDI mode program content ;

After editing is completed all the procedures by [Reset] key, then edited program is saved in the system memory.

8.1.2. PC computer serial input

By PC computer to transfer files to the controller as follows:

Set the system baud rate and ID number ;

Connect a PC , open Adtech serial communication software ;

Set the baud rate is consistent with the controller , search ID equipment ;

Select the communications software to upload files to the [NC] button ;

CNC pop up dialog box, select the file and press [Open] button ;

8.1.3. U disk copy processing files

CNC machining copy files through external U disk to the system memory as follows: Under the main menu by pressing [EDIT] to enter the program edit screen ;

Select [File] file operations into the picture ;

Select U disk, press the [EOB] to enter ;

Move the cursor to select the file you want to copy the CNC , select [Copy] ;

Return to the main menu, find the directory on drive D under PROG , enter the directory , select the [Paste] to complete the copy .

8.2 reading program to the workspace

8.2.1 Reads program the controller to the workspace

The system memory is loaded into the workspace file according to the following steps: Press [file] button , enter the file operation screen ;

Found to be processed , the default inventory in the D PROG directory , enter the subdirectory press [EOB] , press Cancel to exit the catalog ;

Move the cursor to select the program to load , press [EOB] to confirm the selection , the program will be transferred to the editing area.

8.2.2 read U disk program to the workspace

U disk file will be loaded into the system workspace , follow these steps : Insert U disk ;

Press [file] button , enter the file operation screen ;

Select the U disk into , move the cursor to select U disk file, press [EOB] to finish loading ;

8.3 edit, modify procedures

CNC memory program can be modified by NC keyboard. Under the main menu, press [EDIT] to enter the program edit screen to the current workspace for editing program (the program will be loaded into the workspace can refer to 8.2 content) . Editing a manner similar to the windows notepad, move the cursor directly , positioning, direct key input for line breaks [EOB] , [Delete] to delete the current cursor character [Cancel] to backspace to delete the previous character .



After all the operations carried out by the reset to save the file , edit functions are based on MDI mode of operation ;

Because CNC46XX is to use the new file mapping technology , memory can be transferred over its own processing files, so the overall operating efficiency of the system in order to provide a greater than 2M processing document does not allow editing, only retrieval, and processing.

8.4 Delete Files

8.4.1 To delete the memory file

Delete the system memory program may proceed as follows :

Press [file] button , enter the file operation screen ;

Follow the screen prompts to find the file you want to delete and press [Delete] key twice to confirm deletion ;



If the file has been deleted currently loaded into the workspace , delete the memory program , the work area and did not remove the program , then run the program will get an error , you need to reboot the system in order to remove it.

Currently loaded into the workspace of the program can not be removed, such as the implementation of the operation, the system prompts an error message.

7. main screen presentation system

9.1 Location screen

Position the screen to display the current machine coordinate information , there is an absolute position , relative position , consolidated position of the three screens , the main screen, press the [operation] to enter the location of the picture .

Way into the position of the picture :



The absolute position

The current position of the machine coordinate value of point coordinates relative to the origin of the workpiece coordinate system .

The absolute position picture as follows :

绝对位置	手	动		运转	程序	参数	【 坐标	诊断
X Y Z	+000 +000 +000	0.000 0.000 0.000)))	M T S 00 6:	05 09 33 10 00 00000 (件名: 00 649 6 01 ; 00 649 6	编程际给 进手动 D2.CN 40 G80 0.;	速率 率率 倍速 倍率 C 600;	2400 0 80% 800 80%
GO1 G1 G40 :D0 G49 :H0 系统时间	7 G90 00 = 0 01 = 0 1 (G54 G80 006.500 591.274 D:56:55)) !	T2 S1 G(G(G4	2 MO6 ; 10000 MO 54 G17 G 00 X-2.5 13 H2 Z4	3 ; 90 ; 29 Y-3 .15 MO	9.92; 3;	
停止状态					<u> </u>			
<<<	位置	轨迹	MDI					>>>

The absolute position picture

Relative position

In manual mode, the current coordinate cleared for easy viewing from any period of relative movement of displacement, it is called relative position.

The display screen is generally used for some early occasions knife , taking into account some of the operators have been accustomed to manual calculation , so keep this feature. With automatic features in increasingly powerful , and slowly have less use.

Mode of operation as follows:

enter [position] screen¬

switch [relative] position on the \neg screen ;

re- enter manual mode ; \neg

To cleared by pressing the axis \neg number, such as 'X', X coordinate flashes ;

Press ' cancel ' button , X_{\neg} coordinate column becomes 0 ;

相対位置 手切 広装 程序 参数 坐标 诊断 X +0000.000 00 99 实际速率 0 Y +0000.000 33 进给倍率 80% Y +0000.000 10 F动速率 800 Z +0000.000 000 F动速率 80% Y +0000.000 000 Y Folder 80% Y +0000.000 000 Y Folder 80% Y +0000.000 Y Y 10 Folder Folder Y +0000.000 Y Y Y 90 Y 90 Y Y Y Y Y Y Y Y Y Y Y	HU 그는 14 명원		-L					1	A NC
X +0000.000 Y +0000.000 Y +0000.000 Z +0000.000 Z +0000.000 Q 33 # 05 (%) \$\$\mathcal{A}\$ \$\$\mathcal{B}\$ Y +0000.000 T 00 \$\$\mathcal{B}\$ \$\$\mathcal{B}\$ \$\$\$\mathcal{B}\$ \$\$\mathcal{B}\$ \$	相刈怔直		列		冱 牧	椎序	【 参数	【【坐标】	じじていていていていていていていています。
G01 G17 G90 G54 G80 T2 M06; G40 :D00 = 0006.500 S10000 M03; G49 :H01 = 0591.274 G54 G17 G90; 系统时间 11:00:10 停止状态 关闭 绝对 相对 综合	X Y Z	+000 +000 +000	0.00 0.00 0.00	0 0 0	M T S 文 69	0 { 0 { 3 { 1 (0 (0 0 0 0 ((件名: 0 0 649 (0 649 (0 1 628 Z	5 编程 实际 进给 手动 手动 D2.CN	速率 速率率 倍率 倍率 C 程 600;	2400 0 80% 800 80%
G40 :D00 = 0006.500 S10000 M03 ; G49 :H01 = 0591.274 G54 G17 G90 ; 系统时间 11:00:10 停止状态 关闭 绝对 相对 综合	GO1 G1	7 G90	G54 G8	0	T2	2 MOG ;			
G49:H01 = 0591.274 G054 G17 G90; G00 X-2.529 Y-39.92; G43 H2 Z4.15 M08; 停止状态 关闭 绝对 相对 综合	G40 :D	00 = 0	006.50	0	S1	0000 MC)3 ;		
系统时间 11:00:10 G43 H2 Z4.15 M08; 停止状态 关闭 绝对 相对 综合 >>>	G49 :H	01 = 0	591.27	4	60)4 til/t)∩ v–o p	190 ; 20 v -20	0.00	
停止状态 关闭 绝对 相对 综合 >>>	系统时间	1	1:00:10)	64	13 H2 Z4	15 MO8	; ;	
关闭 绝对 相对 综合 >>>	停止状态								
	关闭	绝对	相对	综合					>>>

The relative position picture as follows :

The relative position picture

Comprehensive coordinate

Absolute coordinates and machine coordinates common display screen.

Comprehensive position on the screen as follows :

综合位置	手	动	Ĩ	运车	1 2	序	参数	(坐	标	诊断
绝 X +00 Y +00 Z +00 Z +00 Y +00 Z +00	村位置 00.000 00.000 00.000 は位置 00.000 00.000 00.000	相 X +00 Y +00 Z +00 Z +00 Z +00 Z Z	对位置 00.000 00.000 00.000 贵位置	0 0 0	M T S000 文件 0001 690 6 691 6	05 09 33 10 00 000 名: [49 G4 28 70	编 实 进 手 手 动 0 680	速速倍速倍 客率率率 C G00;	程序	2400 0 80% 800 80%
G01 G1 G40 :I G49 :H 系统时间	17 G90 000 = 0 101 = 0 1 1	G54 G8 006.50 0591.27 1:04:04	0 0 4 1		T2 M0 S1000 G54 G G00 X G43 H	6 ; 0 M03 17 G9 -2.52 2 Z4.	; 0 ; 9 Y-39 15 M08).92; 3;		
停止状态		-				_				
关闭	绝对	相对	综合							>>>

Comprehensive position picture

9.2 Edit screen

Edit screen to display the current contents of the program workspace , the main interface, press [EDIT] key to enter the program screen.

Enter the program edit screen mode as follows:



Program Editor

NC program editing screen displays the contents of the current procedures for processing ; Entry mode can be edited in the NC program (see 8.3).

程序编辑	手	动		运转 程	序 参数	₹ 坐标	诊断
% 0001 690 649 G91 628 T2 M06 \$10000 M0 654 617 600 X-2.8 G43 H2 Z-15.695 601 G01 X-2.8 X-1.896 Y X1.896 Y X2.529 Y X3.574 Y X2.681 Y Line:	340 680 60 20. 33 390 529 Y-39.99 4.15 M08 M08 529 Y-39.92 Z-1 39.92 Z-1 39.92 Z-1 39.92 Z-1 39.84 Z-1 39.84 Z-1 39.84 Z-1 1 Col: 1	0 2 2 Z-18. 695 18. 695 8. 695 8. 695 8. 695 8. 695 8. 695 8. 695	F1500.				
停止状态		-	-	-	-	-	
<<<	编辑				文件		>>>



Program editing screen

System Information screen

System information block is currently processing zones to make a summary display, and calculate the current occupancy resources processing zones . Program directory screen displays the current upper right foot controller software version. Our engineering staff if you want to live on the software version of the controller for confirmation, please write down the version information feedback in Division I can be.

Enter the system information screen mode as follows:



System Information screen as follows:

系统信息	录	入		运转【编	辑【参数	坐标	诊断
系编硬开 G 当当已已 此为 所 日 版 库 码 加 加 程 存	本: 0.6.0 期: 11-02 本: 1.2 版本号: 正文件: 1 正主程序 储空间:	1 2-28 17:08 100 : 2c \PROG\D : 00001 1 1502 KB	3:58 2.CNC 剩余: 9 剩余: 10	999 47073 KE	3		
<<<	警报	输入	输出	DA	系统信息		>>>

System Information screen

9.3 MDI screen

MDI mode is mainly used for direct writing and G code for execution . Way into the MDI screen :



Under MDI screen input in entry mode complete NC code instructions in entry mode, press the [Start] key directly executed after the second confirmation.

If you want to quickly restore the default content , often press the [Reset] key for three seconds after the prompt release can decide whether you want to restore the default content .

MDI interface as follows :

MDI运行	录	入		运转	扁辑 参数	女 坐标	诊断
绝对	位置	SG54G	18600				
X +00	20.000						
Z +00	10.000						
LH H	- <i>1</i>), mt						
机闭	、位置						
X +00	20.000						
Z +00	10.000						
停止状态							
<<<	位置	轨迹	MDI				>>>

MDI 交互界面

9.4 File Management

The following file system file management screen can be managed . Way into the file management screen :



The main function of document management are:

1)connecting U disk devices, U- disk files and disk files mutual electronic copy;

2)update the system – software , using the above two -line , can be upgraded to copy files to the system memory , do software upgrades ;

3)soft reboot the controller. In the [\neg File Management] screen , press the reset button to restart the controller. This approach is different from the power restart, the user can, under certain situations this way is more efficient to restart the controller to a function to take effect.

4) connected to a PC via a USB cable attached to the PC 's quite – a U disk and the PC for data exchange .

文件管理	! 手	动	j	运转 程	序 参数	(【坐标】	诊断	
我的设备								
<mark>本地</mark>	.磁盘(C:)	─────────────────────────────────────	±(D:)	可移动磁盘	(U:)			
NPROGN本地磁盘(C:)								
停止状态								
关闭	设备	新建	复制	粘帖	剪切	连接PC	>>>	
File operation screen								

File operation screen as follows

File operation screen

9.5 graphical simulation

[Trajectory] function is to display the NC machining simulation program . Way into the trajectory simulation screen :



Interface into the next track , the track starts automatically displayed in real time . Automatically during system operation will display real-time tracking trajectory , in the standby mode , you can also press preview, pre- processing document scanning . Shortcuts position adjustment as follows:

PageUp: Enlarge

PageDown: narrow

 $\rightarrow \leftarrow \uparrow \downarrow$: Location pan , pan unit is set in pixel units .

Graphic simulation screen as follows :



Graphic simulation screen