Spray hand manipulator control system

V3.0 VERSION

Shenzhen Huacheng Industrial Control Co.,Ltd.

CATALOGUE

1 System configuration and installation

1.1 Basic Configuration

1,8 inch true color touch screen

2, servo control panel

3, I / O board

4, the power part (2 power supply)

1.2 System installation

1, wiring operations must be carried out by a professional electrician.

2, to confirm the power to disconnect before starting the job.

3, please install on metal and other fire-retardant materials and away from combustibles.

4, must be safely grounded.

5, the external power supply failure, the control system failure, in order to make the whole system safe, be sure to set the external control system security circuit.

6, installation, wiring, operation, maintenance, must be familiar with the contents of this manual; use must also be familiar with the relevant machinery, electronic common sense and all relevant safety precautions.

7, install the controller of the electrical box, should have a well-ventilated, oil, dust conditions. If the electronic control box is closed, it is easy to make the controller temperature is too high, affecting the normal work, to be installed fan, electric box suitable temperature is 50 ℃ below, do not use in condensation and freezing place.

8, the controller should be installed to avoid contactors, transformers and other accessories too close to the layout, to avoid unnecessary surge interference.

CAUTION: Improper handling may result in hazards, including personal injury or equipment accidents.

2 Operation interface

2.1 Appearance and description

2.2 Key function description

2.2.1 State selection switch

Manual control of the state is divided into three kinds, namely manual, stop, automatic.

"Manual" ： The status selector switch to the left to enter the manual state, the upper left corner of the screen icon becomes As shown in Fig 

In this state, manual operation and programming can be performed.

"**Stop**"：The status selector switch to hit the middle of the state into the stop, the upper left corner of the screen icon becomes Figure 

In this state, parameter setting is possible

"**Auto**"：The status selector switch to the right to enter the automatic state, the upper left corner of the screen icon becomes Figure 

In this state can be fully automatic and the corresponding settings.

2.2.2 Function keys

"Start" key: Pressing this key will start the corresponding action when performing OPR and fully automatic operation.

"Stop" key: Function 1: Press this button to enter the single cycle mode. In the automatic mode, the system will stop in the single-cycle mode. After pressing the [Stop] key again, the robot Stop motion.

Function 2: In the event of an alarm, press this key in the stop state to clear the alarm display that has been resolved.

"Origin" key: In the stop state, press this key, then press "start" key to start the home return operation.

Note: You can select the way of homing and the order of homing in this key. For details, please refer to 3.2.1.17 Function description of origin command.

"Reset"key: Press the [Reset] key and then press the [Start] key to return all the axes to the home position.

Note: You can also add other commands to this key, for example, to turn off an output point when you press the reset button. For details, see section 3.1.

"Acceleration / deceleration" key: These two keys can be used to adjust the global speed of manual and automatic.

2.2.3 Axis action keys

X + (X1 +)key**:** Pressing this key moves the axis in the positive direction at the current speed.

X- (X1-) key: The axis moves at the current speed in the negative direction.

Y1- (Y1-) key: The axis moves at the current speed in the negative direction.

Y1- (Y1-) key: The axis moves at the current speed in the positive direction;

Z + (Z +) key: Pressing this key moves the axis in the positive direction at the current speed.

Z- (Z-) key: The axis moves at the current speed in the negative direction.

U + (A +)key: Pressing this key moves the axis in the positive direction at the current speed.

U- (A-)key: The axis moves at the current speed in the negative direction.

V + (B +)key: Press this key to move in the positive direction at the current speed.

V- (B-) key: The axis moves in the negative direction at the current speed.

W + (C +)key: Pressing this key moves the axis in the positive direction at the current speed.

W- (C-)key: The axis moves at the current speed in the negative direction.

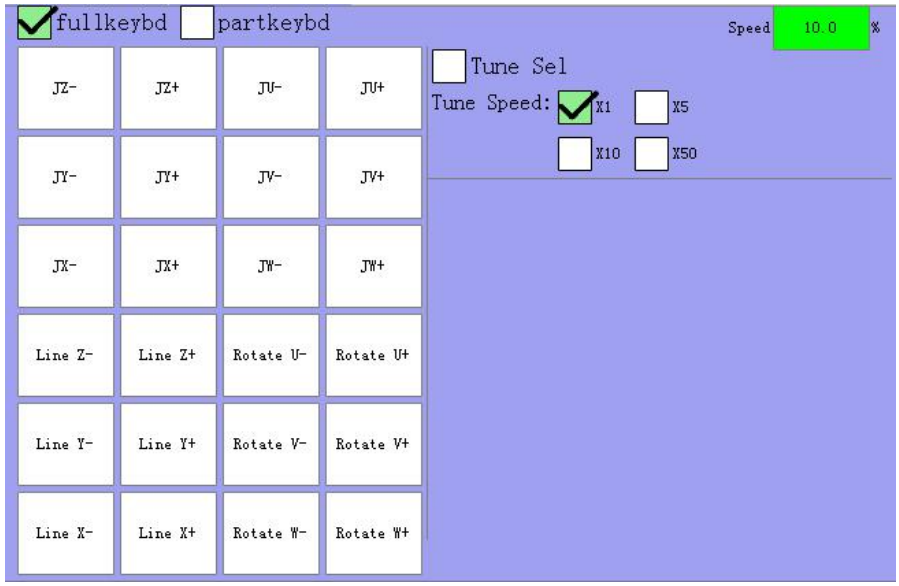
There are two types of axis motion, one is the world coordinate motion and the other is the joint movement. Pressing the axis type in manual mode and pressing the axis action button will activate the corresponding axis.

Operating procedures:

1, in manual mode, click this icon once to open the manual keyboard button.

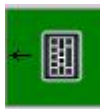
2, the icon after opening the icon below, in this figure, select the axis movement type and press the appropriate axis keys (keyboard keys or hand control button), the corresponding axis will act.

3,Manual speed control: in manual mode can press the acceleration and deceleration keys can be adjusted speed, can also be fixed in the manual speed, the corresponding setting can be entered in the stop state "parameter" → "machine settings" → "run parameters (Chapter 4.2.1) of the Standalone Control Manual option.


fullkeybd
partkeybd
Speed
10.0
%
JZ-
JZ+
JU-
JU+
Tune Sel
Tune Speed:
X1
X5
X10
X50
JY-
JY+
JV-
JV+
JX-
JX+
JW-
JW+
Line Z-
Line Z+
Rotate U-
Rotate U+
Line Y-
Line Y+
Rotate V-
Rotate V+
Line X-
Line X+
Rotate W-
Rotate W+

2.2.4 Fine adjustment knob

Function: You can use this knob to precisely move the axis when the manual mode is fine-tuned.

To do this, click the Open  button, click the [Tune sel] option, select the tune speed, select the axis to be fine-tuned in the left box, or press the axis button (on the hand controller) The fine adjustment knob moves the axis one point at a time to the target point.

Tune speed:

X1: The movement of a grid axis is 0.01mm or the axis is rotated by 0.01 degree.

X5: moving a grid axis 0.05mm or axis rotation 0.05 degrees.

X10: moving a grid axis movement 0.1mm or axis rotation 0.1 degrees.

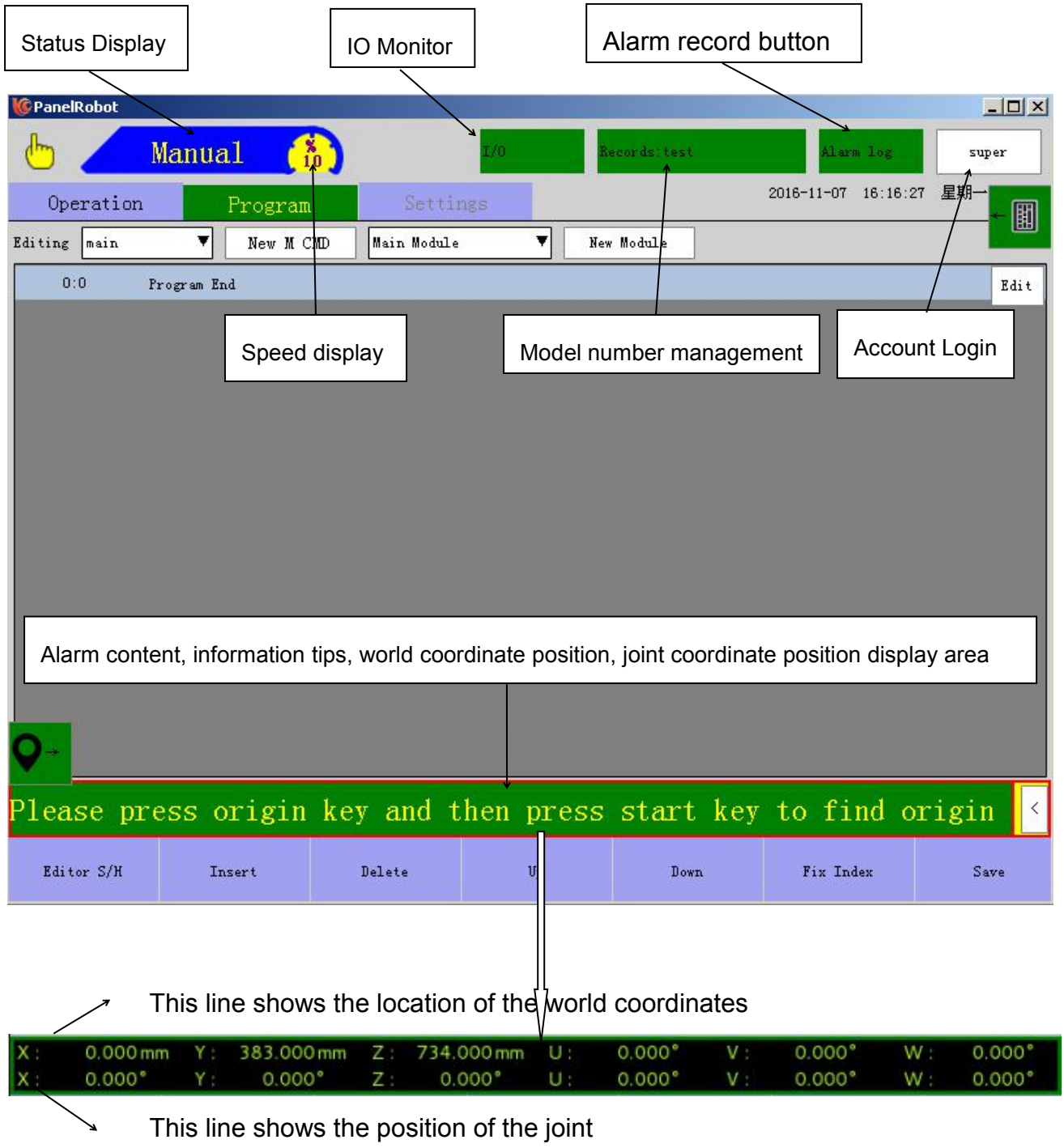
X50: moving a grid axis moving 0.5mm or axis rotation 0.5 degrees.

World Coordinates: The position and attitude of the end point of the tool with the center of the robot base as the origin.

Joint coordinate: The coordinate value of the motor coordinate converted by the mechanism coupling relationship.

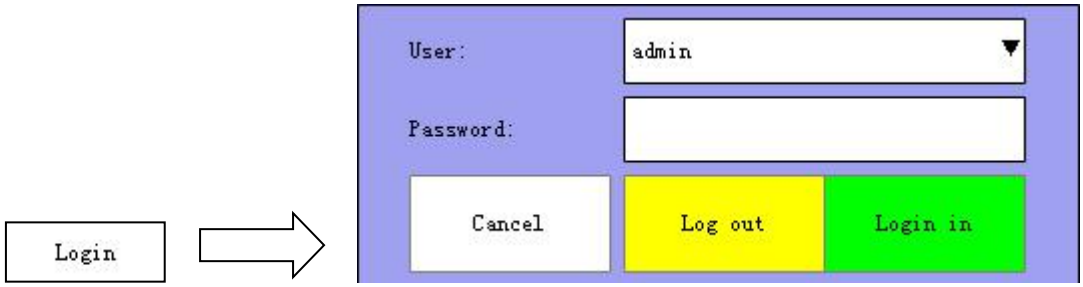
2.3 Main screen and axis definition

2.3.1 Main screen description



1, Rights management

Login: Click "Login" to enter the login interface, first select the user type, enter the password, then click "login". To exit to the minimum privilege click on "Log out". Log in before you set up the system, because different user names have different administrative rights.



Operator (op): The permission can only be moved in the manual state can not enter the teaching page to teach the page, automatic state can start the robot, adjust speed, stop state can enter the home return.

Administrator (admin): This permission can only move the axis in the manual state can not enter the teaching page for teaching, automatic state can start the robot, adjust the speed, stop state can enter the home return.

(Super): The user can perform all the operations except for user management, the default login password 123456.

Super administrator (root): the user can perform all the operations under the default login password 12345678.

Permissions Size: Operator <Administrator <Administrator <Super Administrator

2, I / O monitoring: Click once to see I / O points and intermediate variable on-off state, click the second page retraction.

3, Module number: Click on the module number to enter the model management page can be "new", "load", "copy", "delete" specific methods of operation are as follows:

New program: in the new file name text box to enter the new model name, and then click "New" button, you can create a new model of the blank program, model name can enter letters and numbers.

Copying program: After entering a new name in the new module name text box, click the saved model name, and then click the [Copy] button to copy the stored model number program to the new model number program .

Load the program: Click the stored model number, and then click "Load" button, you can load the selected model number, run automatically when running the program.

Deleting a program: Click the stored module number, and then click the [Delete] button to delete the module. The currently loaded module can not be deleted.

Export program: Click the saved module number, and then click [export to U disk] button, you can export the selected model.

Import program: insert U disk to USB port of manual controller Click "Import from U disk" button, select the module to import. Click "Open" button and then "Load" to import the module.

4, Alarm log: click once will appear alarm log page, the page records the most recent alarm records, click the second page retraction.

2.4 Operating mode

The manipulator has manual, stop, automatic three states, the status selector switch to the left gear position for the manual state, in which the state of the robot manual operation. Rotate the status selector switch to the neutral position to stop the robot. In this state, the robot will stop all the movements and return to the home position. Rotate the status selector switch to the right position and press the "Start" button once, the robot will enter the automatic running state.

2.4.1 Return to the origin

In order for the robot to operate correctly and automatically, the OPR operation is performed every time the power is turned on and stopped. The OPR operation will drive each axis of the robot to its home position.

Return to the origin operation method:

Condition 1: Operation flow without origin setting:

1. Move all axes to the home position in the manual mode.

2. In the stop state, go to [Parameter Setting] → [Mechanical Setting] → [Motor Parameter] page, click "Set as Origin" or "Set as Origin" button, and then click "Save Origin" button.

Condition 2: The flow of operation has been set to the origin:

Press the "OPEN" key in the stop state to display the selection dialog box as shown in the following figure. Select the option according to the actual situation (if you do not understand the options, please click the [Help] button) The robot starts the OPR operation.

"Display Help" Details:

□ Near the origin: The position is probably used in the vicinity.

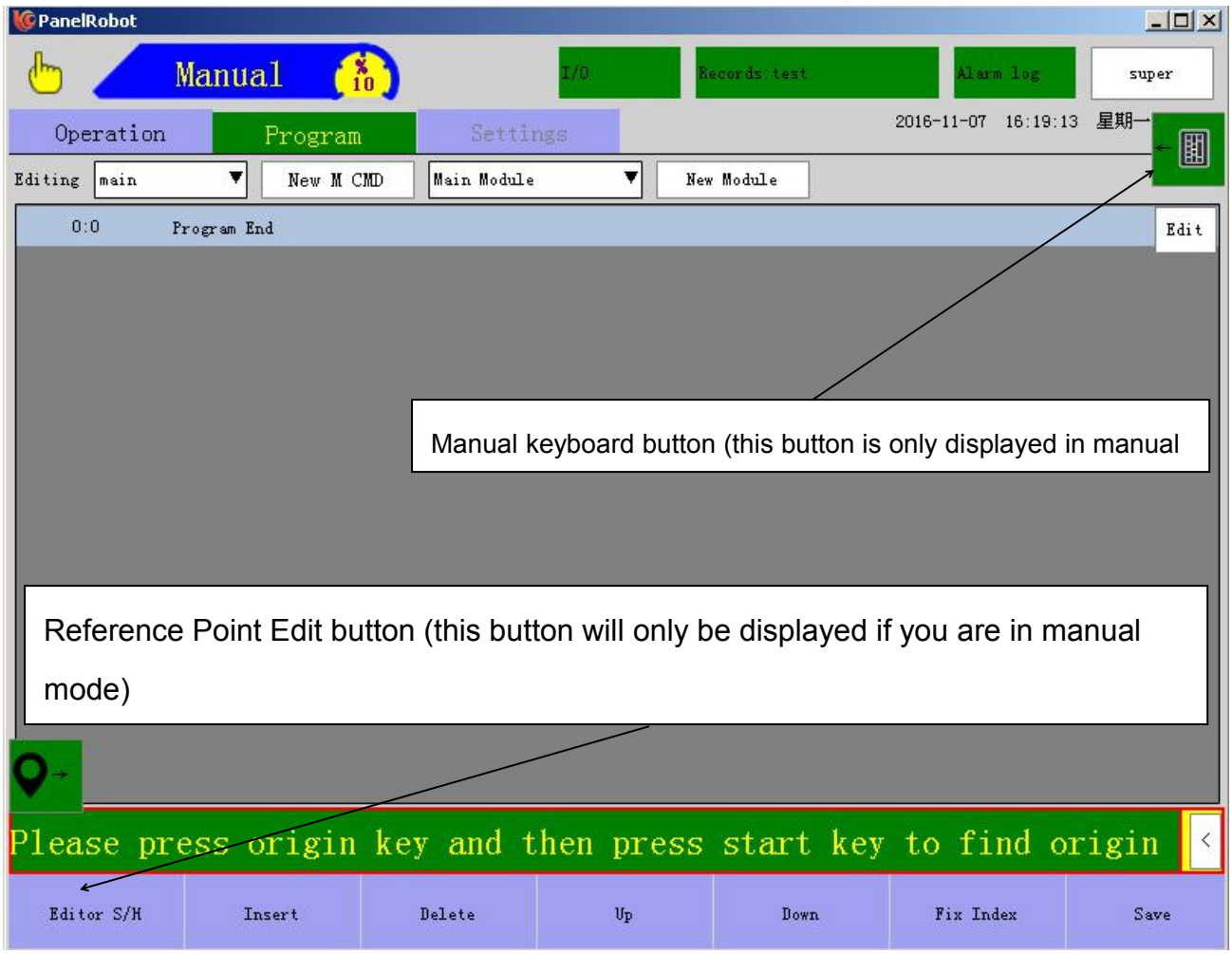
□ Emergency shutdown before shutdown: only to determine the shutdown has been captured before the emergency stop can be used.

□ re-homing: has not returned in the vicinity of the origin of the time, once again when the original point of use.

Note: You can not perform manual, automatic operation and parameter setting for the robot during the OPR. In case of an emergency, press the [STOP] key to stop the OPR or press the [Emergency button] button.

3 Manual status

The hand control knob on the third gear hit the manual state into the following interface:



3.1 Program

Modulus of the composition: a set of modules contains a main program and eight subroutines can be selected according to their actual use.

Program selection method: Pull down the "Edit" menu, select the program (click once that means selected).

Special subroutine: Subprogram 8, the program itself in the default subroutine 8, regardless of the state (automatic / manual / stop) will automatically run.

Tip: In the case of the program to teach to run automatically when the subroutine and the main program is running at the same time.

"Programmable Keys": You can program in a self-defined key name.

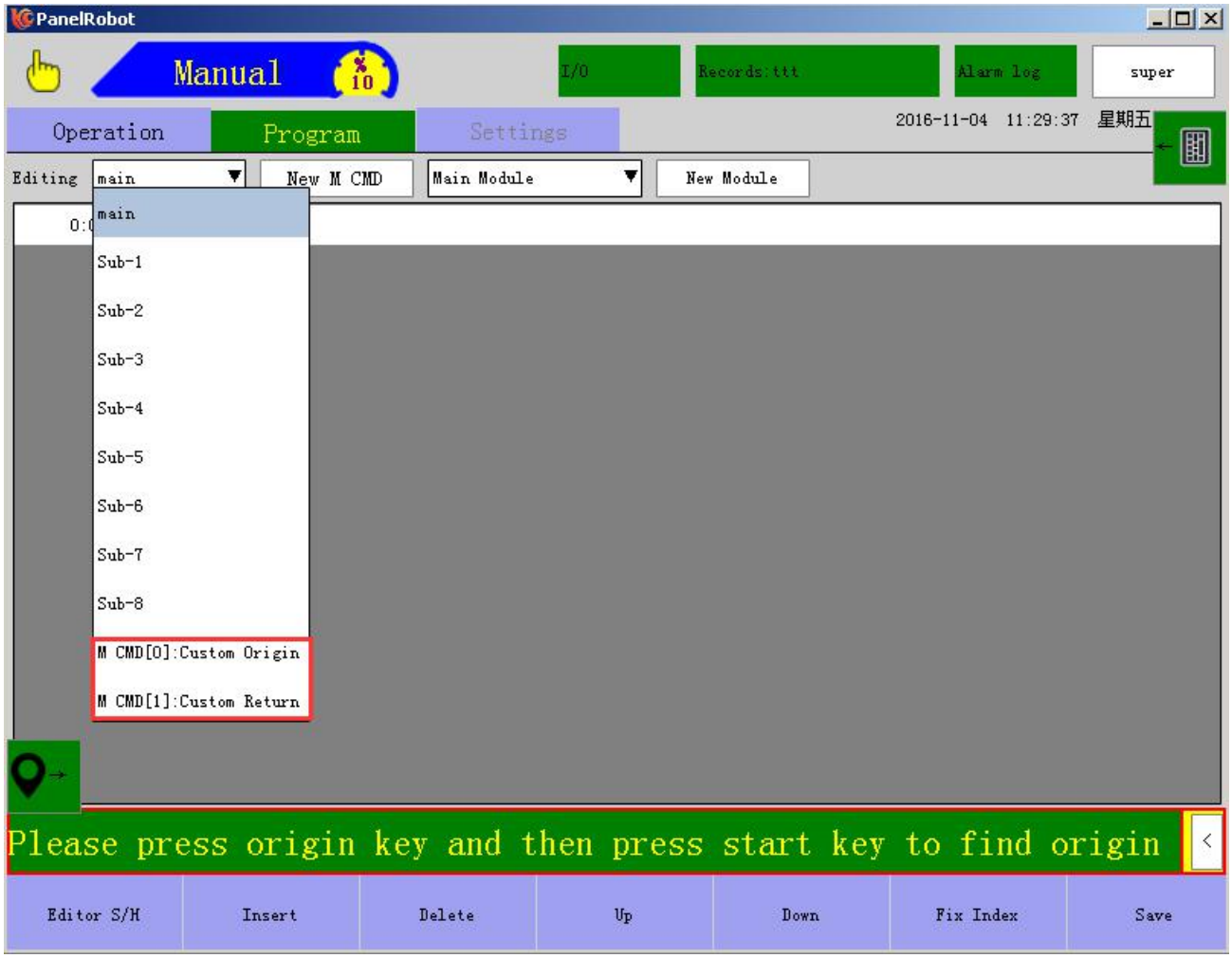
New Programmable Keys: Click "New Programmable Keys" → Edit Key Name Click OK → Pull Down "Edit" Menu Move the page up and down to find the programmable key, click once the name of the button has been edited into the teaching page teach.

Special programmable keys:

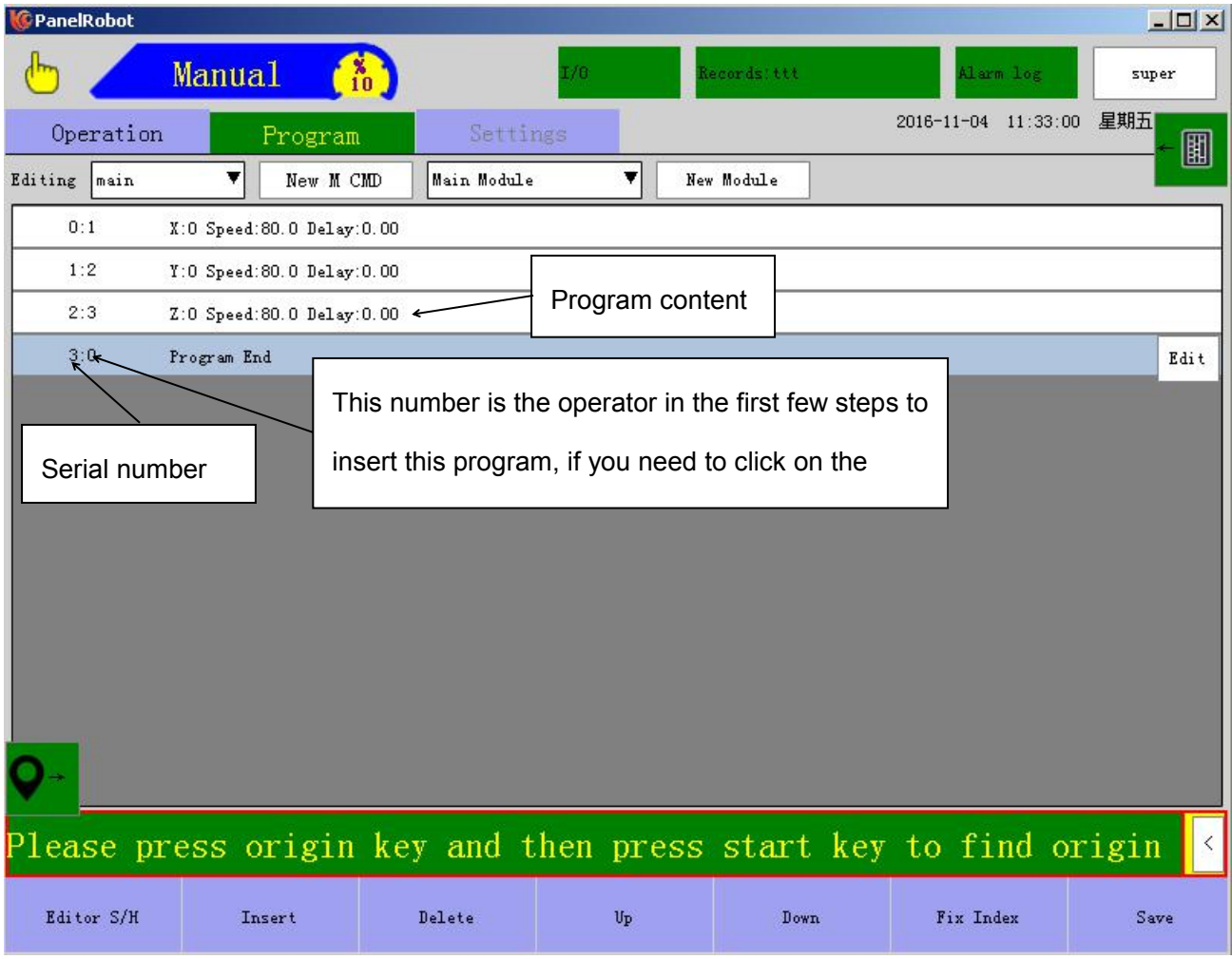
"ORIGINAL" If you perform homing in the stop mode (pressing the home key again to start), the system will execute the program that has been edited in the "Origin" key if the sequence of homing or other actions is instructed in this key.

"Reset" Pressing the [Reset] key once in the stop state, the system will execute the program which has been edited in the reset button.

Deleting Programmable Keys: Select the name of the button in the drop-down "Edit" and then click the [Delete Programmable Keys] button.


PanelRobot
Manual
10
I/O
Records:ttt
Alarm log
super
Operation
Program
Settings
2016-11-04 11:29:37 星期五
Editing
main
New M CMD
Main Module
New Module
main
Sub-1
Sub-2
Sub-3
Sub-4
Sub-5
Sub-6
Sub-7
Sub-8
M CMD[0]:Custom Origin
M CMD[1]:Custom Return
Please press origin key and then press start key to find origin
Editor S/H
Insert
Delete
Up
Down
Fix Index
Save

3.1.1 Programming interface

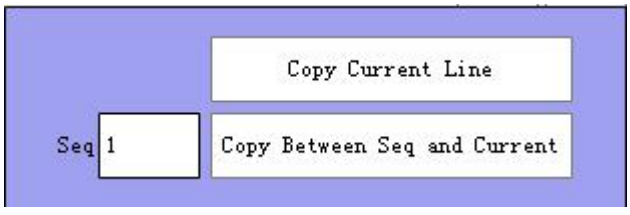


"Trial": press this button, the program will run this step.

"Up": Click on the program to move to the previous line.

"DOWN": Click to move to the next line.

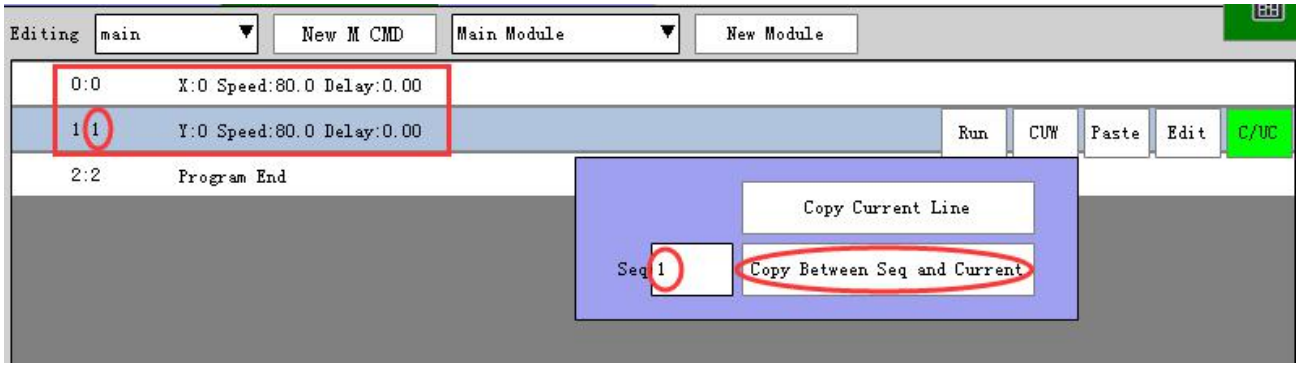
"Copy": Click the [Copy] button to pop up the contents of the selected copy of the selection box as shown below:



NOTE: The number entered in the "Selected Line" edit box indicates the program number

Copy the use case: Suppose you need to copy the program number 0 and 1, the procedure is as follows

Step 1: Click the Copy button, enter 1 in the "Selected Row" edit box and then click the [Copy Selected Row to Current Row] button.



Step 2: Select the next line you want to paste the program Click the [Paste] button

Note: If the copy of the "end of the module" sentence paste into the program is invalid.

"Paste": Paste the copied program in a single click.

"Modify": Click once to modify the program content from the new definition.

[Shield]: click that shield, if you want to cancel and then a "shield" can be.

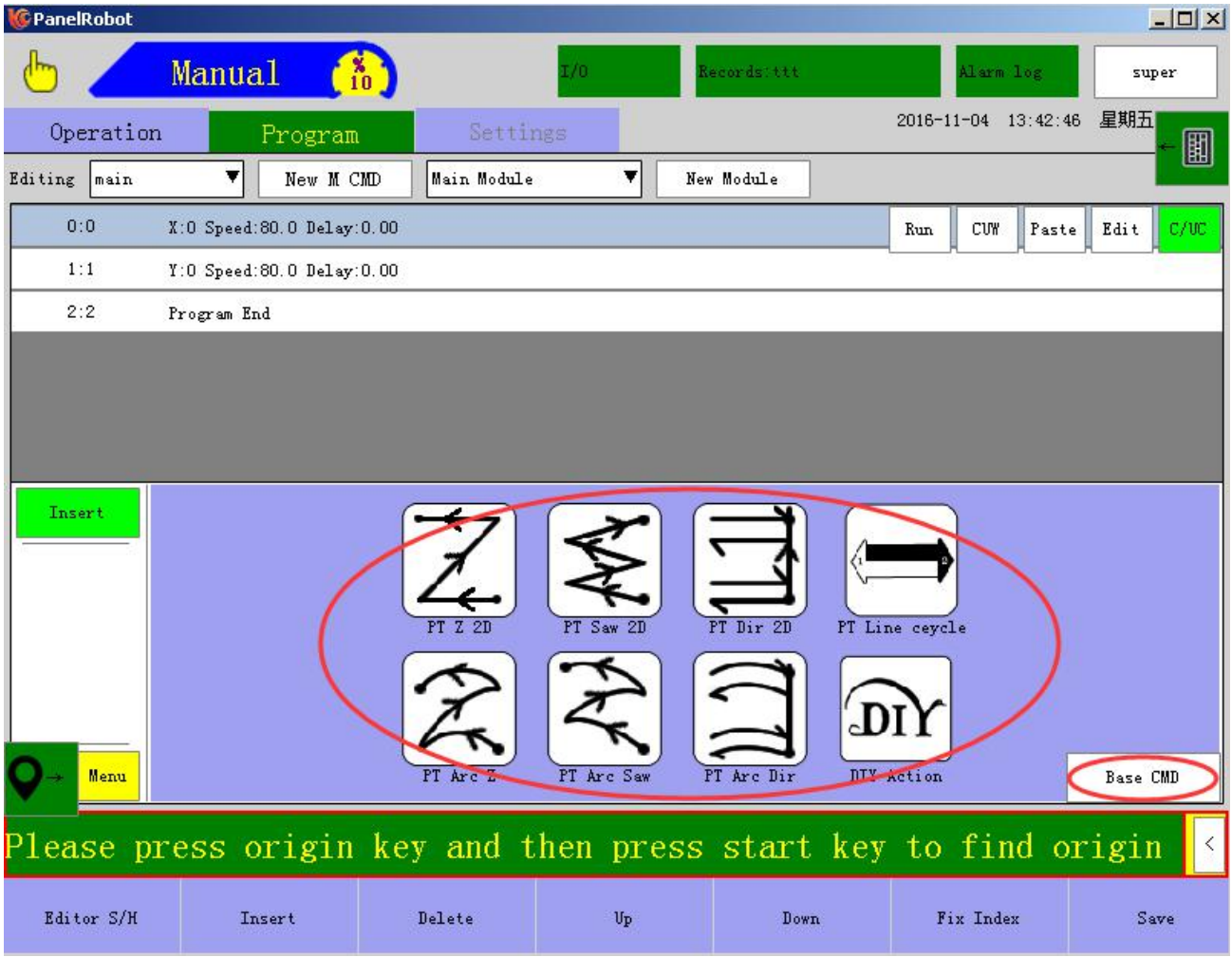
"Delete": Click delete to delete the program.

"Collation No.": Click the number in the auto-finishing sequence.

3.1.2 Action menu

Click "Action" to enter the action type interface to teach, as shown below:

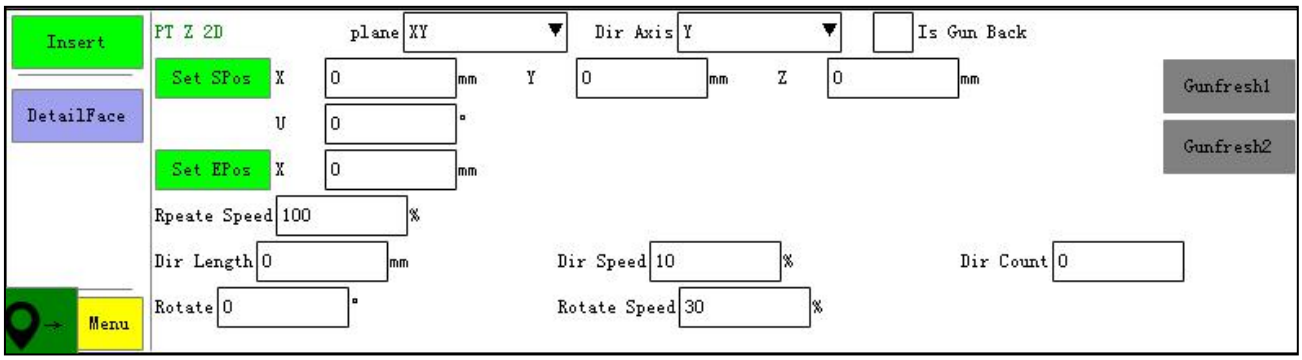
Action menu: The action menu contains 8 spray patterns and 17 basic actions. Click once on the "Open" menu and then the second "Close" menu.



3.1.2.1 Spray mode

Linear spraying action:

1,straight L-shaped



Plane: Pull down the triangular arrow to select the plane to spray.

Dir axis: Pull down the triangular arrow to select the axis to move.

Is gun back: After checking, it means that the axis of the control gun will return to the origin position and then go to the next starting point to finish spraying.

Set the starting point(Set Spos): in the manual state, move the axis to the starting point and then click "Set the starting point(Set Spos)" button to Set the starting point(Set Spos) of the coordinates of the location edit box.

Set the end point(Set Epos): In the manual state, move the axis to the end point and then click "Set EPos" button to set the coordinates of the end of the location of the edit box.

Repeat Speed: Sets the speed at which repetitive actions are performed.

Dir length: Set the length of the inch axis.

Dir speed Set the moving speed of the jog axis.

Cycles: Sets the number of action cycles.

Rotate: Sets the angle at which the turntable rotates.

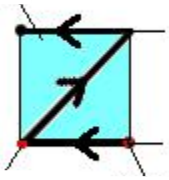
Rotate Speed: Sets the speed at which the dial rotates when it rotates.

"**Gun fresh1**" button: Click this button once to turn green atomization 1(Y014), oil volume 1(Y015), spray amplitude 1(Y016) These three output points will have the output (the corresponding output light will be on) And then click the button once to become gray.

Note: This button is here for the convenience of the user during debugging.

"Gun fresh2" Click this button once to turn green atomization 2(Y017), oil volume 2(Y020) spray amplitude 2 (Y021)These three output points will have the output (the corresponding output light will be on) Once the button turns gray.

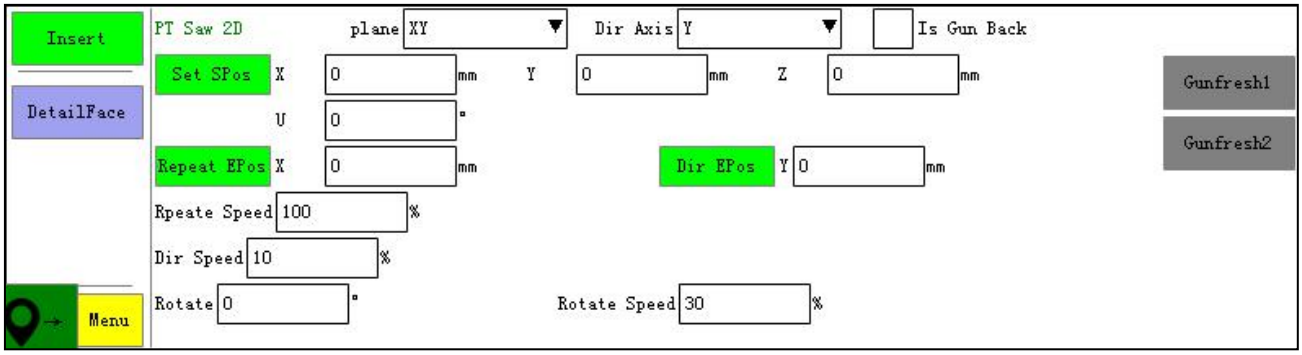
flat



Inching distance

terminal point starting point

2、Straight serrated



Plane: Pull down the triangular arrow to select the plane to spray.

Dir axis: Pull down the triangular arrow to select the axis to move.

Is gun back: After checking, it means that the axis of the control gun will return to the origin position and then go to the next starting point to finish spraying.

Set the starting point(Set Spos): in the manual state, move the axis to the starting point and then click "Set the starting point(Set Spos)" button to Set the starting point(Set Spos) of the coordinates of the location edit box.

Set the end point(Set Epos): In the manual state, move the axis to the end point and then click "set end point" button to set the coordinates of the end of the location of the edit box.

Repeat Speed: Sets the speed at which repetitive actions are performed.

Dir speed Set the moving speed of the jog axis.

Cycles: Sets the number of action cycles.

Rotate: Sets the angle at which the turntable rotates.

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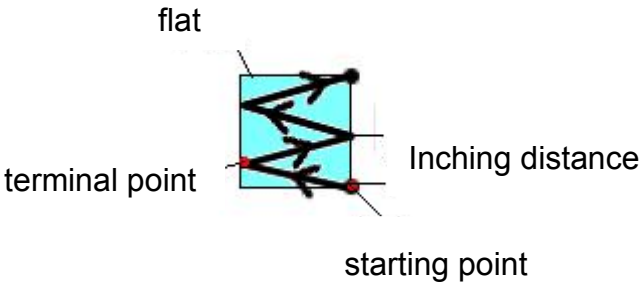
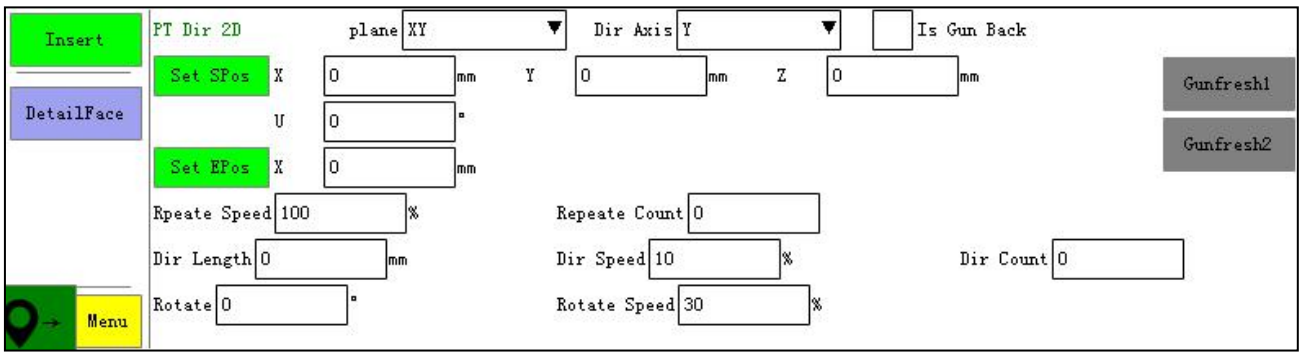
"**Gun fresh2**" Click this button once to turn green atomization 2(Y017), oil volume 2(Y020) spray amplitude 2 (Y021)These three output points will have the output (the corresponding output light will be on) Once the button turns gray.



3、Linear motion



Plane: Pull down the triangular arrow to select the plane to spray.

Dir axis: Pull down the triangular arrow to select the axis to move.

Is gun back: After checking, it means that the axis of the control gun will return to the origin position and then go to the next starting point to finish spraying.

Set the starting point(Set Spos): in the manual state, move the axis to the starting point and then click "Set the starting point(Set Spos)" button to Set the starting point(Set Spos) of the coordinates of the location edit box.

Set the end point(Set Epos): In the manual state, move the axis to the end point and then click "set end point" button to set the coordinates of the end of the location of the edit box.

Repeat Speed: Sets the speed at which repetitive actions are performed.

Rotate Count: Sets the number of reciprocating sprays.

Dir length: Set the length of the inch axis.

Dir speed Set the moving speed of the jog axis.

Dir Count: Sets the number of action cycles.

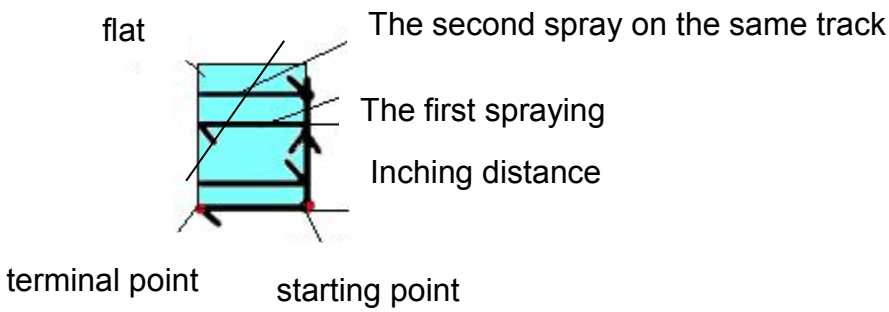
Rotate: Sets the angle at which the turntable rotates.

Rotate Speed: Sets the speed at which the dial rotates when it rotates.

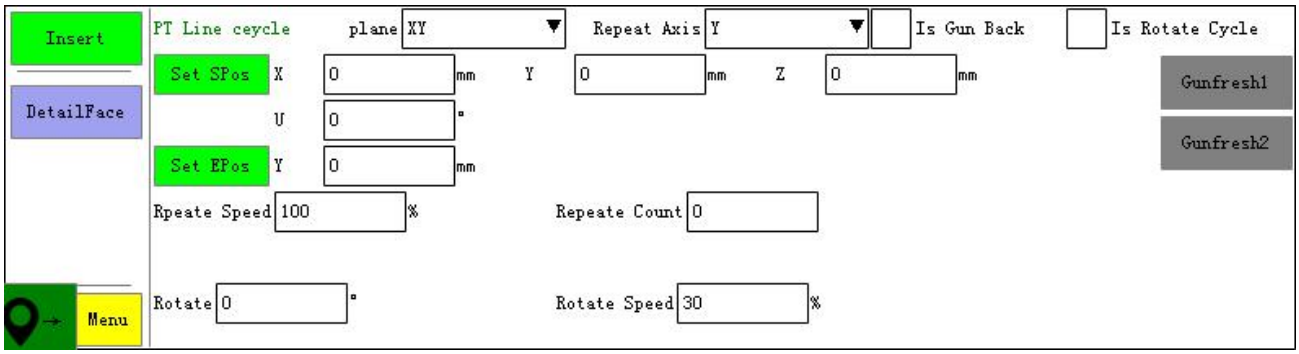
"**Gun fresh1**" button: Click this button once to turn green atomization 1(Y014), oil volume 1(Y015), spray amplitude 1(Y016) These three output points will have the output (the corresponding output light will be on) And then click the button once to become gray.

Note: This button is here for the convenience of the user during debugging.

"**Gun fresh2**" Click this button once to turn green atomization 2(Y017), oil volume 2(Y020) spray amplitude 2 (Y021)These three output points will have the output (the corresponding output light will be on) Once the button turns gray.



4、Linear reciprocating type



Plane: Pull down the triangular arrow to select the plane to spray.

Dir axis: Pull down the triangular arrow to select the axis to move.

Is gun back: After checking, it means that the axis of the control gun will return to the origin position and then go to the next starting point to finish spraying.

Rotate Follow: When checked, the rotary axis is also rotated when the gun is sprayed.

Set the starting point(Set Spos): in the manual state, move the axis to the starting point and then click "Set the starting point(Set Spos)" button to Set the starting point(Set Spos) of the coordinates of the location edit box.

Set the end point(Set Epos): In the manual state, move the axis to the end point and then click "set end point" button to set the coordinates of the end of the location of the edit box.

Repeat Speed: Sets the speed at which repetitive actions are performed.

Rotate Count: Sets the number of reciprocating sprays.

Cycles: Sets the number of action cycles.

Rotate: Sets the angle at which the turntable rotates.

Rotate Speed: Sets the speed at which the dial rotates when it rotates.

"**Gun fresh1**" button: Click this button once to turn green atomization 1(Y014), oil volume 1(Y015), spray amplitude 1(Y016) These three output points will have the output (the corresponding output light will be on) And then click the button once to become gray.

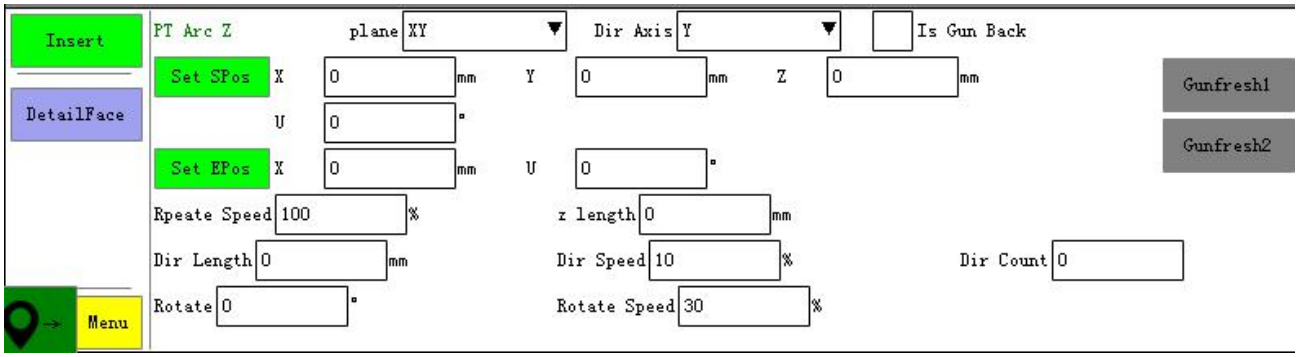
Note: This button is here for the convenience of the user during debugging.

"**Gun fresh2**" Click this button once to turn green atomization 2(Y017), oil volume 2(Y020) spray amplitude 2 (Y021)These three output points will have the output (the corresponding

output light will be on) Once the button turns gray.

Curved spray action

1、Curve Z-shape



Plane: Pull down the triangular arrow to select the plane to spray.

Dir axis: Pull down the triangular arrow to select the axis to move.

Is gun back: After checking, it means that the axis of the control gun will return to the origin position and then go to the next starting point to finish spraying.

Set the starting point(Set Spos): in the manual state, move the axis to the starting point and then click "Set the starting point(Set Spos)" button to Set the starting point(Set Spos) of the coordinates of the location edit box.

Set the end point(Set Epos): In the manual state, move the axis to the end point and then click "set end point" button to set the coordinates of the end of the location of the edit box.

Repeat Speed: Sets the speed at which repetitive actions are performed.

z length: the z length, the positive number is the convex arc, and the negative number is the concave arc.

Dir length: Set the length of the inch axis.

Dir speed : Set the moving speed of the jog axis.

Cycles: Sets the number of action cycles.

Rotate: Sets the angle at which the turntable rotates.

Rotate Speed: Sets the speed at which the dial rotates when it rotates.

"**Gun fresh1**" button: Click this button once to turn green atomization 1(Y014), oil volume 1(Y015), spray amplitude 1(Y016) These three output points will have the output (the

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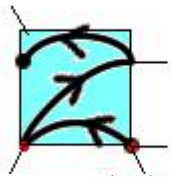
"**Gun fresh2**" Click this button once to turn green atomization 2(Y017), oil volume 2(Y020) spray amplitude 2 (Y021)These three output points will have the output (the corresponding output light will be on) Once the button turns gray.

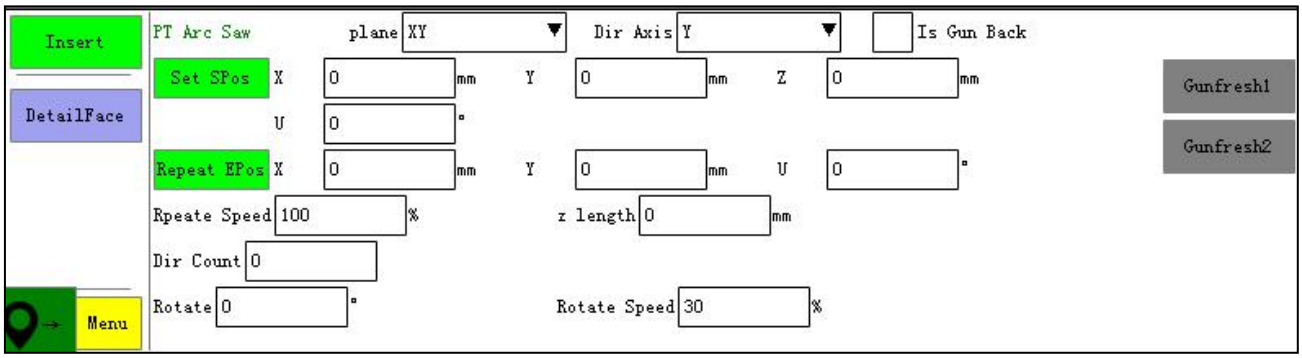
flat



Inching distance

terminal point starting point

2、Curve jagged



Plane: Pull down the triangular arrow to select the plane to spray.

Dir axis: Pull down the triangular arrow to select the axis to move.

Is gun back: After checking, it means that the axis of the control gun will return to the origin position and then go to the next starting point to finish spraying.

Set the starting point(Set Spos): in the manual state, move the axis to the starting point and then click "Set the starting point(Set Spos)" button to Set the starting point(Set Spos) of the coordinates of the location edit box.

Set the end point(Set Epos): In the manual state, move the axis to the end point and then click "set end point" button to set the coordinates of the end of the location of the edit box.

Repeat Speed: Sets the speed at which repetitive actions are performed.

z length: the z length, the positive number is the convex arc, and the negative number is the concave arc.

Cycles: Sets the number of action cycles.

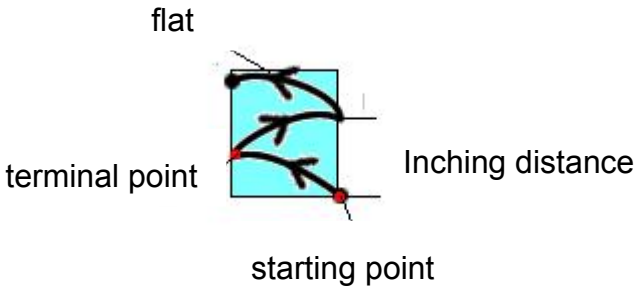
Rotate: Sets the angle at which the turntable rotates.

Rotate Speed: Sets the speed at which the dial rotates when it rotates.

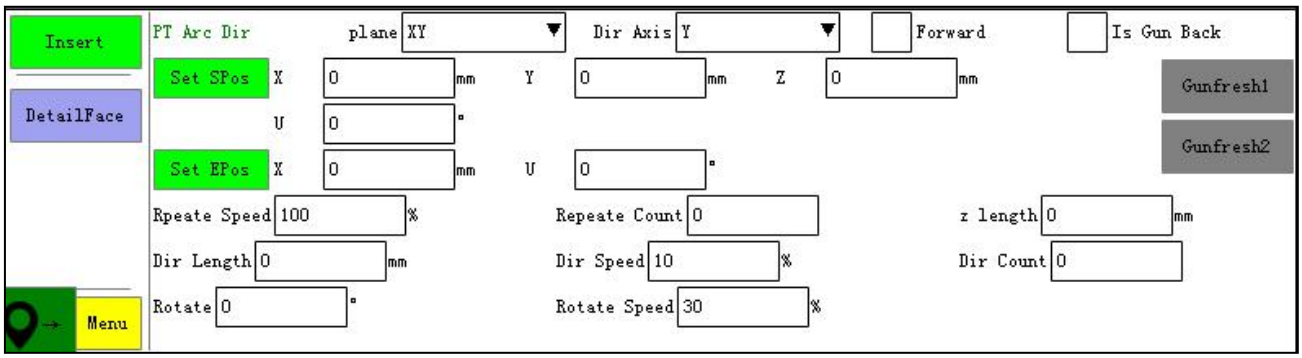
"**Gun fresh1**" button: Click this button once to turn green atomization 1(Y014), oil volume 1(Y015), spray amplitude 1(Y016) These three output points will have the output (the corresponding output light will be on) And then click the button once to become gray.

Note: This button is here for the convenience of the user during debugging.

"**Gun fresh2**" Click this button once to turn green atomization 2(Y017), oil volume 2(Y020) spray amplitude 2 (Y021)These three output points will have the output (the corresponding output light will be on) Once the button turns gray.



3、Curve inching



Plane: Pull down the triangular arrow to select the plane to spray.

Dir axis: Pull down the triangular arrow to select the axis to move.

Is gun back: After checking, it means that the axis of the control gun will return to the origin position and then go to the next starting point to finish spraying.

Set the starting point(Set Spos): in the manual state, move the axis to the starting point

and then click "Set the starting point(Set Spos)" button to Set the starting point(Set Spos) of the coordinates of the location edit box.

Set the end point(Set Epos): In the manual state, move the axis to the end point and then click "set end point" button to set the coordinates of the end of the location of the edit box.

Repeat Speed: Sets the speed at which repetitive actions are performed.

z length: the z length, the positive number is the convex arc, and the negative number is the concave arc.

Dir length: Set the length of the inch axis.

Dir speed : Set the moving speed of the jog axis.

Cycles: Sets the number of action cycles.

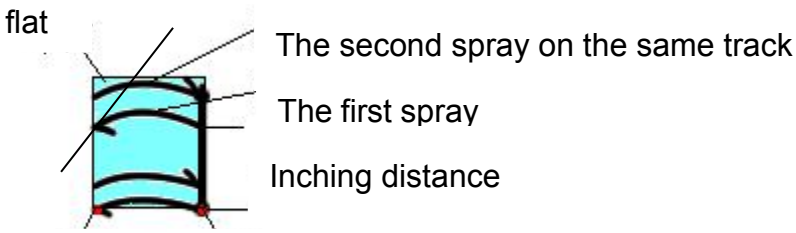
Rotate: Sets the angle at which the turntable rotates.

Rotate Speed: Sets the speed at which the dial rotates when it rotates.

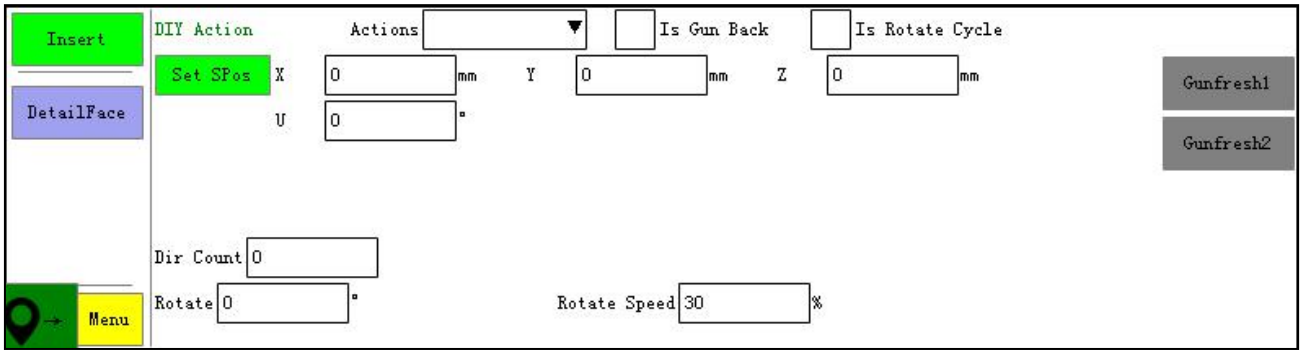
"**Gun fresh1**" button: Click this button once to turn green atomization 1(Y014), oil volume 1(Y015), spray amplitude 1(Y016) These three output points will have the output (the corresponding output light will be on) And then click the button once to become gray.

Note: This button is here for the convenience of the user during debugging.

"**Gun fresh2**" Click this button once to turn green atomization 2(Y017), oil volume 2(Y020) spray amplitude 2 (Y021)These three output points will have the output (the corresponding output light will be on) Once the button turns gray.



DIY



Action: Drop-down Select the action that has been customized in the programmable buttons.

Set the starting point(Set Spos): in the manual state, move the axis to the target point and then click "Set the starting point(Set Spos)" button to teach the coordinates of the target point to the program.

Is gun back: After checking, it means that the axis of the control gun will return to the origin position and then go to the next starting point to finish spraying.

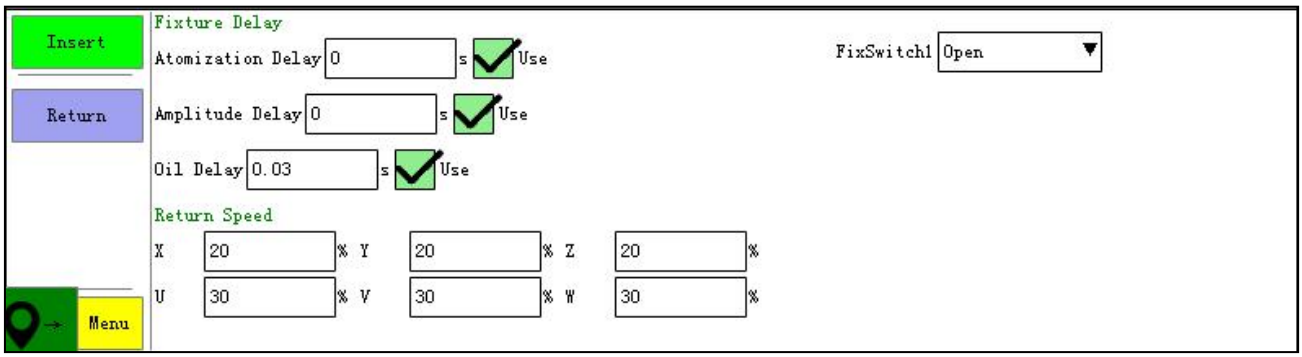
Rotate Follow: When checked, the rotary axis is also rotated when the gun is sprayed.

Cycles: Sets the number of action cycles.

Rotate: Sets the angle at which the turntable rotates.

Rotate Speed: Sets the speed at which the dial rotates when it rotates.

Details of the interface parameters:



Atomization Delay: check the "use" to set the delay time after the atomization valve.

Anplitude Delay: check the "use" can be set after the Anplitude Delay delay time.

Oil Delay: Check this to "use" to set the delay time of the oil valve.

FixSwich1:

1, the left(L): the gun moves to the left when the close to.

2,the right(R); gun: gun to move to the right to close it;

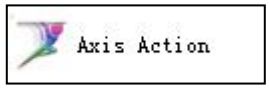
3,normally open(open): the gun is in full open state;

4, normally closed(close): the gun is always off;

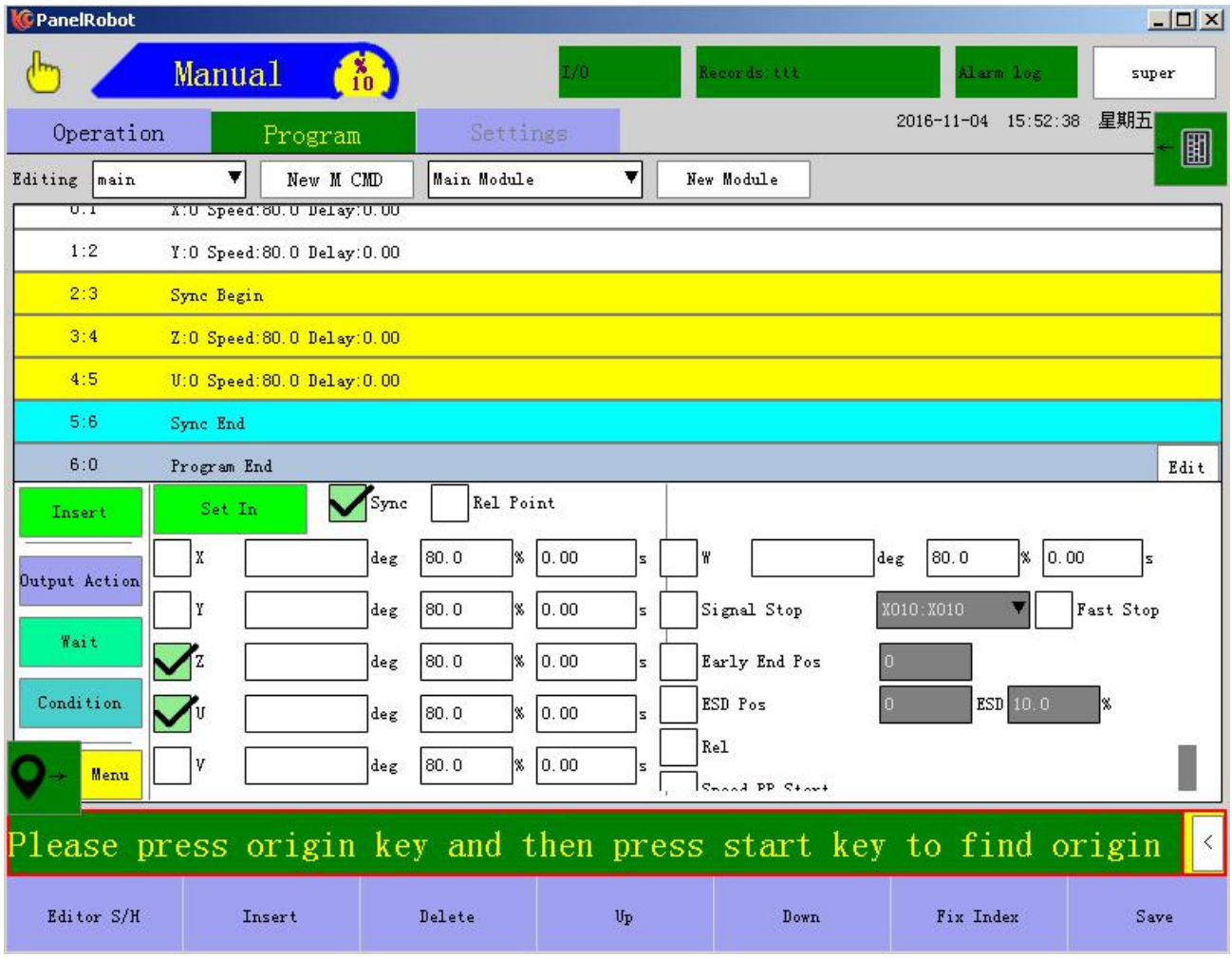
5,bilateral: Close to both sides.

Return speed: It is used to set the speed for each axis to return to the starting point.

3.1.2.2 Axis action

Click the 

button to enter the following interface.



Note: Clicking on the small box turns √ to indicate that it is selected.

Insert: In the instruction page, select the location where you want to insert the action and choose to teach the action. Click Insert to insert the action into the program.

Settings: When the axis and the target location click "Settings" and then click "Insert" to teach the location of the target point to the program.

Synchronization: Select several axes and then select "Synchronize" the axis will be in motion at the same time movement.

"**End Position**": Inserting this step into teaching indicates that the next movement has started when the axis has not reached the target position when it reached the end position.

Use case: If the advance position is set to 200 and the position is set to 1000, the axis moves to the position of 800 (1000-200) and the next step is carried out, and the procedure continues to 1000.

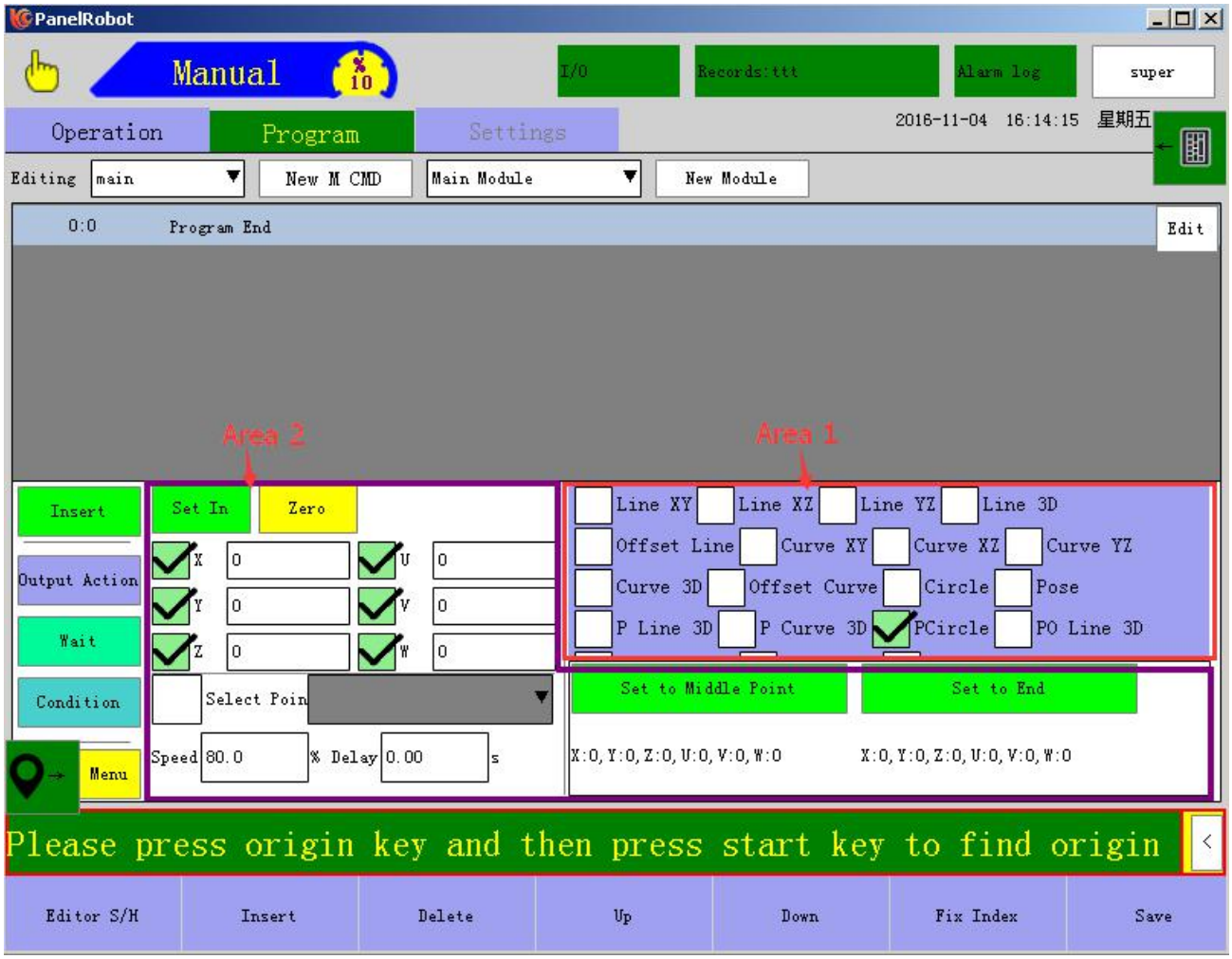
"**Advance Deceleration Position**": Insert this step in the teachings to indicate that the axis will decelerate at the set speed when it reaches the advanced deceleration position.

Use case: If the advance position is set to 200, the advance deceleration rate is 5%, the position is set to 1000, and the speed is set to 80%. Then the axis from 0-800 to 80% of the speed of operation, 800-1000 to 5% speed.

3.1.2.3 Path

Click the 

button to enter the following interface.



Area 1 is the type of action to insert:

Line 2D (Line XY, Line XZ, Line YZ): Holds the position in a plane from the current position to the "end point" position.

Line 3D: In the space, from the current position to "set to end" position to maintain a position to go straight.

Curve 2D (Curve XZ, Curve XZ, Curve YZ): Holds the arc in a plane from the current position to the position set to the intermediate point and the position set as the end point.

Curve 3D: In the space, from the current to "set to the middle point" position and "set to the end of the" position to maintain a position to take a curve.

Posture: from the current position into the target position.

Relative line: The current point as a starting point, the direction of the offset coordinates.

Relative Curve: The current point as a starting point, the direction of the offset coordinates.

Posture straight line: from the current point of conversion into the target position to "set the end" of the location of a straight line.

Pose curve: from the current point of change into the target position to "set to the middle point" and "set to the end" of the position to take the curve.

Pose full circle: from the current point of conversion into the target position to "set to the middle point" and "set to the end of the" circle.

Free path: no track movement, the movement of the axis at the same time moving simultaneously.

Relative Joint: Offset in the axial direction relative to the joint.

Relative posture line: Starting from the current point, U, V, W keep a posture in the direction of coordinate offset.

Relative posture curve: from the current point as a starting point, U, V, W to keep a posture in the direction of coordinate offset.

Full circle: Draws a circle with three known points.

Area 2 is to set the coordinates of the location method, set in two ways:

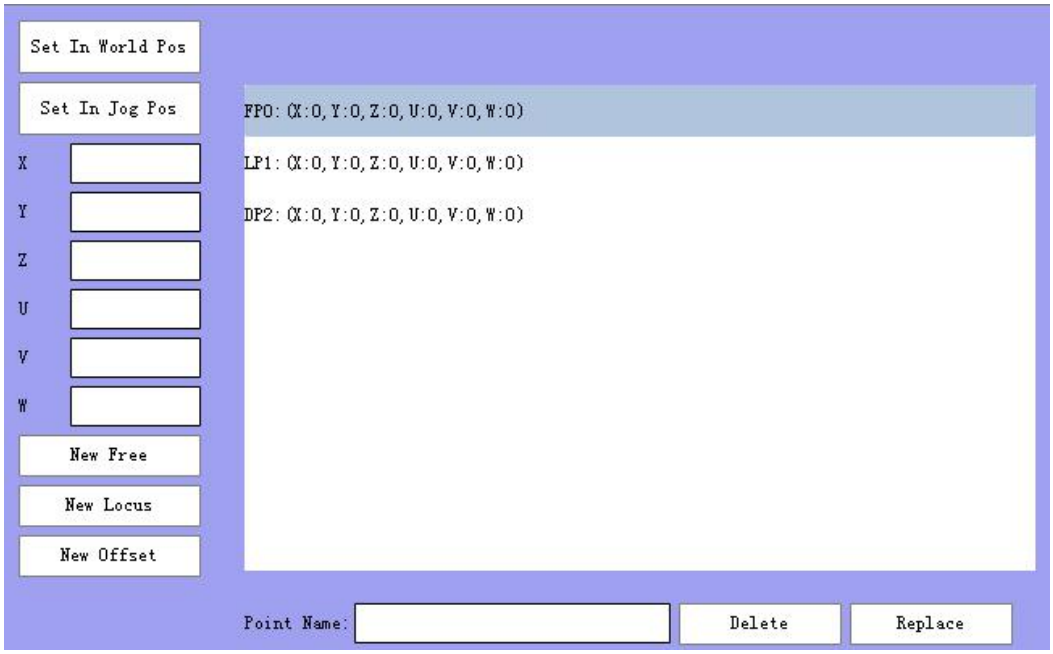
The first one: If it is the current manual control to display the coordinates of the coordinates of the edit position to edit the box you need to first hit the [set] button and then click [set the end] can be, if you want to zero is a direct click [Zero] button.

Second: use the reference point, check the reference point selection box 111 drop-down triangle arrows to select "point", and then click "set to the middle point" or "Set the end point(Set Epos)" button to replace the coordinates of the target point Coordinate value can be.

Reference point button Edit method:

Step 1: Check the box to use it.

Step 2: Click this icon in the lower left corner to open the reference point edit button interface, as shown below:



Reference point role: to facilitate the user for the location of a point to re-use.

Note! : The free path can only refer to the joints, and the relative joints can only refer to the offset points. The rest of the action types can only refer to path points.

Points of the editing process:

Step 1: Position Instruction: Edit the value directly Move the axis to the target point and then click "Set World Position or "Set Joint Position" (choose according to the type of new point).

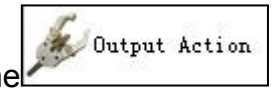
Step 2: Create a new point name in the Point Name dialog box.

Step 3: Click once to create a new type point (new node, the new path, the new offset point) to edit the point of editing a blank point to the dialog box.

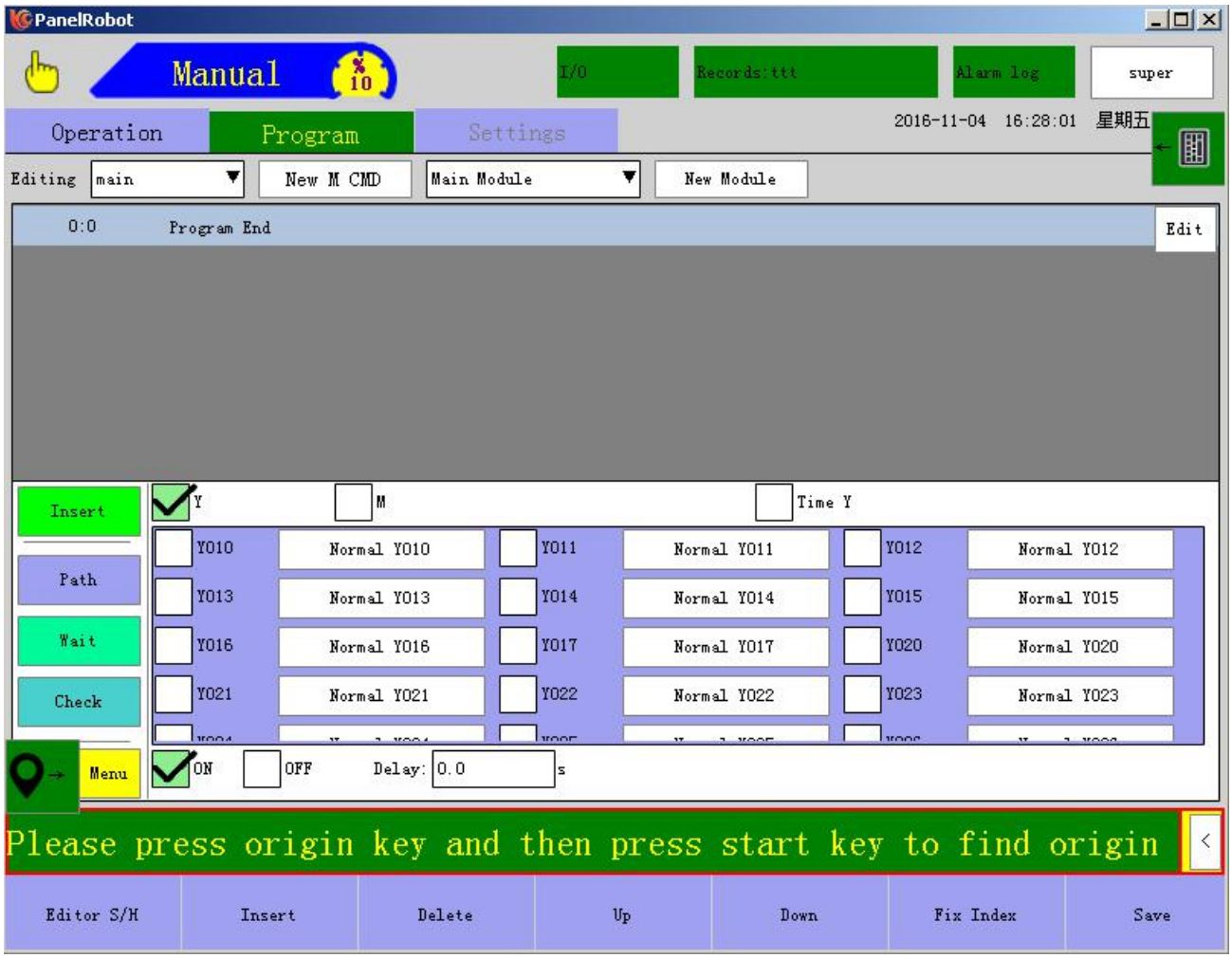
Delete method: select the point you want to delete into a light blue and then click the "Delete" button.

Replace Location Method: Edit the "New Location" and click the "Replace Location" button to complete the replacement.

3.1.2.4 Output action

Click the 

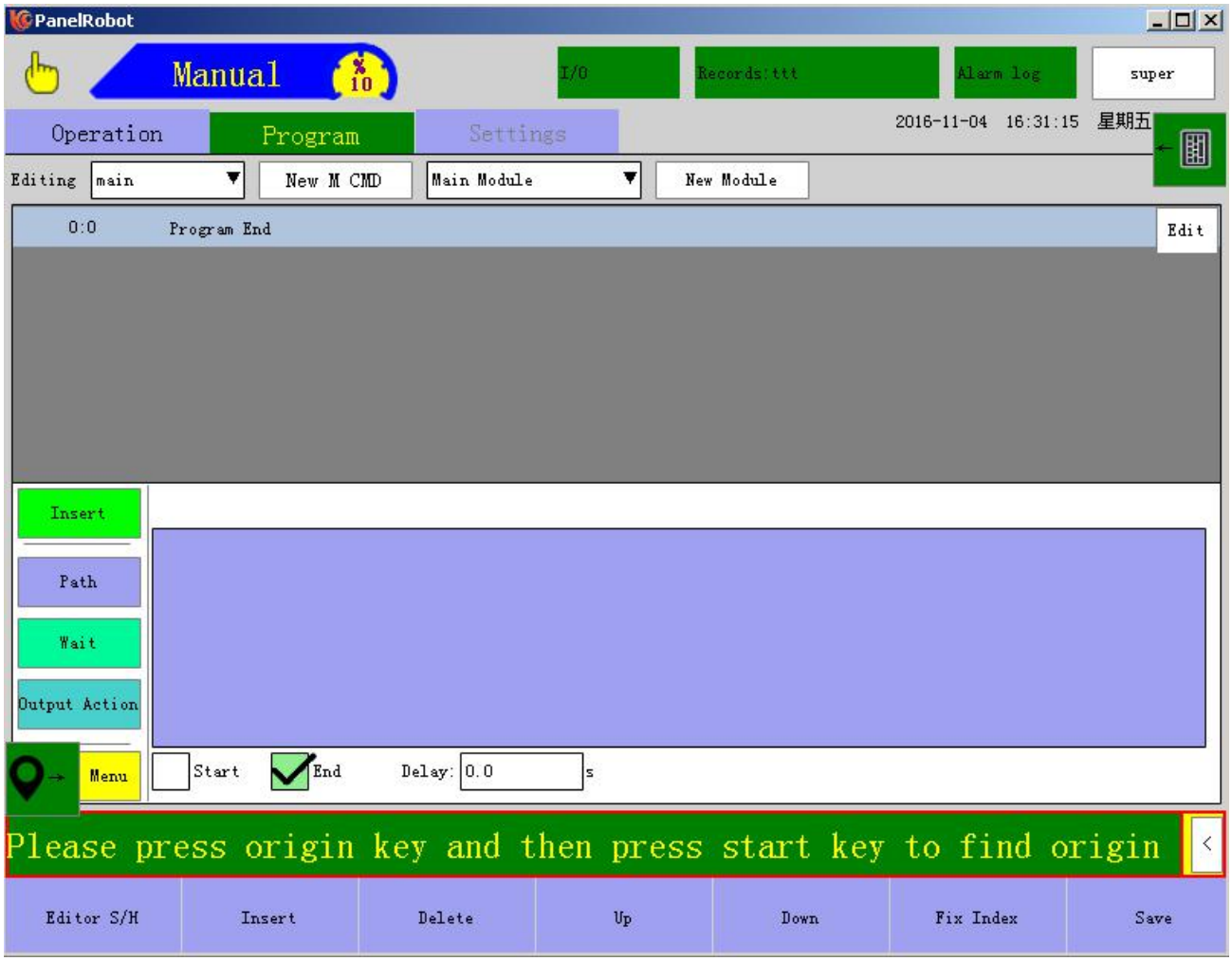
button to enter the following interface:



3.1.2.5 Check

Click the 

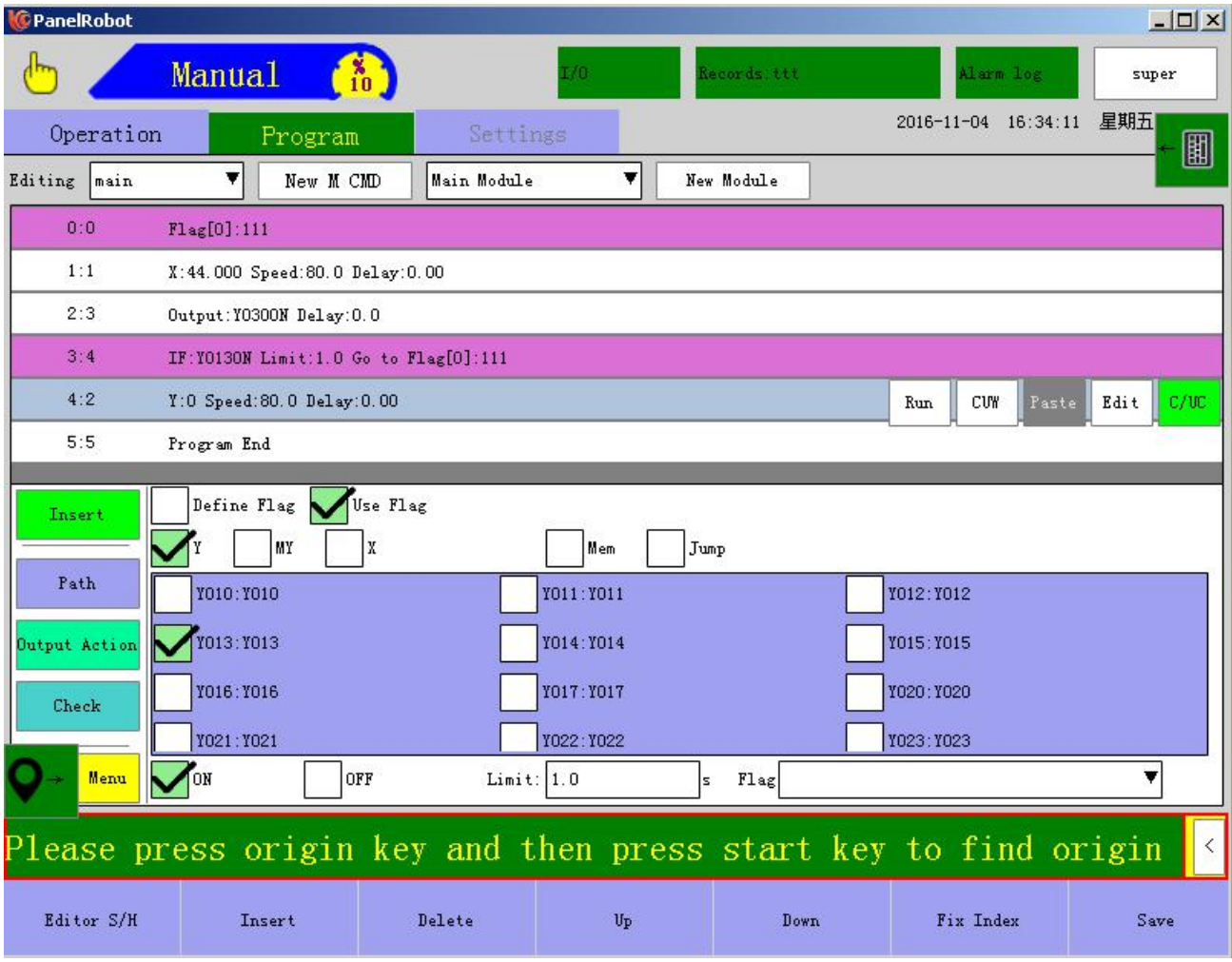
button to enter the following interface,On this page you can select the valve to be tested.



3.1.2.6 Condition

Click the 

button to enter the following interface:

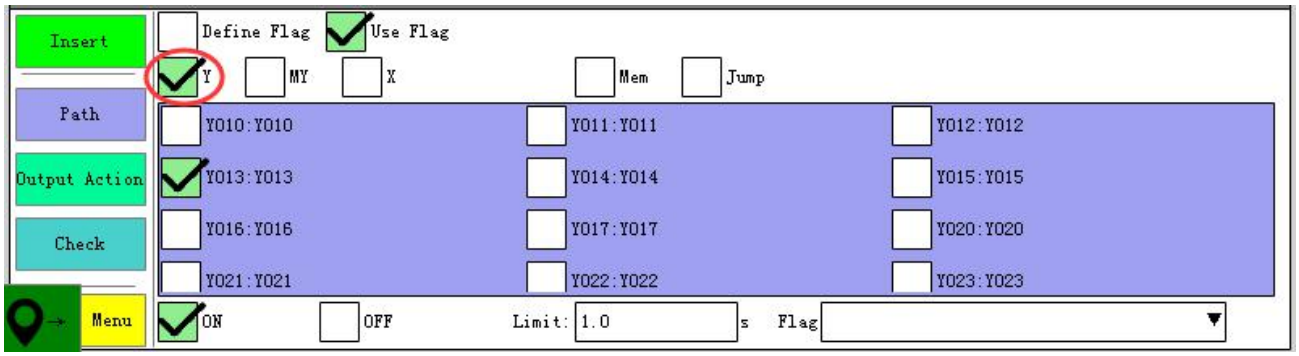


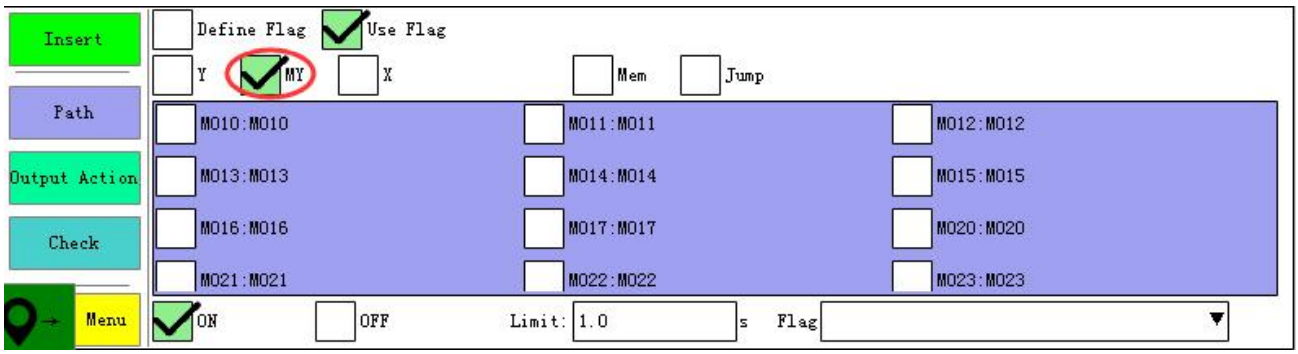
How to use labels:

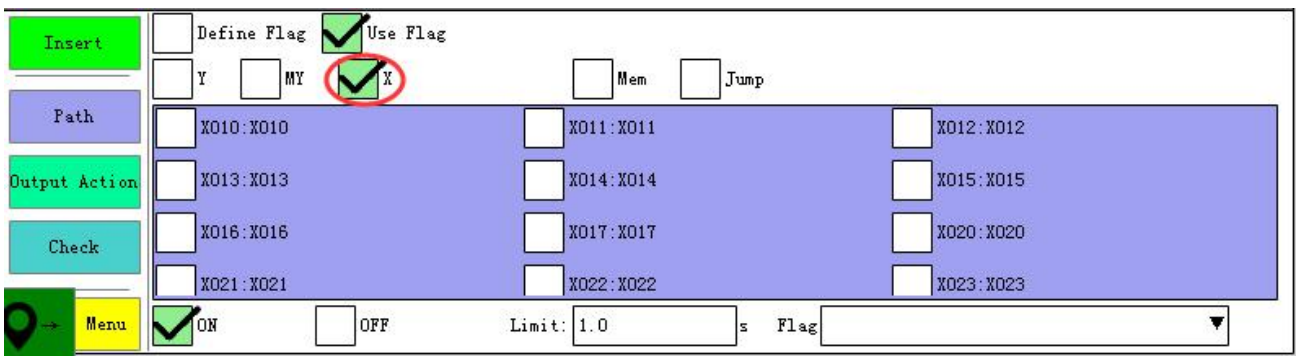
1, check the √ definition label "option, click the label edit box" label ▭ "pop-up keyboard edit name.

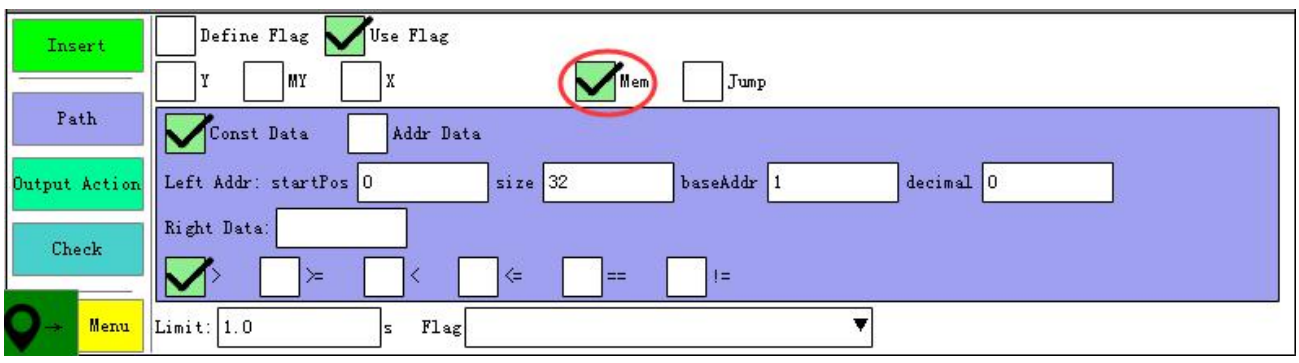
2, in the program need to jump into the location of the previous step from the good tag name.

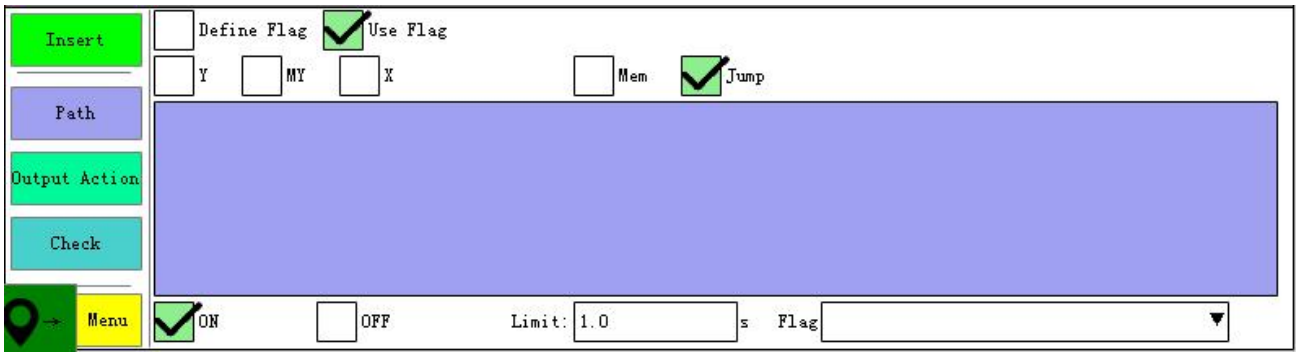
3, check √ "use labels" option to enter the condition selection interface:


Insert
Path
Output Action
Check
Menu
Define Flag
Use Flag
Y
MY
X
Mem
Jump
Y010:Y010
Y011:Y011
Y012:Y012
Y013:Y013
Y014:Y014
Y015:Y015
Y016:Y016
Y017:Y017
Y020:Y020
Y021:Y021
Y022:Y022
Y023:Y023
ON
OFF
Limit:
1.0
s
Flag


Insert
Path
Output Action
Check
Menu
Define Flag
Use Flag
Y
MY
X
Mem
Jump
M010:M010
M011:M011
M012:M012
M013:M013
M014:M014
M015:M015
M016:M016
M017:M017
M020:M020
M021:M021
M022:M022
M023:M023
ON
OFF
Limit:
1.0
s
Flag


Insert
Path
Output Action
Check
Menu
Define Flag
Use Flag
Y
MY
X
Mem
Jump
X010:X010
X011:X011
X012:X012
X013:X013
X014:X014
X015:X015
X016:X016
X017:X017
X020:X020
X021:X021
X022:X022
X023:X023
ON
OFF
Limit:
1.0
s
Flag


Insert
Path
Output Action
Check
Menu
Define Flag
Use Flag
Y
MY
X
Mem
Jump
Const Data
Addr Data
Left Addr: startPos
0
size
32
baseAddr
1
decimal
0
Right Data:
>
>=
<
<=
==
!=
Limit:
1.0
s
Flag

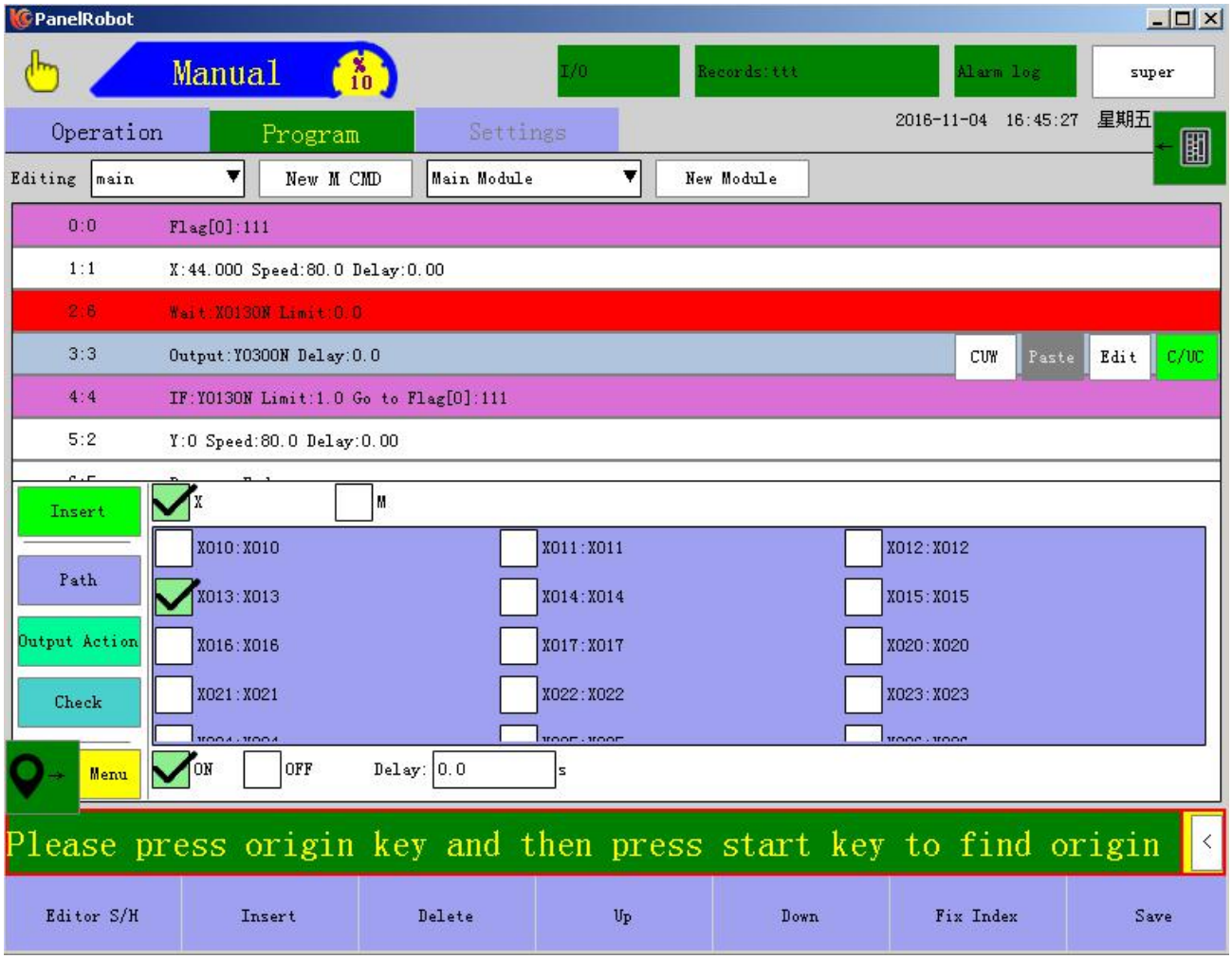


1、Edit the conditions in the need to insert the location after click [insert] button.

3.1.2.7 Wait

Click the 

button to enter the following interface:



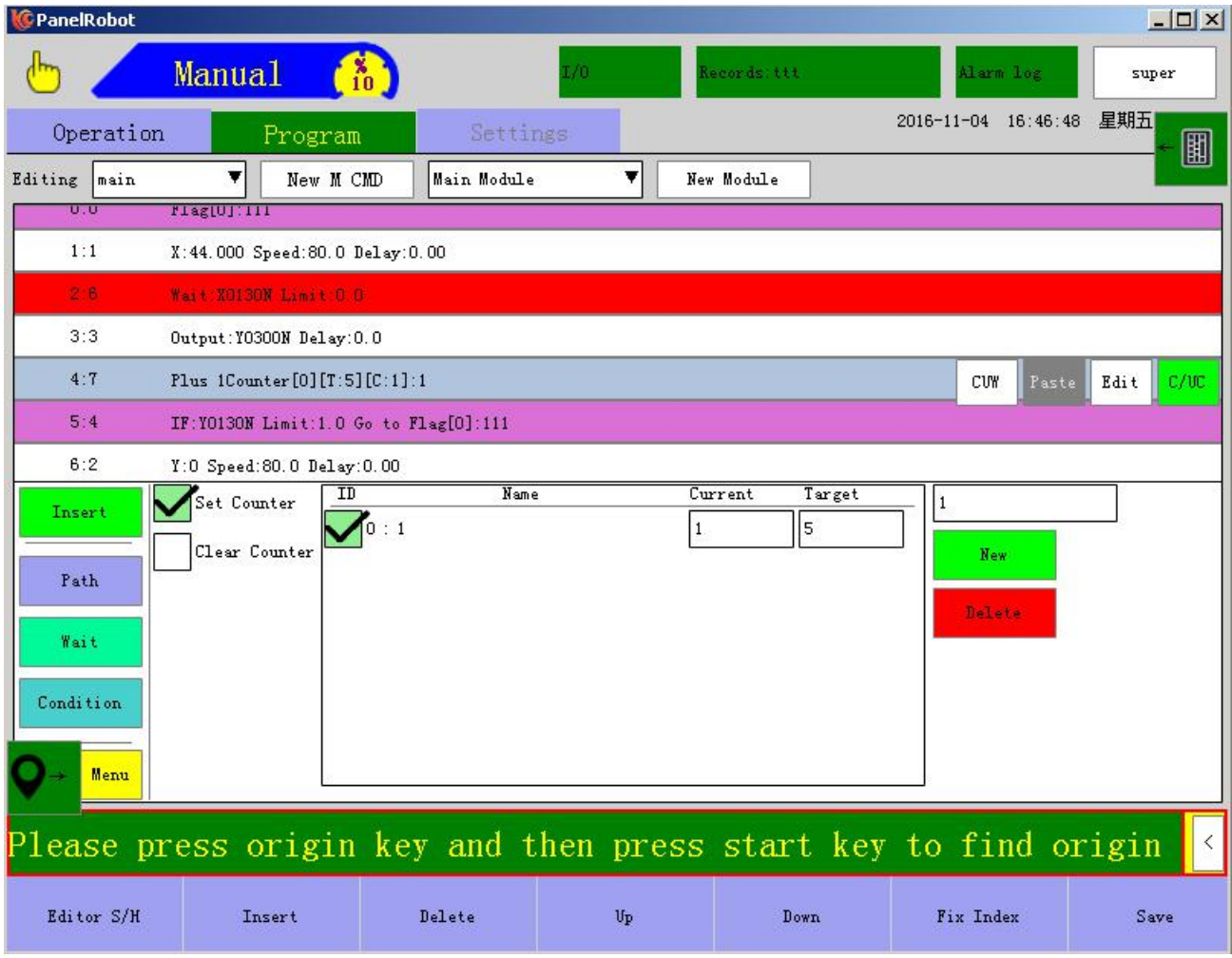
Wait for signal insertion method: select the type of wait point → select the wait point of the off → set the delay time → click "Save" button → instruction page in the need to insert the location of the next click "insert".

Remark: When the action is executed to this step, the system will alarm if the output is not ON or OFF within the set waiting time.

3.1.2.8 Counter

Click the 

button to enter the following interface:



Counter category: plus 1 counter type zero-type counter.

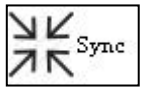
New counter method: Select the counter type → new counter name → click the "new" button → click "save" button → complete.

Current: The current counter count value, the value can be set according to the user's actual situation.

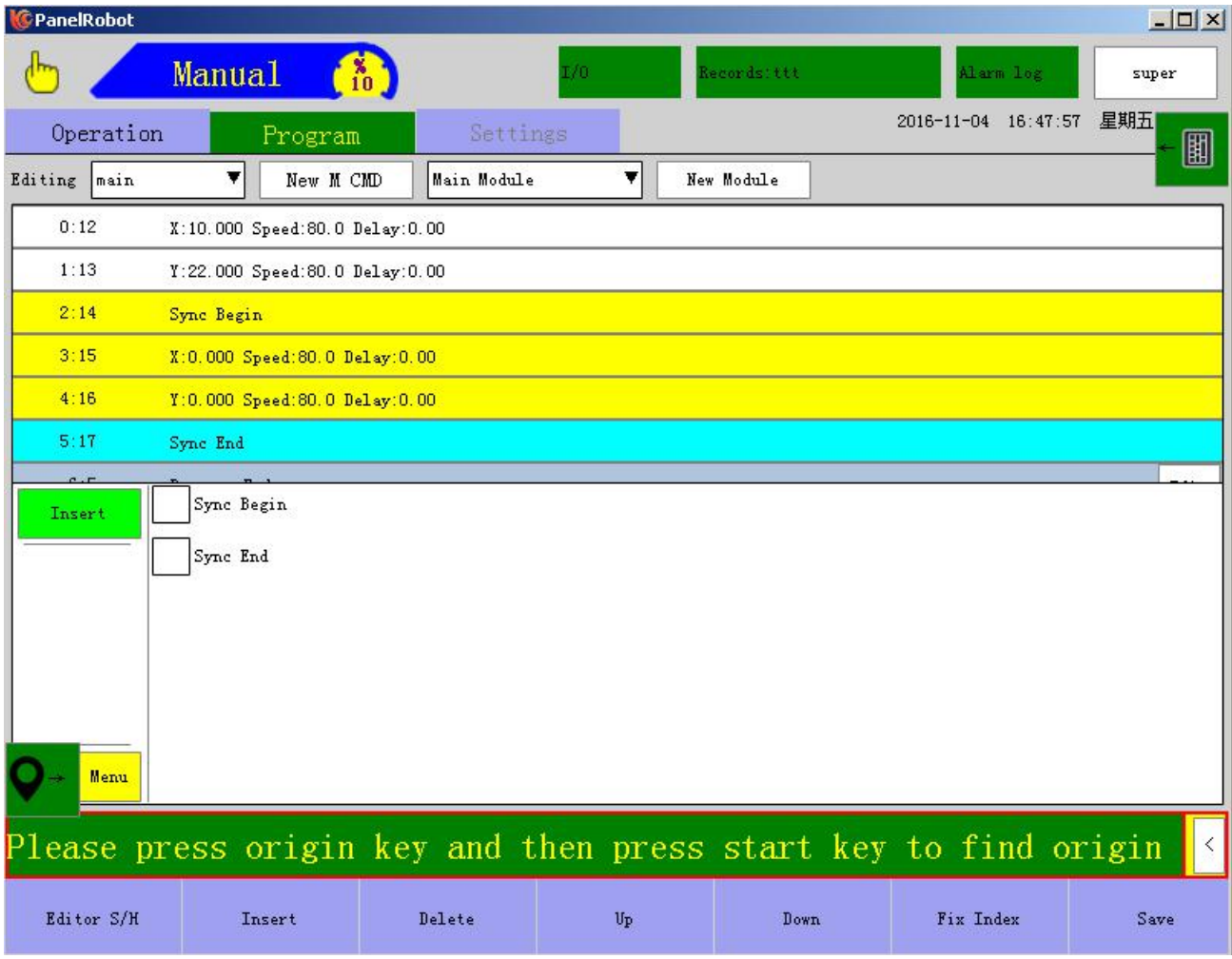
If the current value of the counter is set to 2, the robot will start from the second object and start to stack the second object. If the counter is defined by the current value, .

Target: The target output for the counter.

3.1.2.9 Sync

Click the 

button to enter the following interface:



Inserting a sync start and a sync end before and after a program indicates that the program is combined to move simultaneously.

Note: 1, synchronization can not be nested with each other.

2, jump can not use the synchronization function.

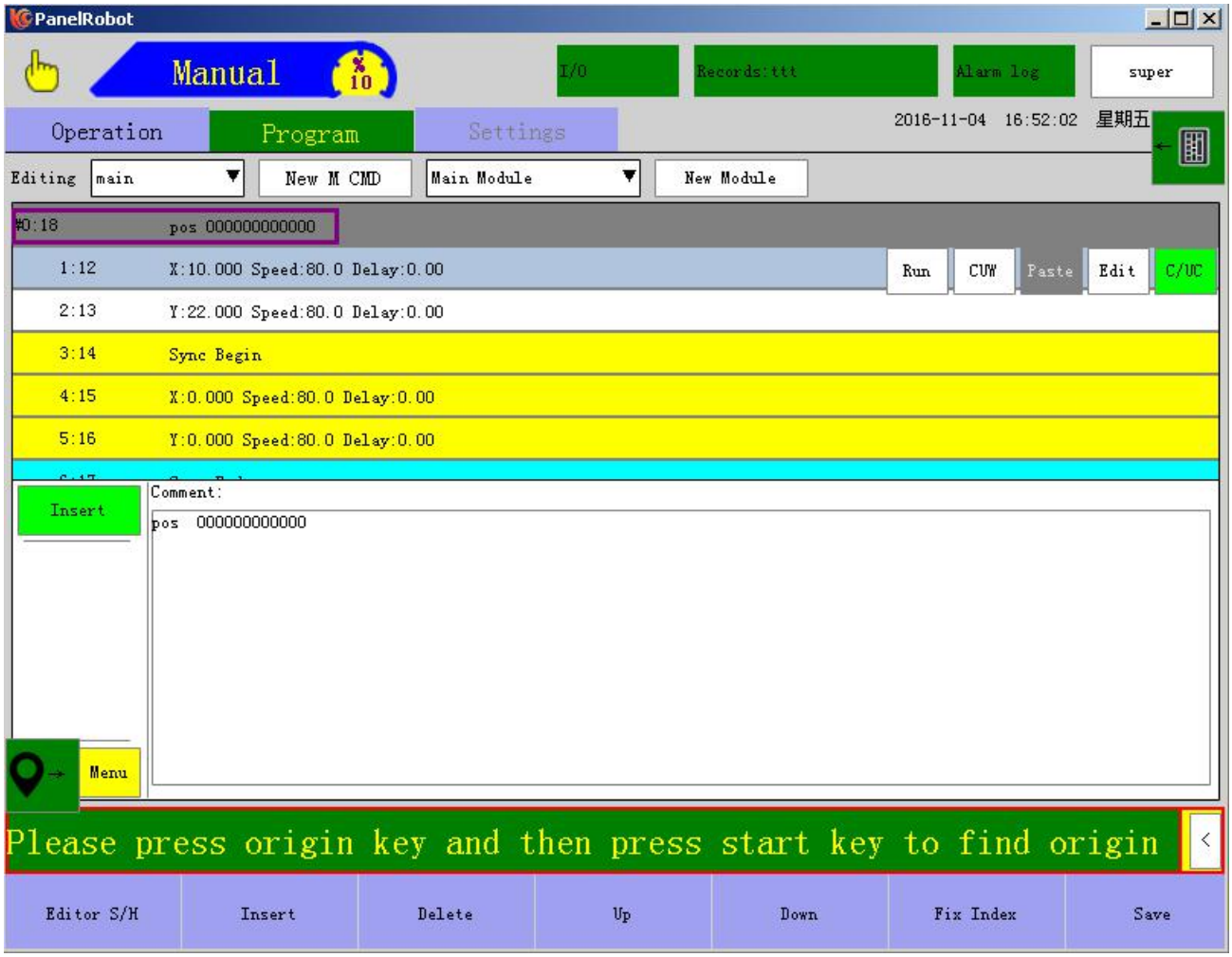
3, the beginning of synchronization and synchronization of the end of certain combinations appear, there must be synchronized to start teaching a synchronous end.

3.1.2.10 Comment

Click the 

button to enter the following interface:

Note that the meaning of the mark, when the user teaches a lot of programs if too much looks will look messy, then the different procedures before and after the corresponding comments to facilitate the search problem.

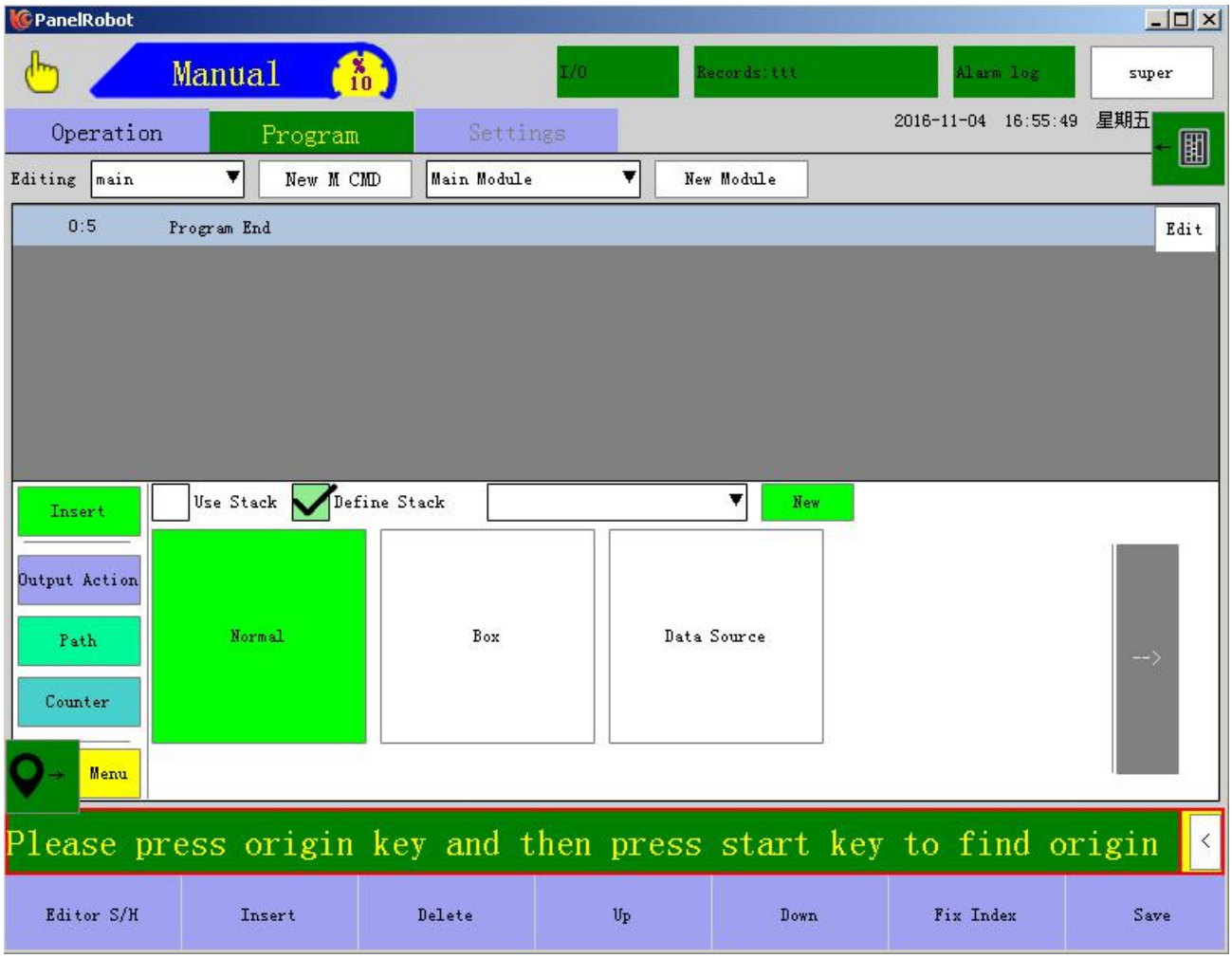


Note Edit method: in the blank click into the name edit box → edit the name and click "Save" key → select the location to insert the next line, click "insert".

3.1.2.11 Stack

Click 

button to enter the stack edit page, as shown below:



Stacking type classification:1,Normal; 2,Box;3,Data Source

Normal stacking

General stacking can be divided into two categories: rectangular shape, as the name suggests can be square out of the items; offset stack, can be stacked into a diamond shape can also be stacked on a slope (Z-axis offset).

Stacked rectangular shape of the operation method:

1, first click the "New" button to create a new stack name or open the file name has been built.

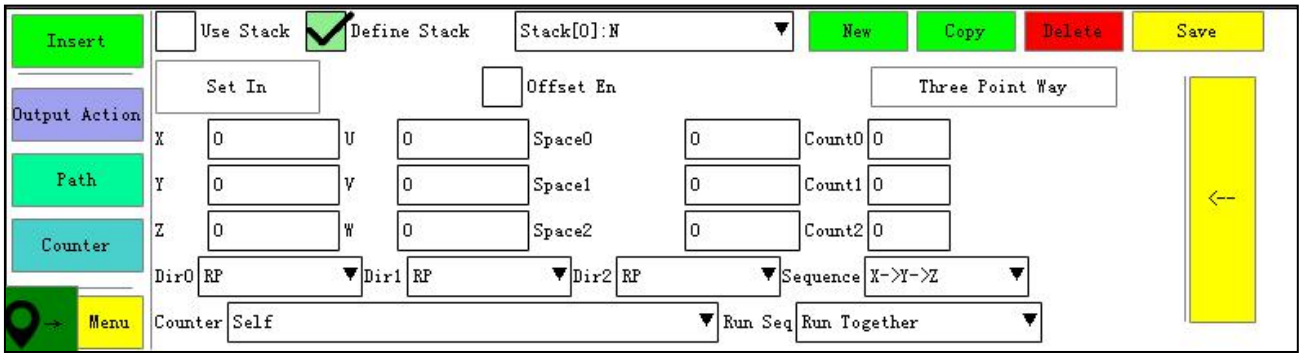
2, click "→" to enter the stack editing interface.

3, Set the starting point coordinates and spacing.

There are two ways to set up:

Use the three-point method to set: three-point method is to use has been set to automatically calculate the three points offset, spacing.

The first step, in the manual state click "three-point method set" button to enter the edit page shown below.



In the second step, move the robot to the starting position of the stack and then click the “Set In” button to set the current coordinate value into the coordinates edit box of each axis.

In the third step, move the manipulator to the next point in the X1 axis direction and then click the [Set] button to set the coordinate value to the X1, Y1 coordinates edit box. Then move the robot to the next point in the Y1 axis direction and then click the [Set] button to set the coordinate value to the X1, Y1 coordinates edit box.

Step 4 Click the [OK] button to return to the previous page for other settings.

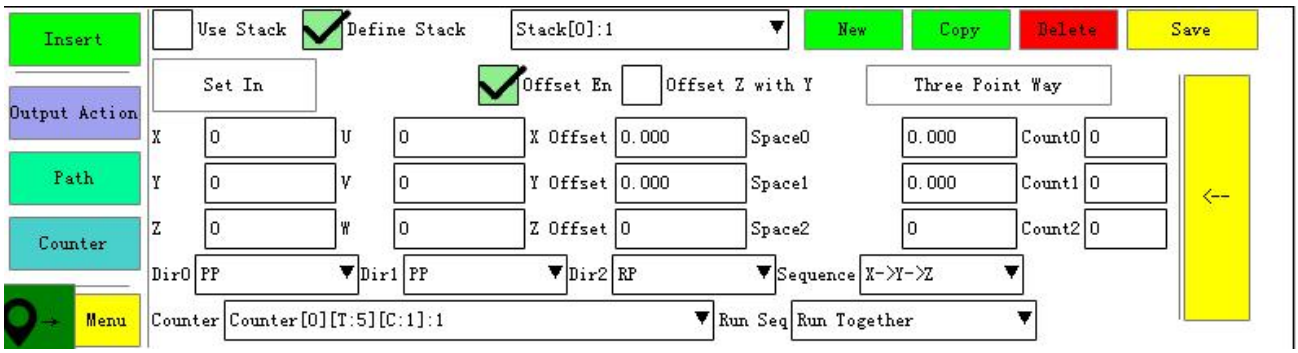
Do not use the three-point method: Calculate the spacing manually.

In the first step, enter the interface as shown in the figure below. Move the robot to the stacking start point manually and then click the [Set] button to set the current coordinate value to the coordinate edit box of each axis.

In the second step, manually measure the spacing between the points in each axis and edit the spacing values into the corresponding edit boxes.

In the third step, set the direction of stacking of each axis, and the positive direction refers to the direction of the axis position + (press the axis button on the hand controller to identify the direction of the axis position).

5, set the stack count, order, counter and run the order, the interface as shown below:



Count: Set the number of heap points on the axis.

Run Sequence: Sets the order in which each axis is stacked.

Counter selection: "self" means that the program runs a mode, the system default counter has been increased by 1; custom counter (in the action menu -> [counter] to set).

6, edit the data and click [Save] button.

7, playing √ "using the stack" in the "stack" in the choice of using the stack, and set the stack speed, choose a good location in the program click on "set" to edit the stack to teach.

8, if the use of custom counters to be inserted in the process of teaching the stack counter plus 1 otherwise the counter does not count.

The offset heap method of operation:

The use of offset stacks can be piled into a diamond shape or stacked on a sloped surface (Z-axis offset)

1, first click the "New" button to create a new stack name or open the file name has been built.

2, click "→" to enter the stack editing interface.

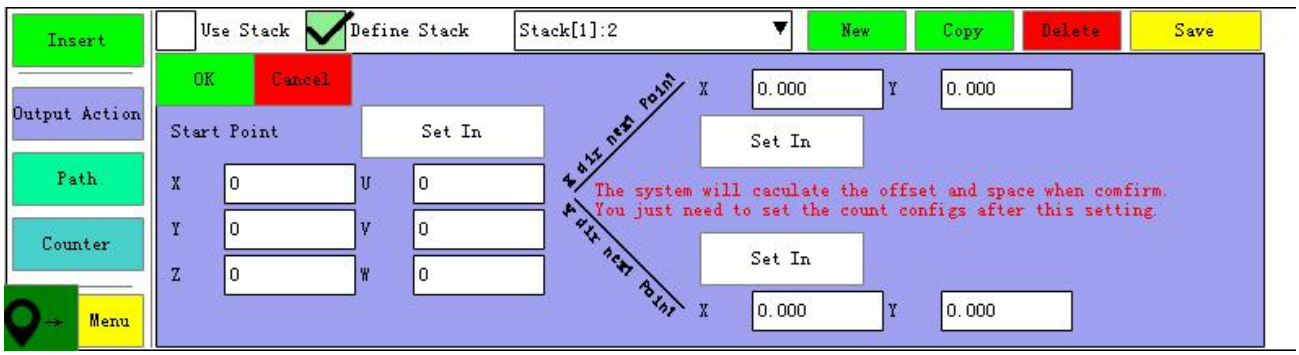
3. Check the [Use Offset] option

4, Set the starting point coordinates and spacing.

Diamond-shaped heap when the starting point and spacing of the set there are two ways:

Use the three-point method to set: three-point method is to use has been set to automatically calculate the three points offset and distance.

The first step, in the manual state click "three-point method set" button to enter the edit page shown below.



In the second step, move the robot to the starting position of the stack and then click the [Set] button to set the current coordinate value into the coordinates edit box of each axis.

In the third step, move the manipulator to the next point in the X1 axis direction and then click the [Set] button to set the coordinate value to the X1, Y1 coordinates edit box. Then move the robot to the next point in the Y1 axis direction and then click the [Set] button to set the coordinate value to the X1, Y1 coordinates edit box.

Step 4 Click the [OK] button to return to the previous page for other settings.

Not using the three-point method: manually calculate the offset distance and spacing of the axis.

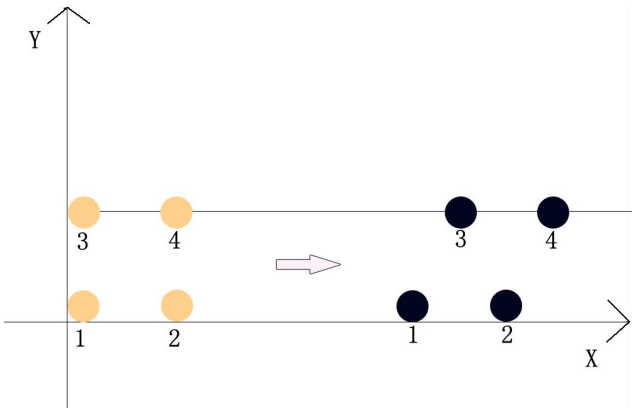
In the first step, enter the interface as shown in the figure below. Move the robot to the stacking start point manually and then click the [Set] button to set the current coordinate value to the coordinate edit box of each axis.

In the second step, manually measure the distance and offset between points in each axis and edit the spacing and offset values into the corresponding edit boxes.

The third step is to set the stacking direction of each axis, and the positive direction refers to the direction of the axis position + (press the axis key on the hand controller to identify) the reverse refers to the direction of the axis position.

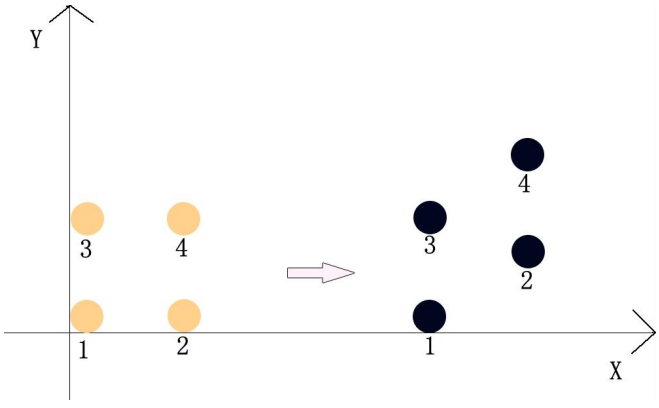
X, Y offset effect map:

The effect of the X offset is shown below, with the left unbiased and the right shifted by the X offset.



Before unbiased After the offset

The effect of the Y offset is shown below, with the left unbiased and the right shifted by X offset.



Before unbiased After the offset

Inclined pile starting point, pitch setting mode:

The first step is to move the manipulator to the stack start position manually and then click the [Set] button to set the current coordinate value to the coordinates edit box for each axis.

In the second step, set the offset distance in the Z direction (default is Z in the X direction). If you want to offset Z in the Y direction, check the [Y direction offset Z] option.

The third step, set the stacking direction, count, order, counter and run the order.

Direction: Direction, direction of axis position +, direction of minus axis, axis direction.

Count: Sets the number of points to be stacked on the axis.

Run Sequence: Sets the order in which each axis is stacked.

Counter selection: "self" means that the program runs a mode, the system default counter has been increased by 1; custom counter (in the action menu -> [counter] to set).

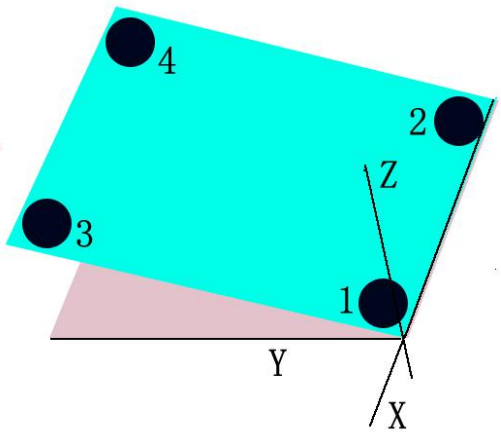
The fourth step, edit the data and click [Save] button.

The fifth step, playing √ "using the stack" in the "stack" in the choice of using the stack, and set the stacking speed, choose a good location in the program click on "Settings" to edit the stack to teach.

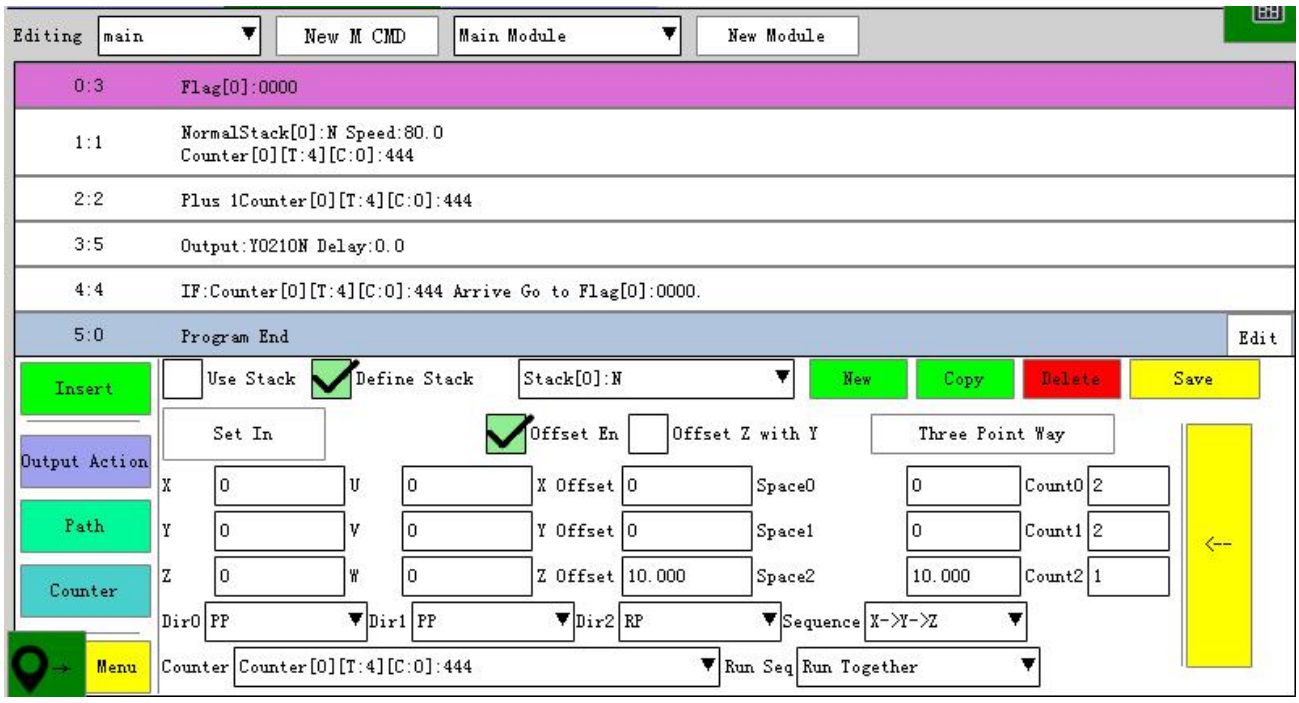
The sixth step, if you use a custom counter to be inserted in the process of teaching the stack counter plus 1 or counter does not count.

Slope offset Stacking Example:

Suppose you need to pile up four circles in the following heap position .

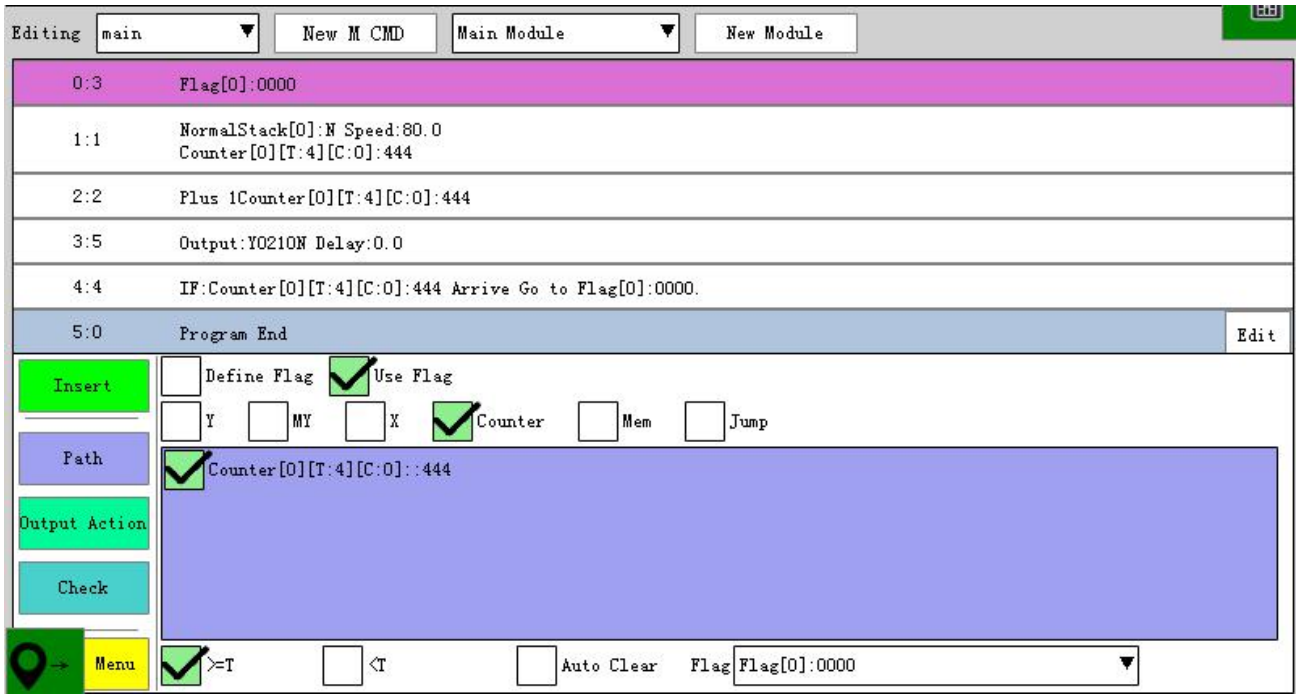


Teaching Page Setup:



Note: 1, because the counter is selected from the definition of the technology will need to teach more than one stack after the counter plus 1

2, if the counter is full, such as after the start of the new conditions, the need to use conditions to clear the jump, conditional Jump page settings as shown below:



Boxing and in-box stacking

Packing and in-box stacking Method of use:

1, select the "box and box stacking" option.

2, click "→" to enter the stack editing interface.

3, first click the "New" button to create a new stack name.

4, in this interface set up under the first box, the spacing between products, quantity, order, direction, and the choice of counter.

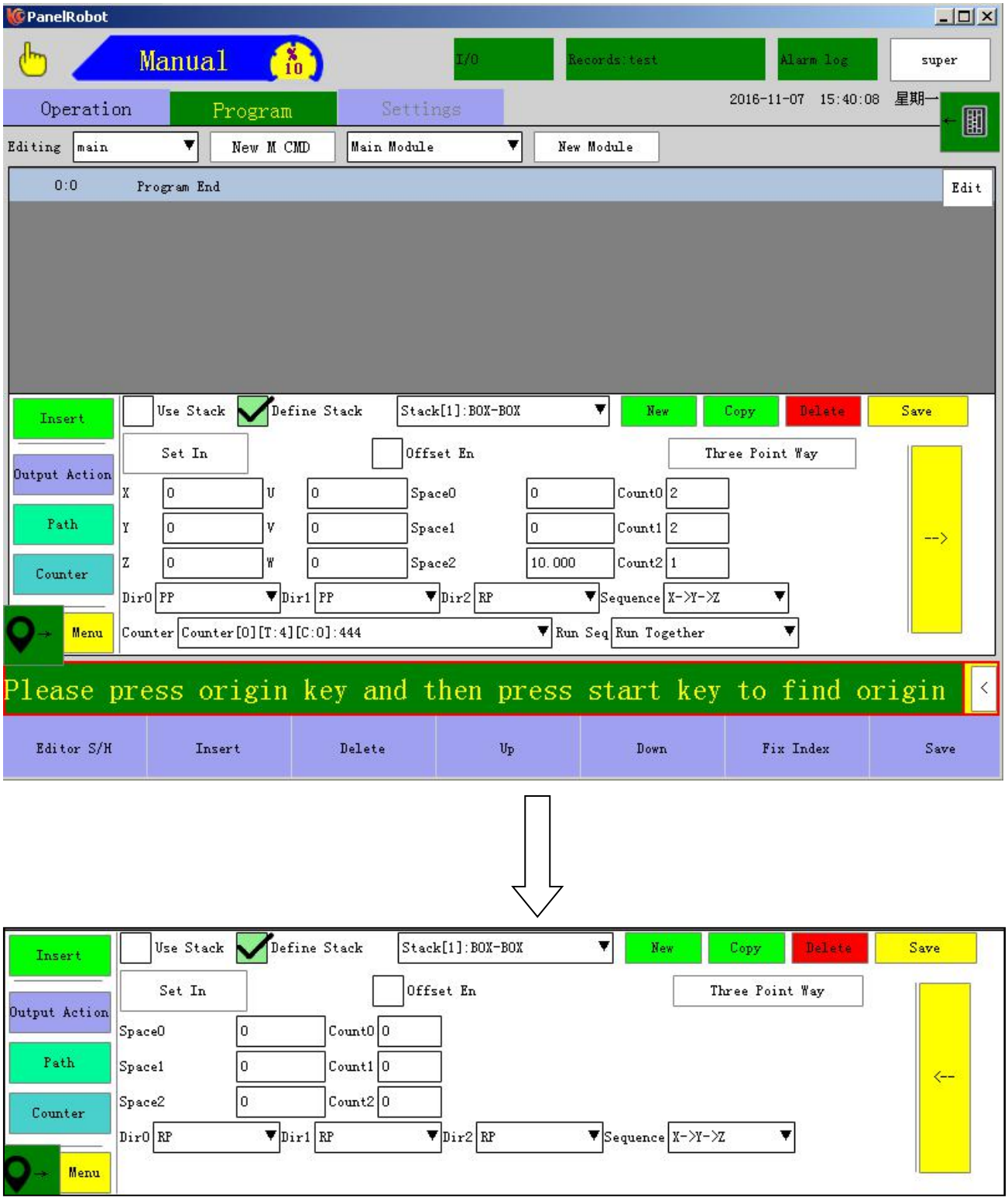
5, click "→" to enter the next editing interface This interface is set between each stacking box spacing, number, order, direction and the choice of counter.

6, set all the data Click the Save button.

7, playing √" "use stack "stack" in which to choose which stack, and set the stack speed,

select a good location in the program click on "set" to edit the stack to teach.

"Use Offset": When selected, offset the previous stack point by the set distance.



Data source stacking

Data source stack usage:

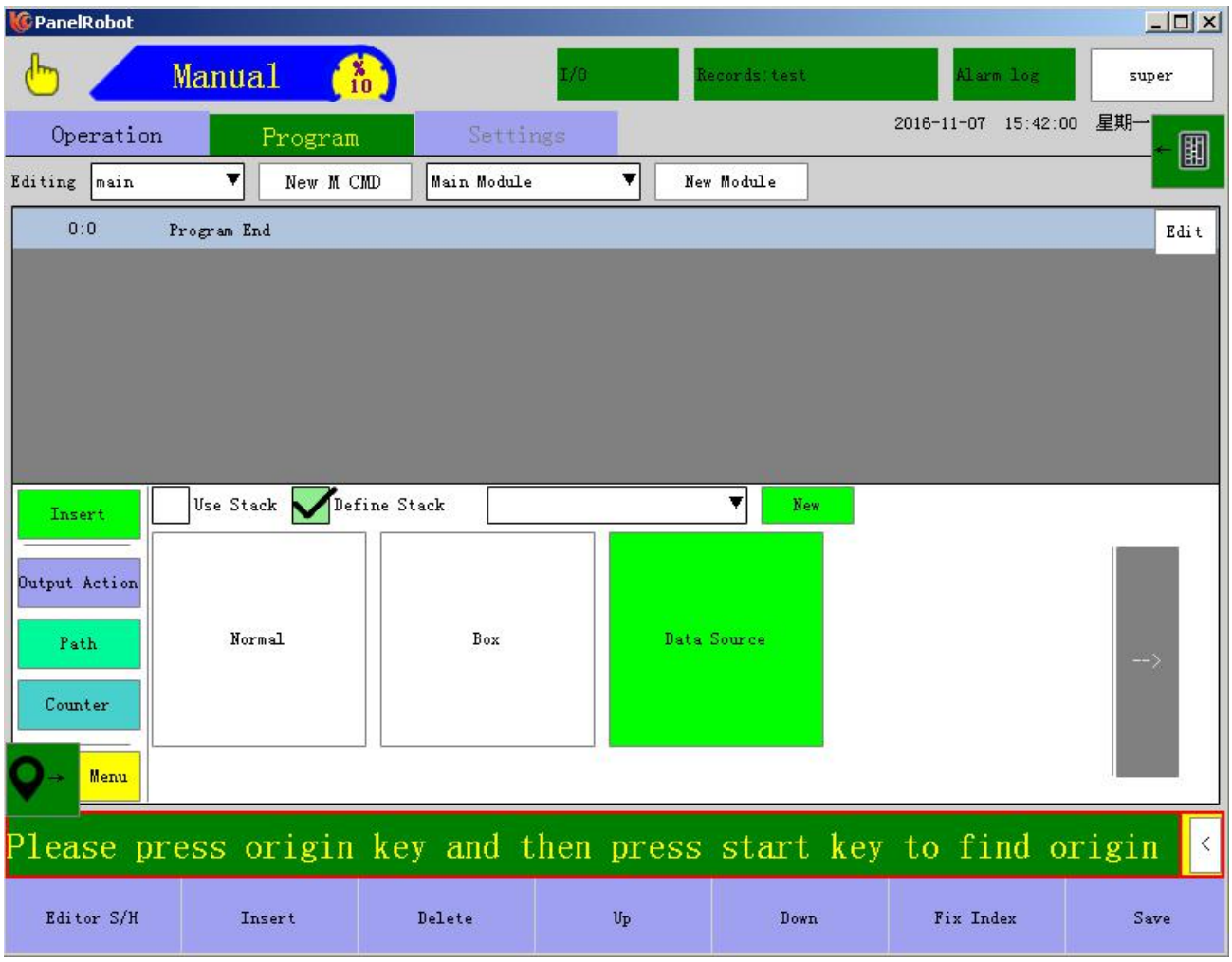
1, select the "data source stack" option.

2, first click the "New" button to create a new stack name.

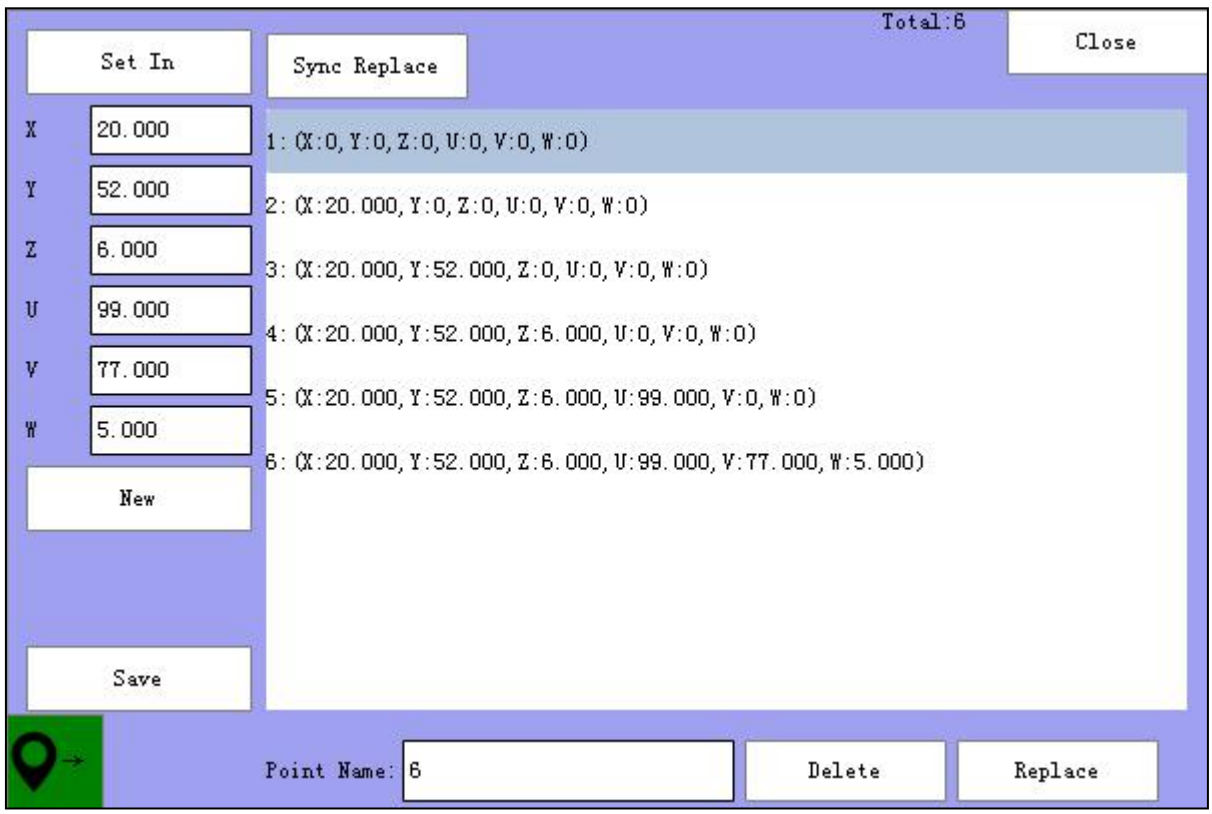
3, click "→" to enter the stack editing interface.

4, select the data source type, the data source type is divided into two types of irregular points (for irregular stacking), such as select this and then click "Edit Point" into the edit point box on the specific editing specific user ID.

5, playing √" "use stack "stack" in which to choose which stack to use, and set the stack speed, select a good location in the program click on "set" to edit the stack to teach.



Data source type option "irregular points" and then click "edit point" button to enter the point editing interface as shown below:

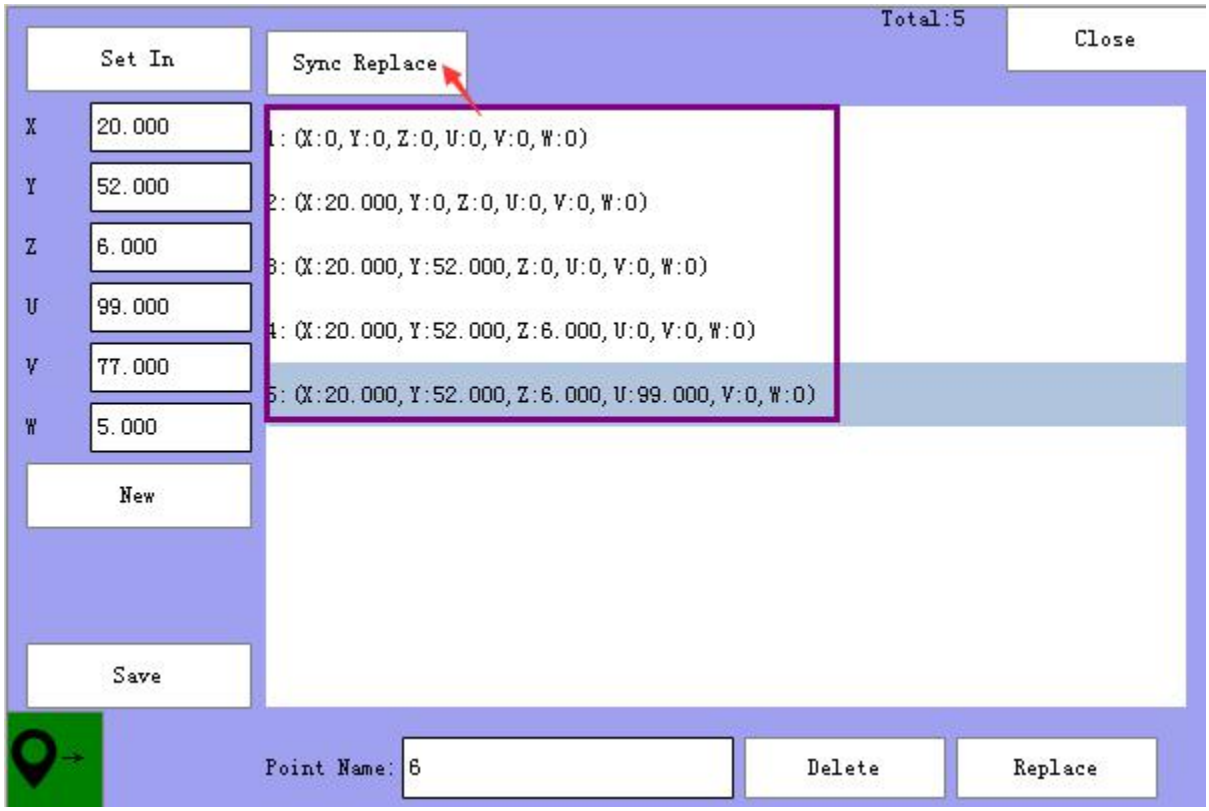


"Replace position": Click the edited position Click "Replace position" button to replace the old coordinate position with the current position.

"Synchronization Replacement": If the user has the position drawing and the starting coordinate of the drawing is inconsistent with the origin coordinate of the manipulator, it can be easily set in the irregular point by synchronous replacement.

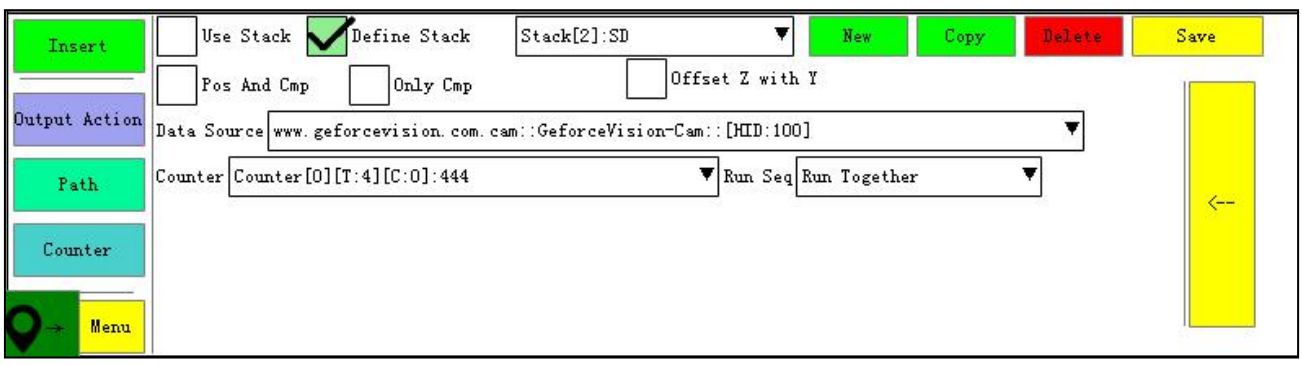
Here's how:

1, first edit the target points Assumptions need to edit the five points as follows:



2. Click the first point to change the coordinate value of the current point to the coordinate value of the origin (first point) of the drawing, and then click the [Save] button, as shown in the following figure:

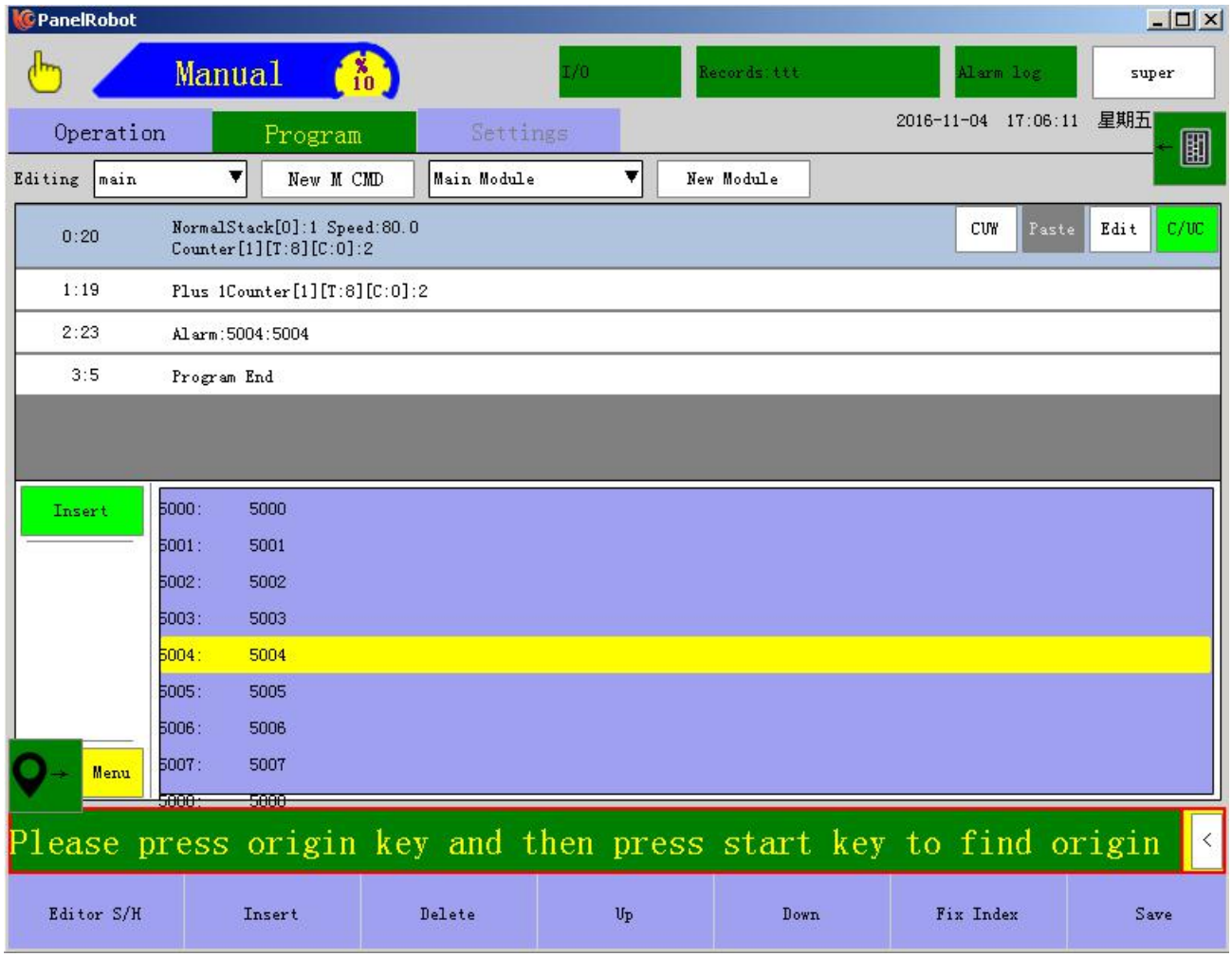
Dedicated user ID display interface:



3.1.2.12 Custom Alarm

Click 

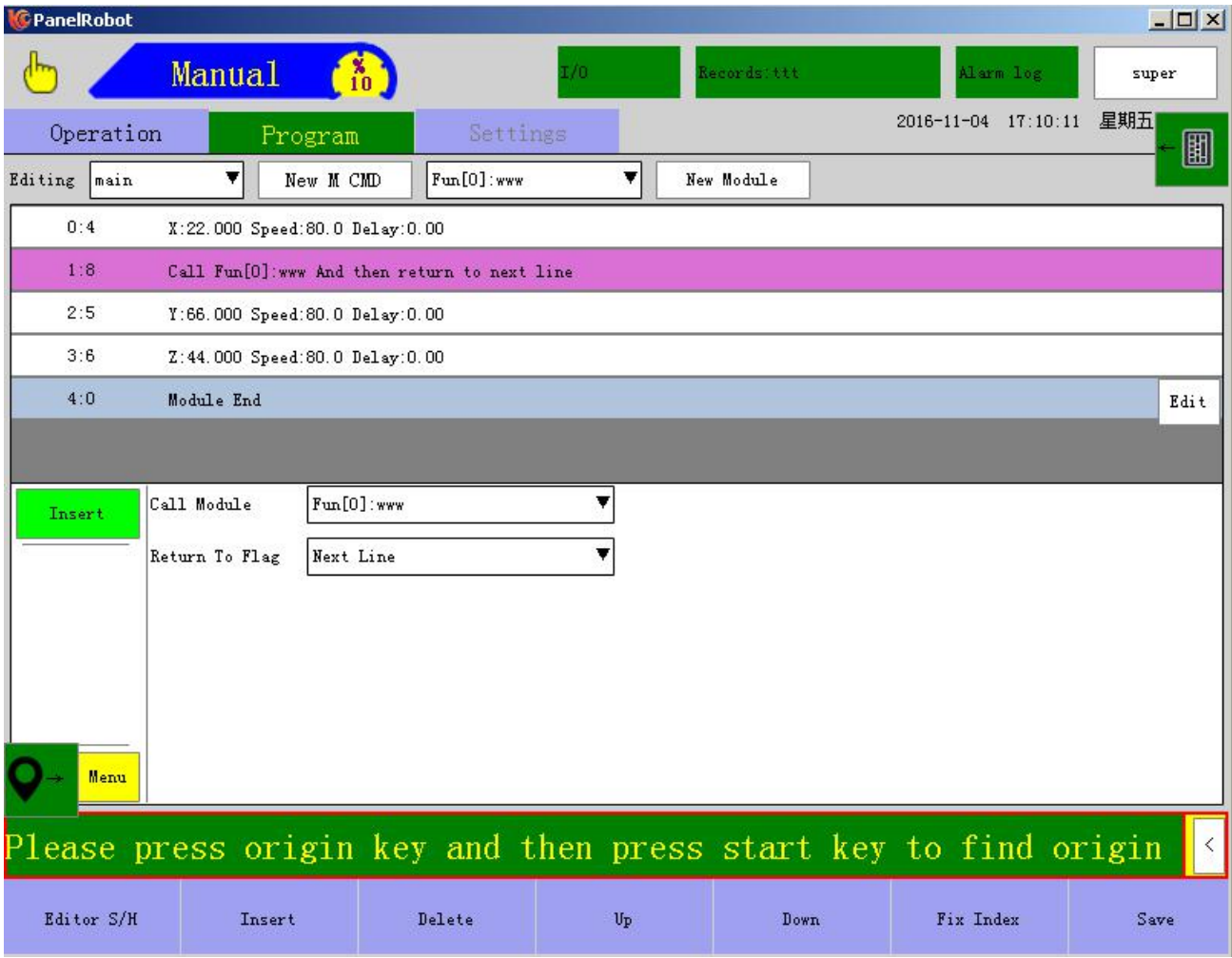
button to enter the following interface:



3.1.2.13 Module

Click 

button to enter the following interface:



Module New: Click "New Module" button → New Module Name → [Save] → In the current module to teach into the program → "Save"

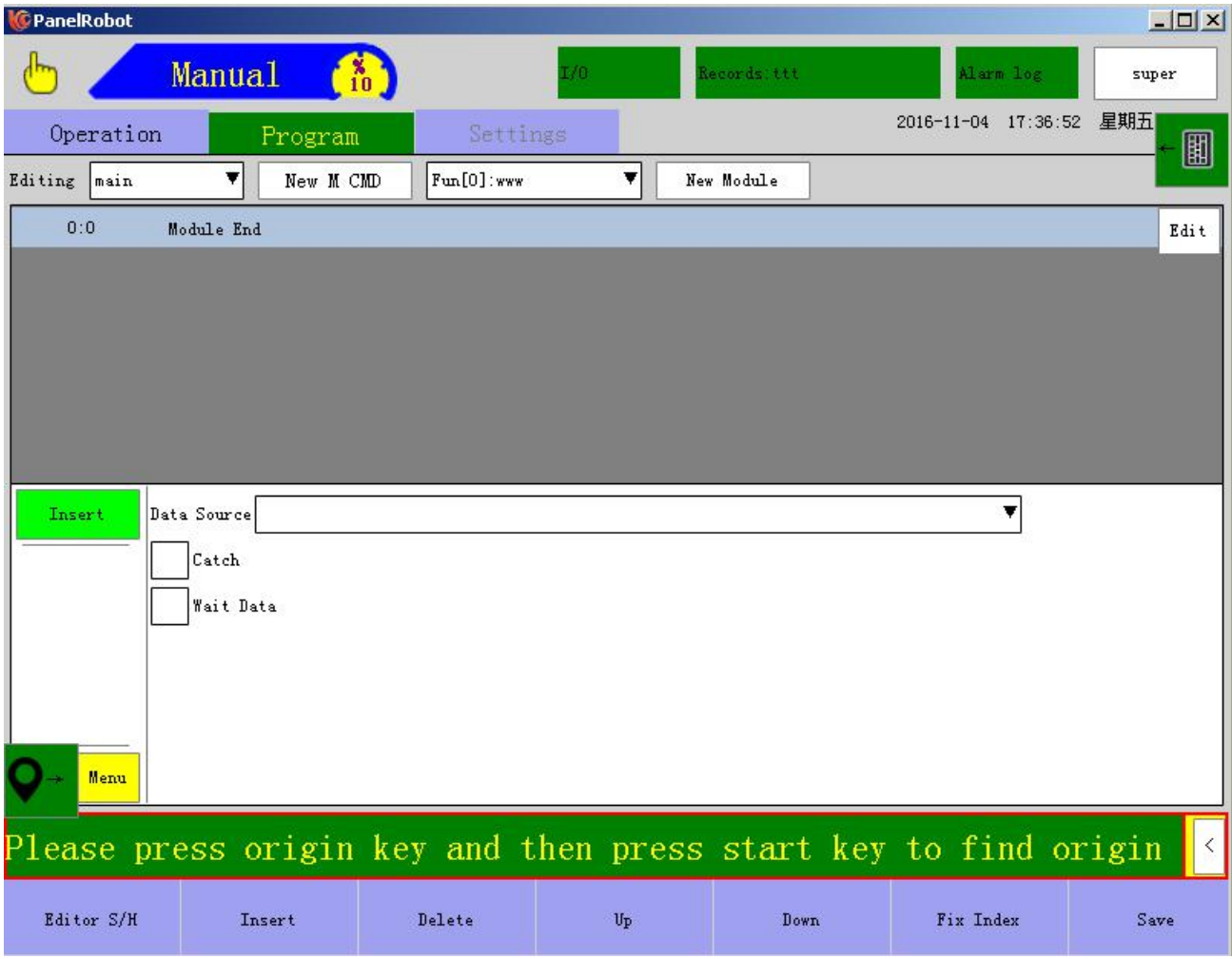
Deleting a module: Pull down the module menu, select the module name and click the [Delete module] button.

Module Insert Method: Pull down the "Call Module" menu Select the module to be called → Pull down the "Return Label" menu Select the return type (Note: If you select the label type, define the label and insert it in advance) → Select The next step of the location click [insert] can.

3.1.2.14 Vision

Click 

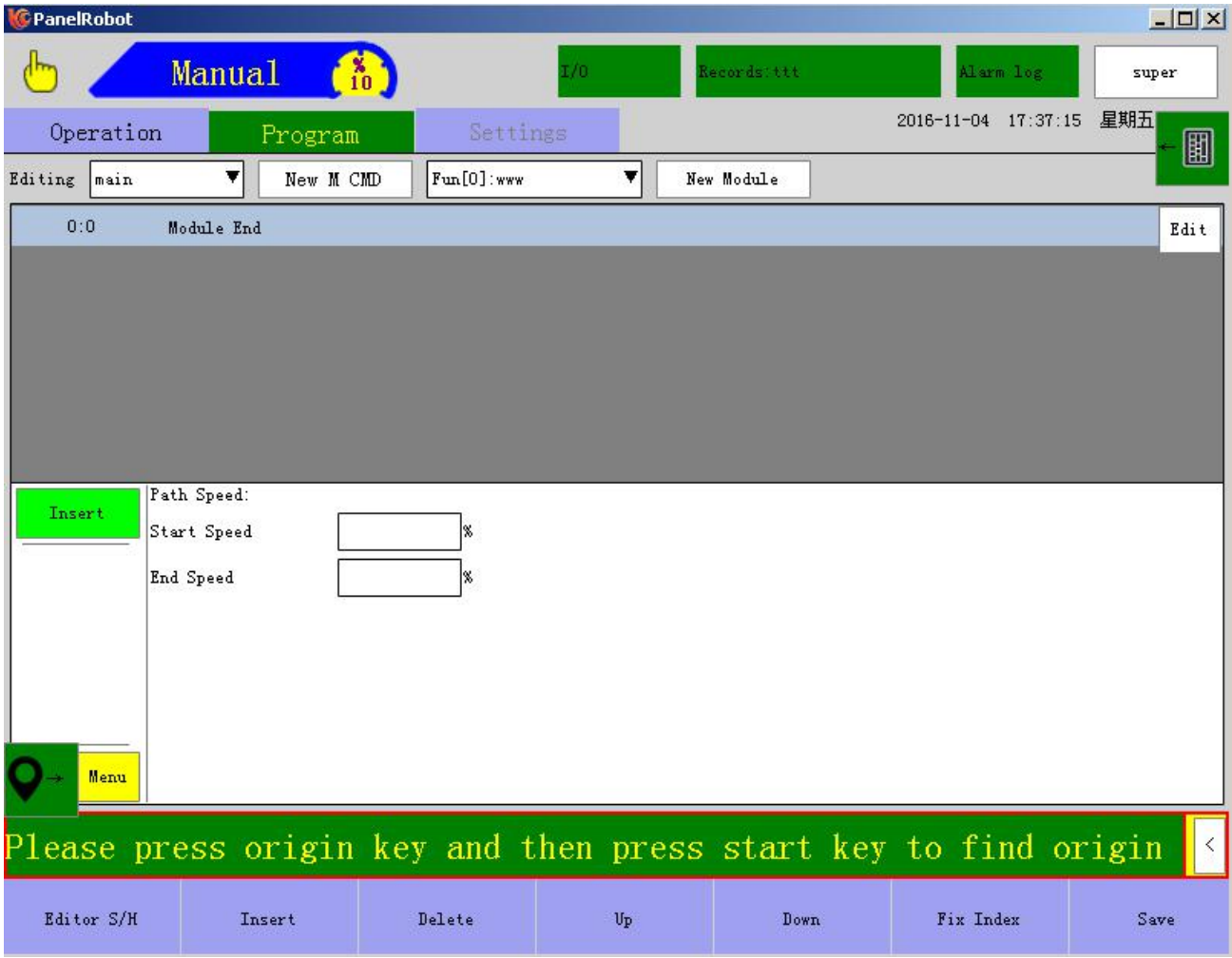
button to enter the following interface:



3.1.2.15 Path speed

Click 

button to enter the following interface:

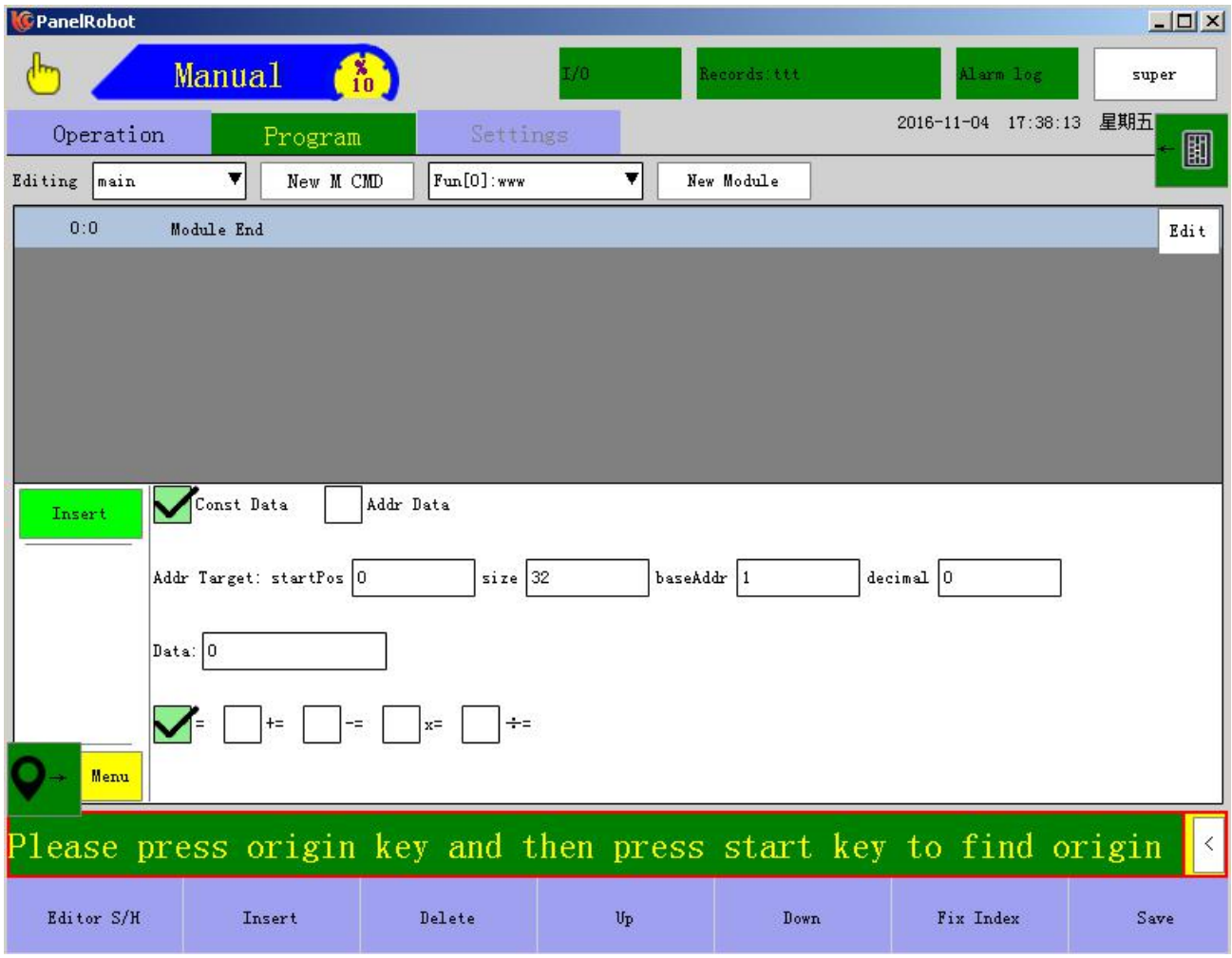


Scope: applies only to the line in the path and curve type of movement.

3.1.2.16 Data command

Click 

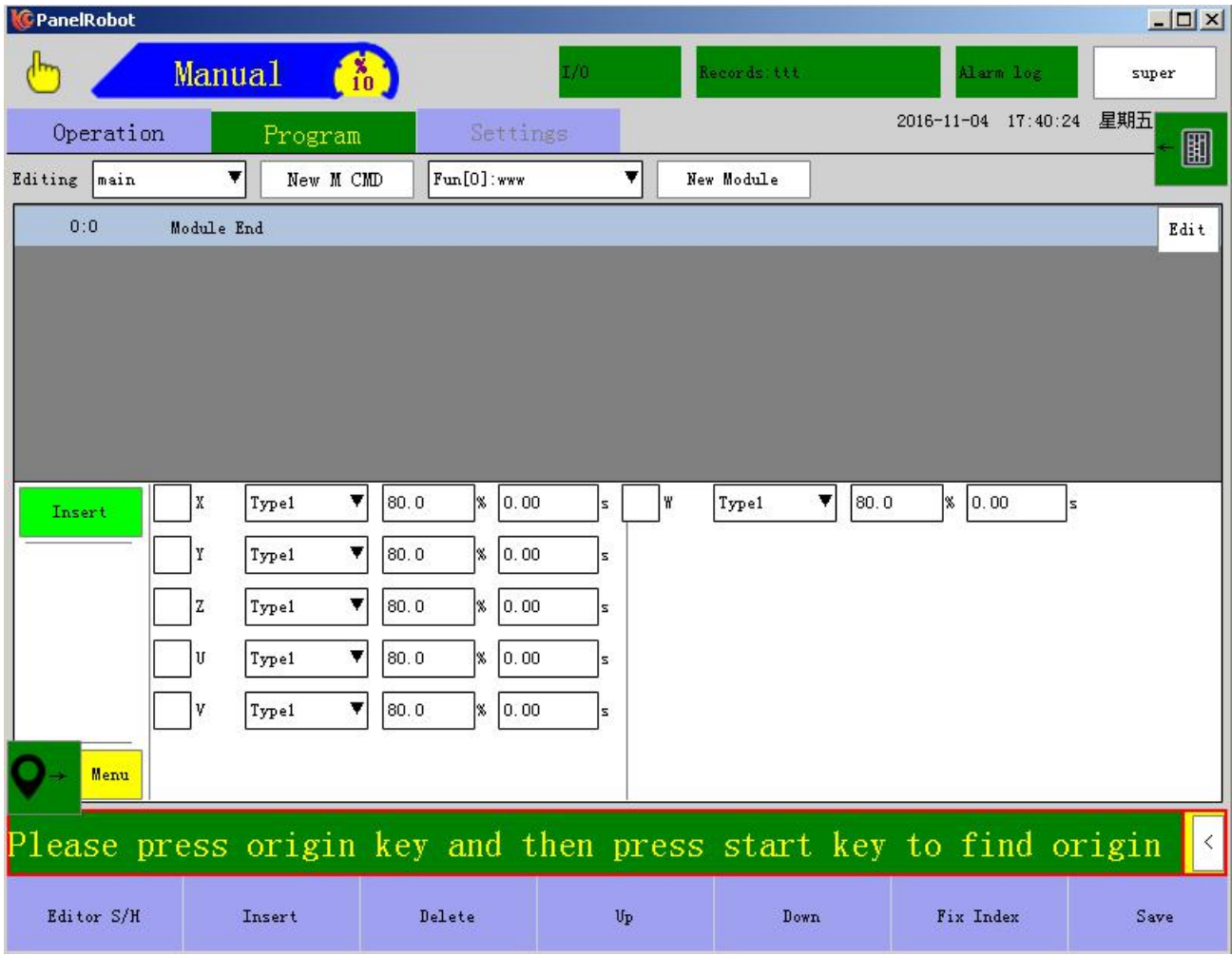
button to enter the following interface:



3.1.2.17 Origin

Click 

button to enter the following interface:



Function of origin command: In this interface, you can set the sequence and speed of axis homing.

Must be 

edited in this programmable button (pull down the "Edit" triangle button to select)

Insert Description:

1, inserted in the order of teaching represents the homecoming order.

2, set the speed of the axis back to the origin (Note: the speed of the origin should not be too fast to avoid collision).

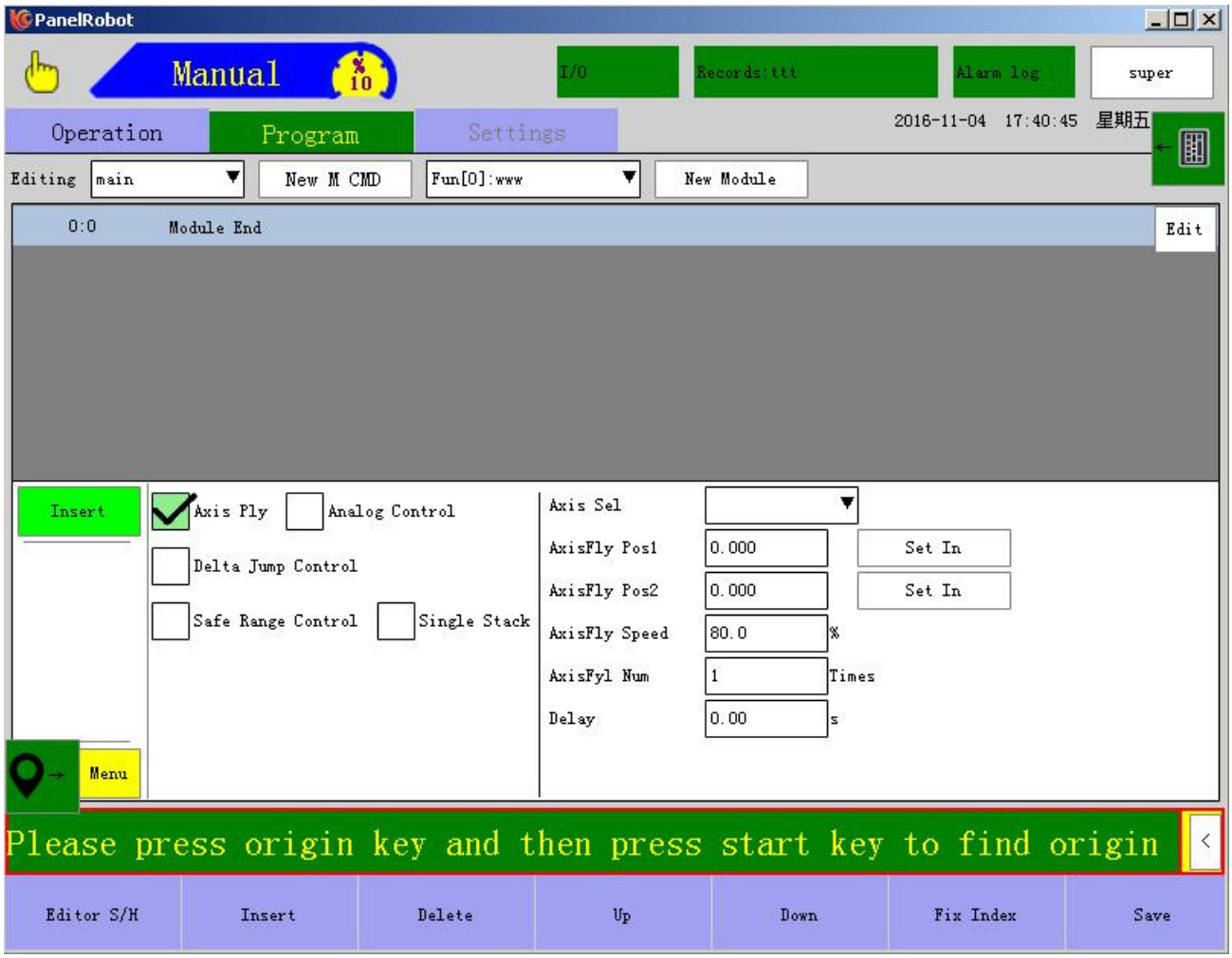
3, insert the synchronization in the program start and end of the synchronization can be homogenized at the same time the axis action.

4, set up after you remember to save the data.

3.1.2.18 Extent

Click 

button to enter the following interface:



Analog control: After selecting the check box, you can set the analog quantity. (Tip 1: Enable the analog input before using this function.) Note 2: The adjustment of the analog quantity can be operated by the "Cycle, Output Counter" button in the automatic mode.

Channel: The system supports up to 6 channels.

Delay: Set the analog delay time.

3.2 Manual operation

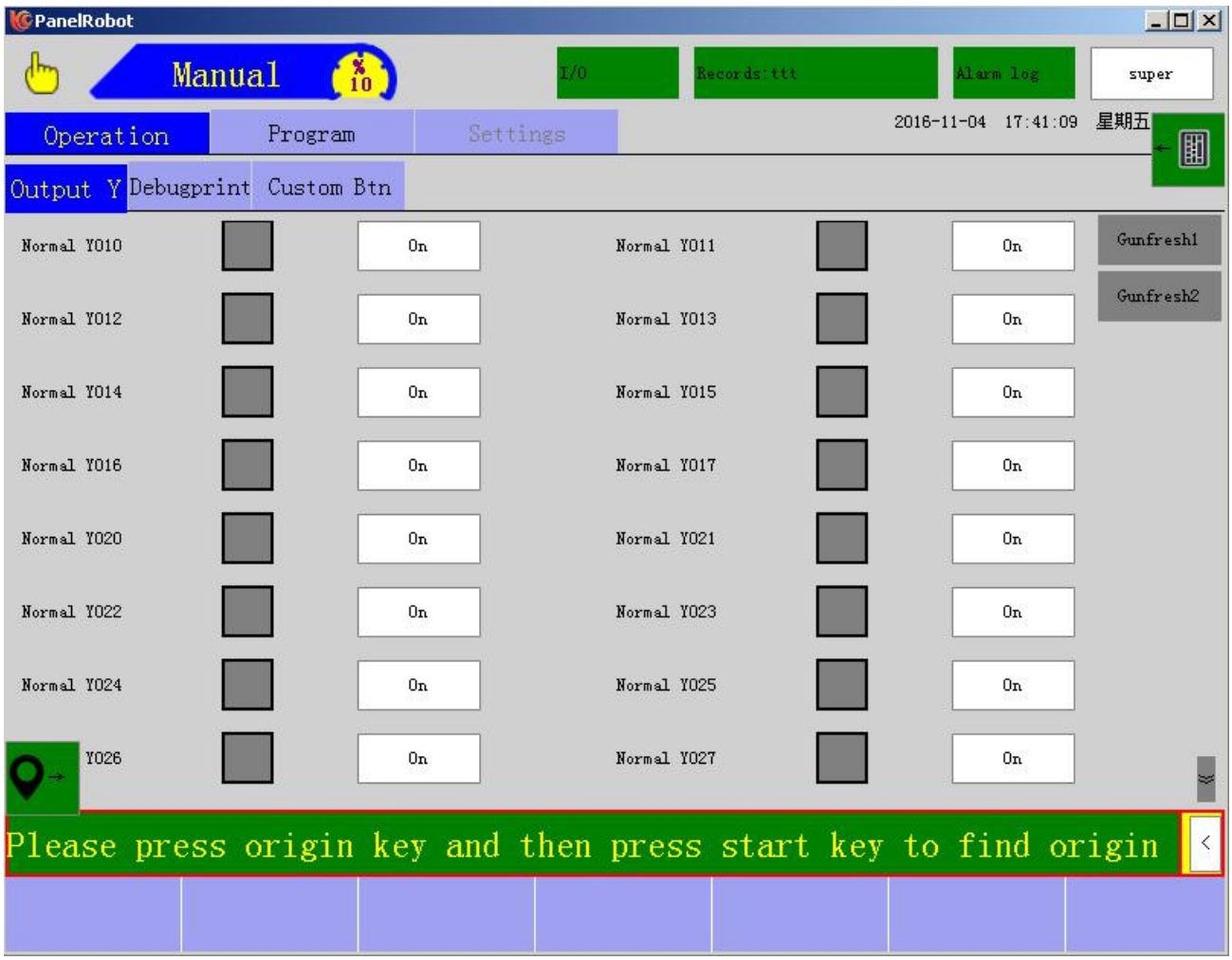
3.2.1 Signal output

In this interface, you can force a certain output point output, click the [pass] button corresponding to the light will turn green, if the corresponding output signal lights will be on.

Special Note

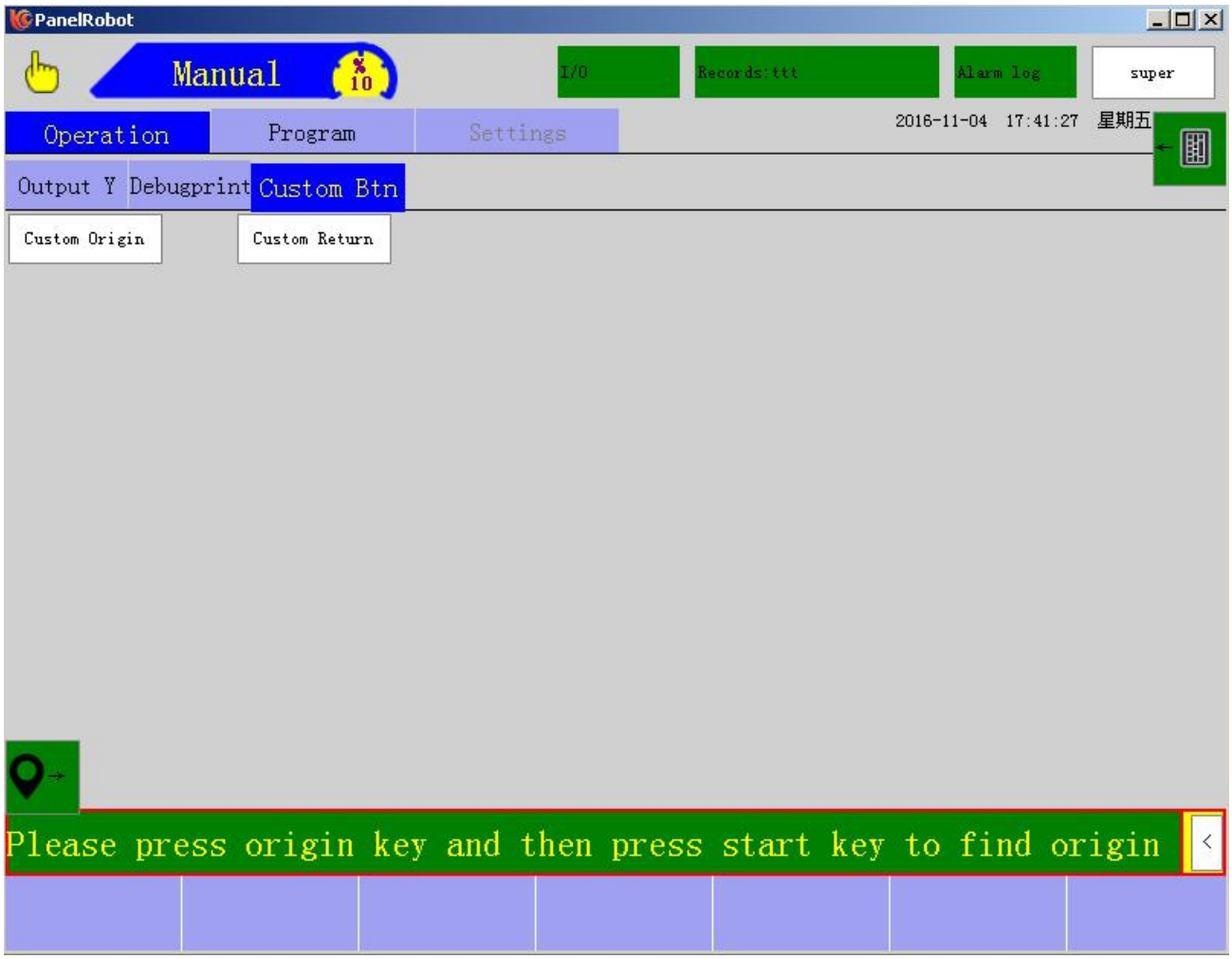
Wash / Rob 1: Click this button to atomize 1（Y014）, spray 1（Y015）, oil 1（Y016） These three lights will turn green.

2: Click this button to atomize 2（Y017）, spray 2（Y020）, oil 2（Y021） The three lights will turn green.



3.2.2 Programmable keys

In this interface, press the button has been edited by the programmable button will be to implement the robot has been editing the program.



4 Stop state

The third gear knob to hit the middle position into the "stop" state interface

You can view the settings of all parameters in the stop status but can not perform manual operation.

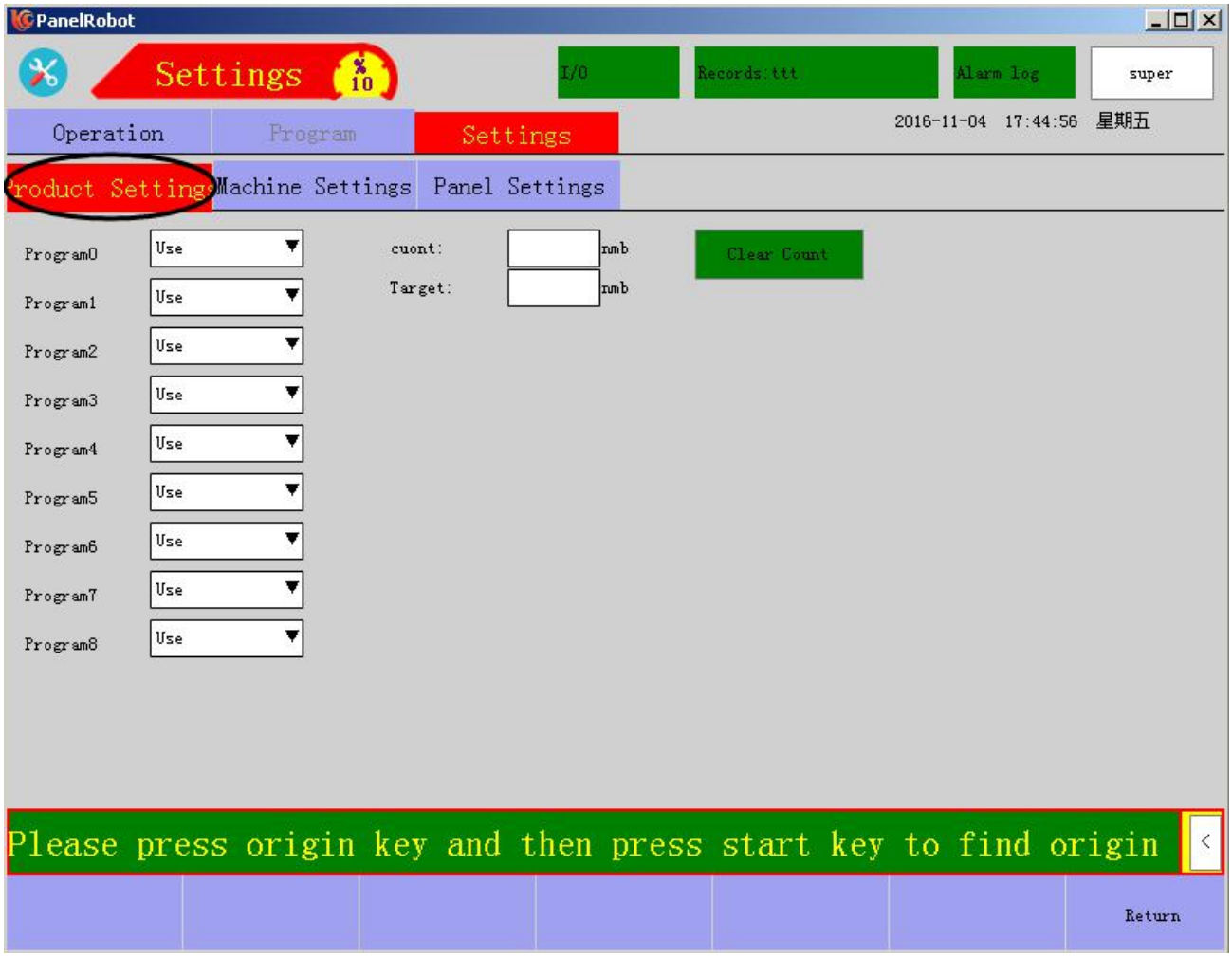
4.1 Parameter setting

Click "Settings" button to enter the following interface, in this interface you can set the product, machine and manual controller.

4.1.1 Product settings

Click the 

button to enter the following interface shown in , in this interface under the product-related things can be set.



Program: a program can use multiple programs at the same time, the system initially default to the main program and subroutine are used, such as do not want to use the drop-down triangle to select it as not used.

Special Note:

1, the main program and the subroutine is running at the same time.

2, can be used separately The subroutine part does not use the main program to carry on the programming.

3, special subroutine - sequence subroutine 8 

, in this interface, select the "use" or "do not use" option on the subroutine 8 is invalid. Because the system itself has been the default subprogram 8 in any state (automatic / manual / stop) will automatically run.

Count: The number of objects to be sprayed during a complete spray.

Target: Sets the number of cycles for a complete painting process.

Clear Count: Press this button once to clear the current production value.

4.1.2 Valve setting

Click the 

button to enter the following interface, in this interface can be related to set the valve.

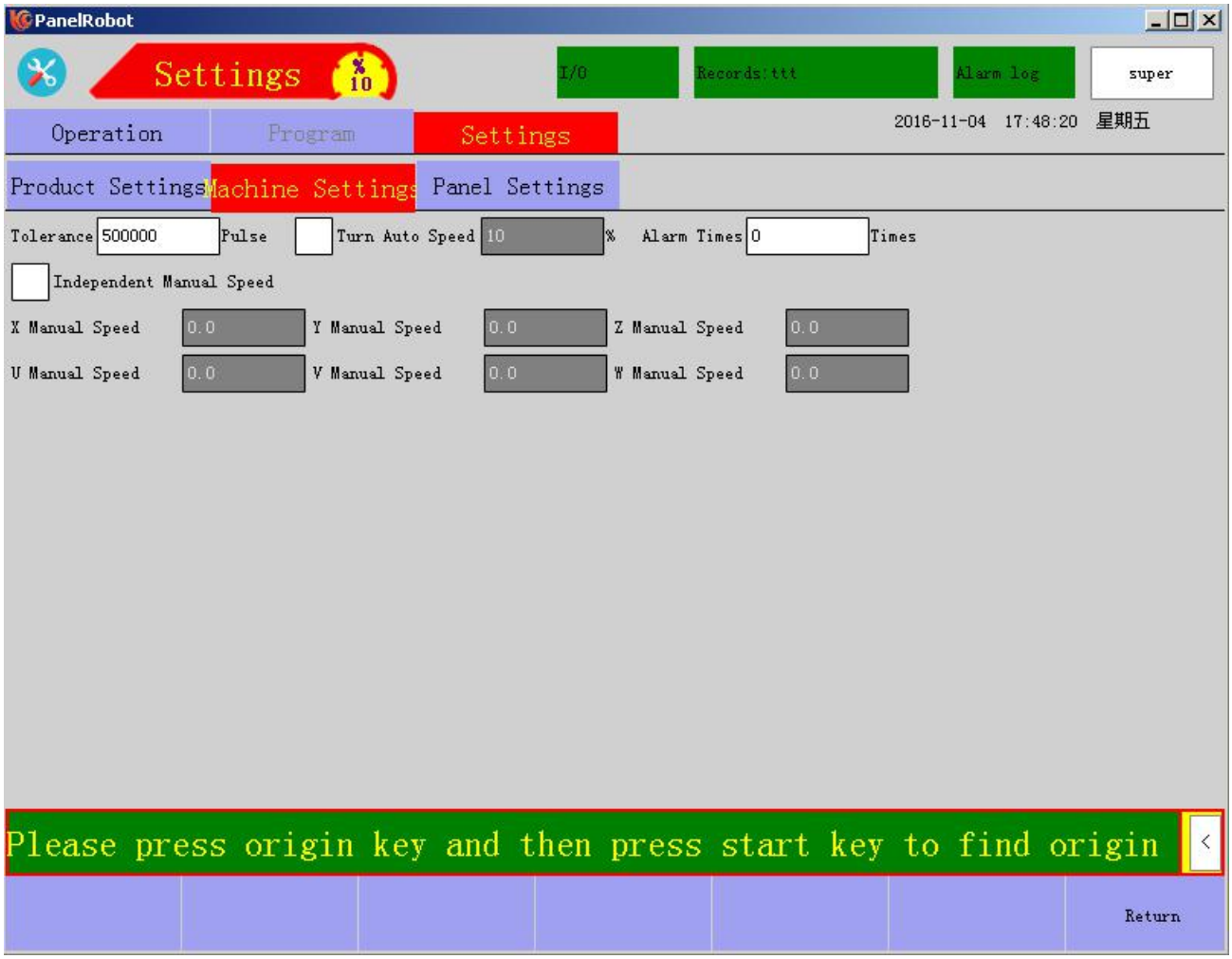
4.2 Mechanical settings

Click the “**Mechanical Setting** “button to enter the following interface, in this interface can be related to the machine parameter settings.

4.2.1 Operating parameters

Click the 

button to enter the following interface, in this interface can be run under the relevant parameters.



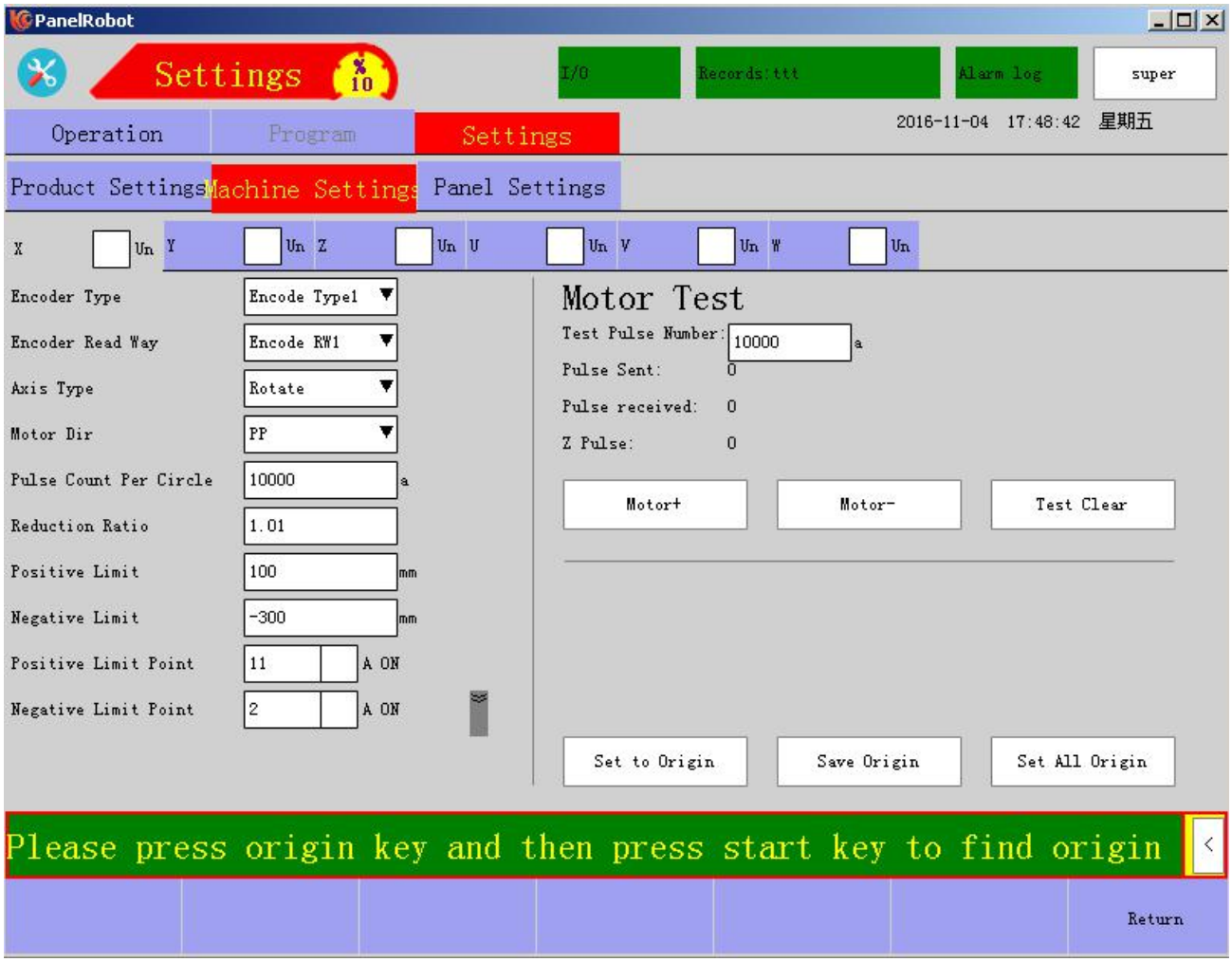
Tolerance: The difference between the transmit pulse and the feedback pulse.

Turn Auto Speed: three-block knob to run automatically when the default run speed settings.

Alarm Times: Set the alarm output Y013 flashing several times.

Independent Manual speed: Check this to set the speed of each axis in manual mode.

4.2.2 Motor parameters



Axis use: All axes are selected as the default use, if not, please check the "do not" check box.

Encoder Read Way: At present, "Huichuan", "Anchuan", "Taida" three brands.

Axis Type: The current type is divided into three "absolute", "incremental", "none."

Motor Dir: classified as three "pulse", "CAN", "RS485".

Motor Dir: The axis type is divided into rotation and straight.

Pulse Count Per Circle: Set the number of pulses per revolution of the servo motor.

Reduction Ratio: Sets the reduction ratio of the servomotor.

The deceleration ratio is the ratio of the instantaneous input speed to the output speed in the reduction mechanism, denoted by the symbol "i".

If the input speed is 1500r / min, and the output speed is 25r / min, then the speed reduction

ratio is: i = 1, the speed ratio of the input speed and output speed is 1: 60: 1.

Positive Limit: The maximum distance the axis moves.

Negative limit: The minimum distance the axis moves.

Value	Input	Value	Input	Value	Input	Value	Input
0	Not use						
1	X10	9	X20	17	X30	25	X40
2	X11	10	X21	18	X31	26	X41
3	X12	11	X22	19	X32	27	X42
4	X13	12	X23	20	X33	28	X43
5	X14	13	X24	21	X34	29	X44
6	X15	14	X25	22	X35	30	X45
7	X16	15	X26	23	X36	31	X46
8	X17	16	X27	24	X37	32	X47

Negative limit point: This item can define the negative limit point of X axis. The default is the normally closed point. If the check mark is set to long open point, input the specified value in the box to specify an input point as X axis negative limit point , Detailed numerical control please refer to the following table:

Value	Input	Value	Input	Value	Input	Value	Input
0	Not use						
1	X10	9	X20	17	X30	25	X40
2	X11	10	X21	18	X31	26	X41
3	X12	11	X22	19	X32	27	X42
4	X13	12	X23	20	X33	28	X43
5	X14	13	X24	21	X34	29	X44
6	X15	14	X25	22	X35	30	X45
7	X16	15	X26	23	X36	31	X46
8	X17	16	X27	24	X37	32	X47

Origin : This setting is when the axis in the homing to move forward or backward to find the origin, the default is to move forward, if you want to set the direction of movement please check the "reverse move."

Acceleration time(ACC 1): Set the acceleration time of the servo motor.

Deceleration time(ACC 2): Set the deceleration time of the servo motor.

Maximum speed(Max RPM): Set the maximum speed of the servo motor

Motor +: the motor forward test, test and feedback are displayed 10000, said the test was successful.

Motor -: the motor reversal test, the test showed 10000, 55536 feedback showed that the

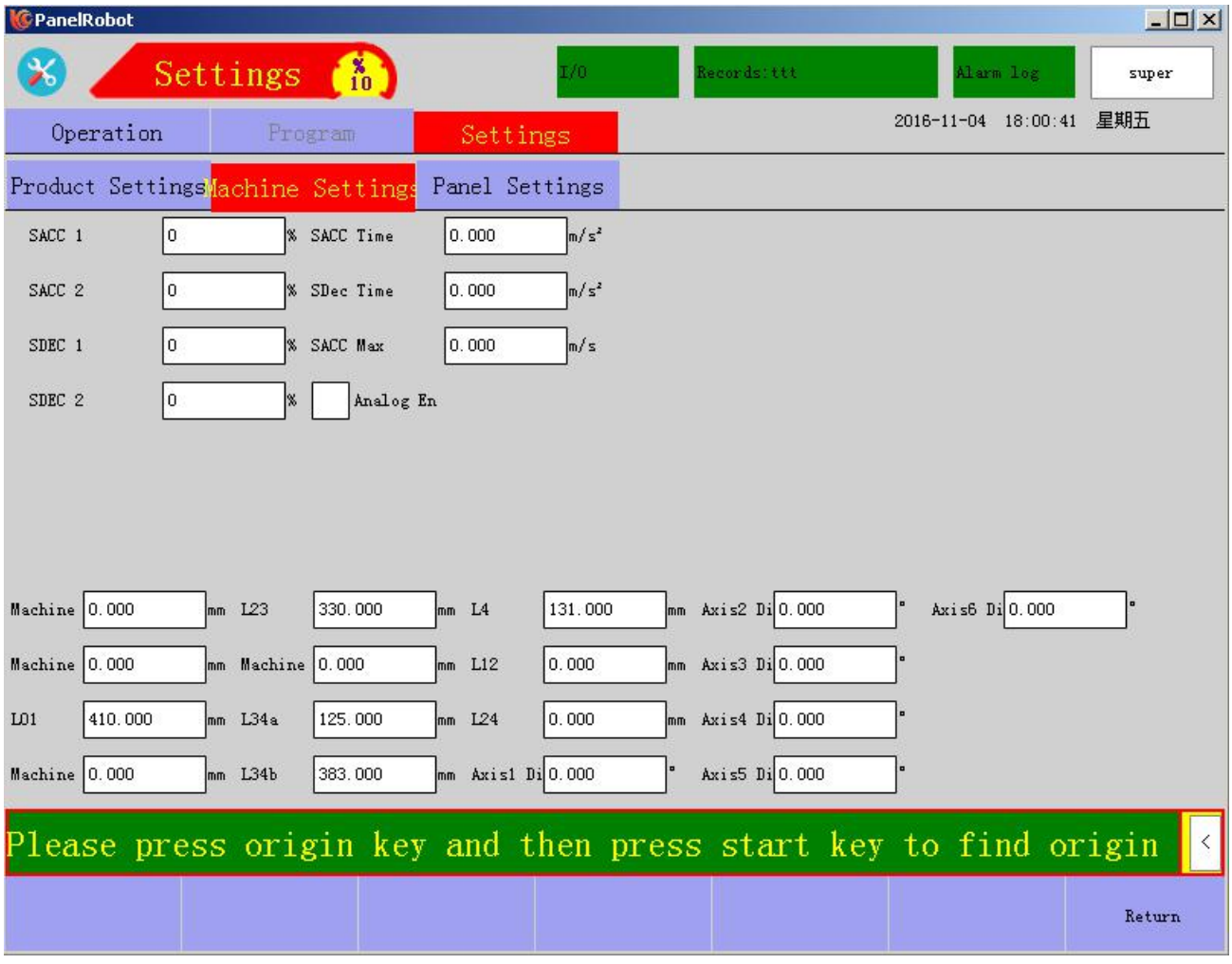
test was successful.

Set to Origin: move a single axis or all axes to the origin and click "Set as Origin" or "Set All Origin" and click "Save".

4.2.3 Structural parameters

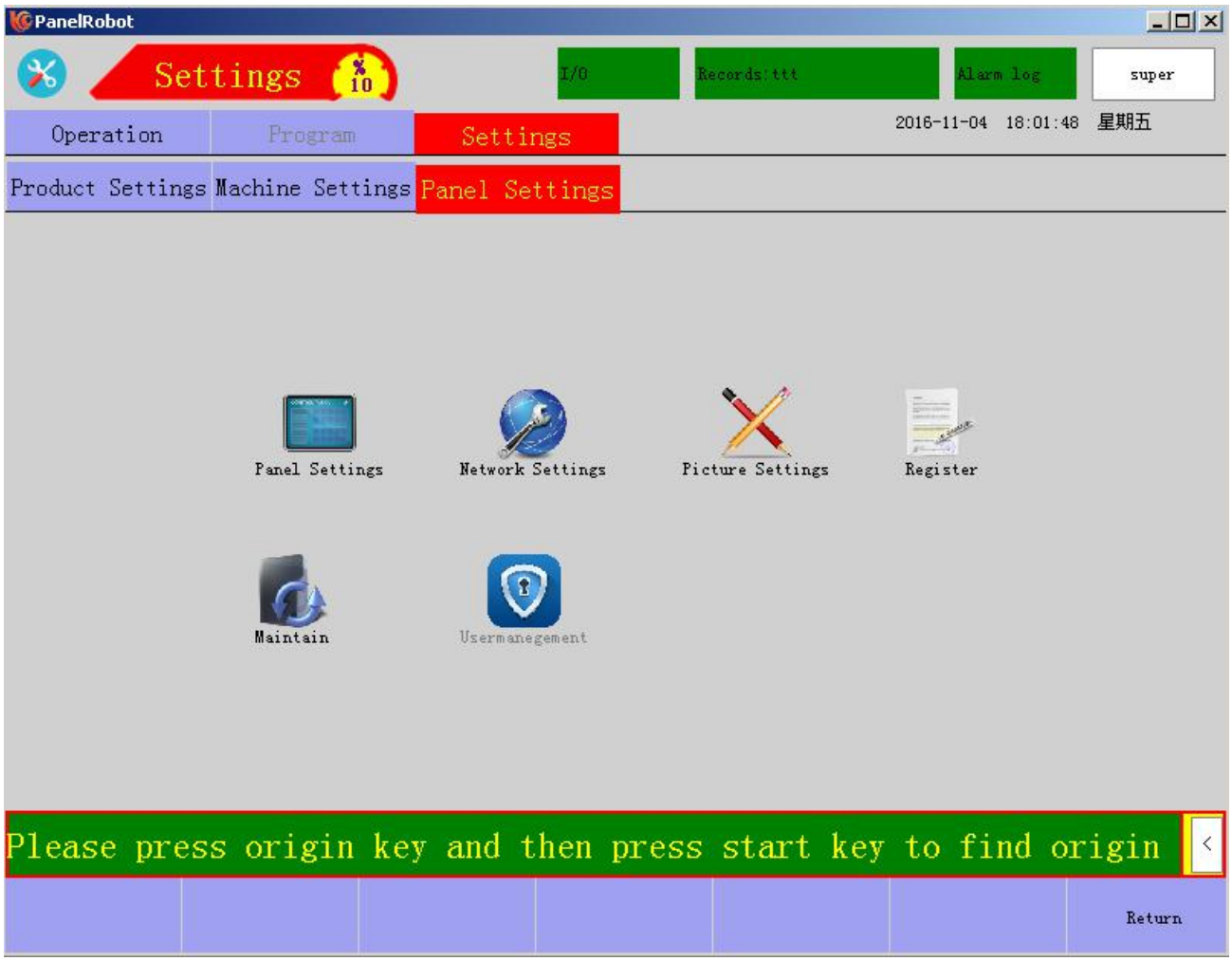
Click 

the button to enter the following interface, in this interface can be related to the configuration parameters.



4.3Manual setting

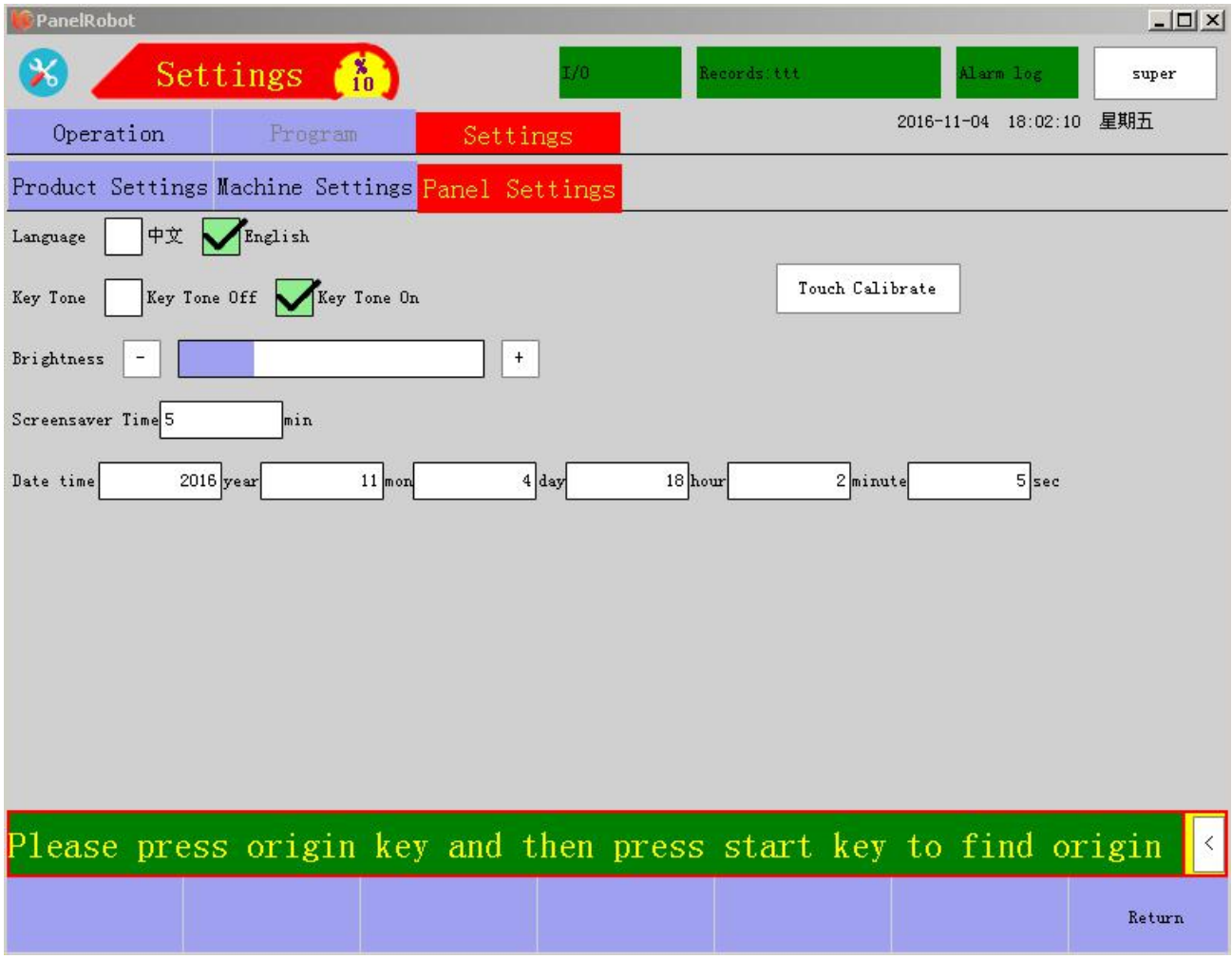
Click "**Panel Settings**" button to enter the following interface, in this interface can be related to the control device settings.



4.3.1 Manual setting

Click the 

button to enter the following interface, in this interface can be related to the controller settings.



Language: Select Chinese or English.

Key tone: key tone on, off switch.

Date time: The system displays the date and time, select the date and time, press the plus or minus keys to change.

Screensaver time: Set the time when the Screensaver time is on.

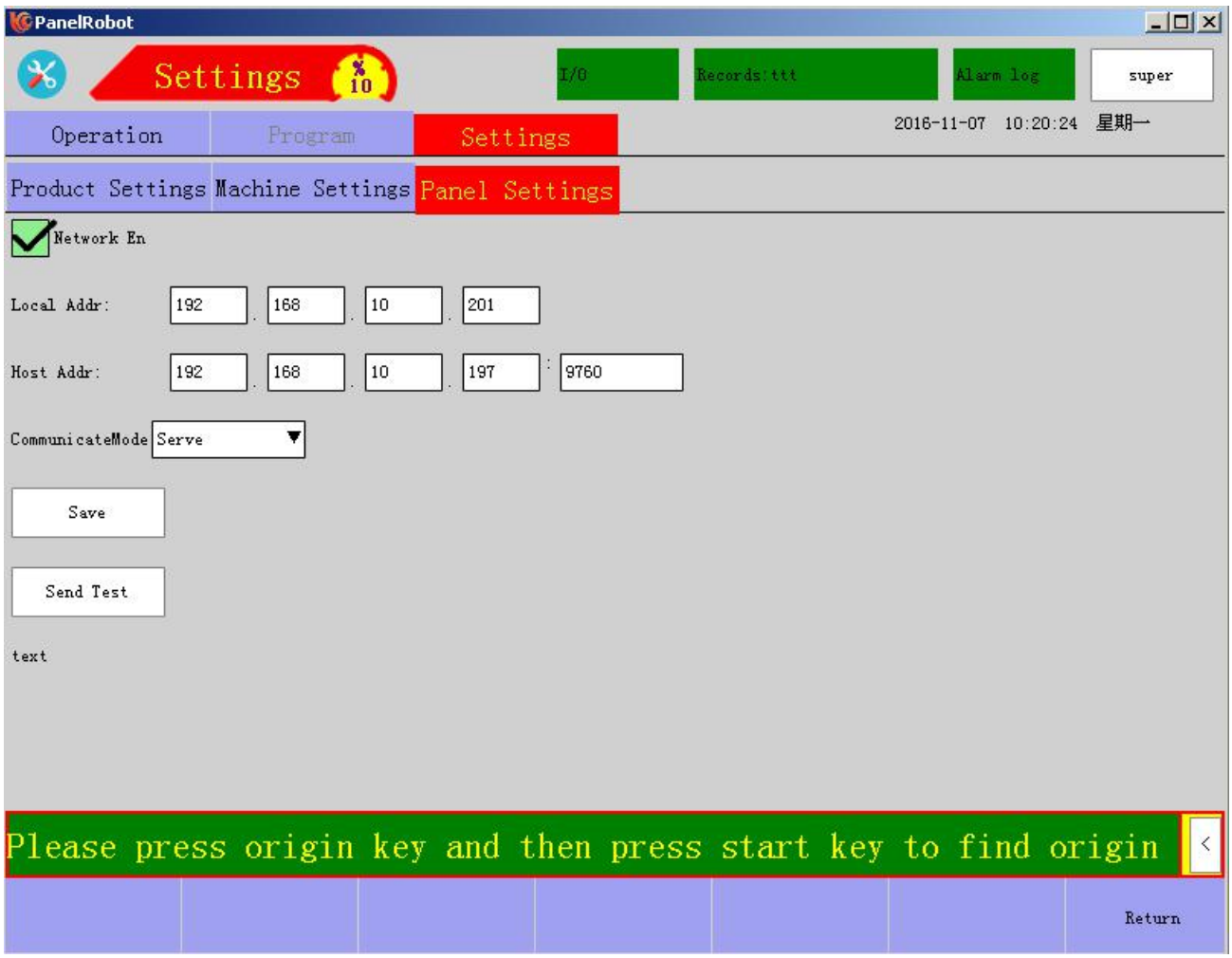
Brightness: Adjusts the brightness of the display.

Touch Calibrate: click and follow the prompts to operate can be corrected, or random rotation of the three-wheel knob and then use the hand controller shortcut keys in order to press F5 → F3 → F4 → F3 → F2 → F3 → F1 → F5 into the school screen Interface, follow the prompts to screen.

4.3.2 Network Configuration

Click the 

button to enter the following interface, in this interface can be related to the network settings.



Instructions:

1, check the 

.

2, set the robot IP address.

3, fill in the target peripheral IP address.

4, select the communication mode.

5, click [save] button to save the set data.

6. Click the [Send Test Data] button.

7, waiting for external feedback to the hand controller data that the network configuration is successful.

4.3.3 Picture settings

Click the 

button to enter the following interface, in this interface, the controller can start the picture and standby picture to update.

Start page and standby page Update method:

1, Production Pictures:

Image size: Start page image: Width * Height is 800 * 600 (unit: pixels).

Standby page image: width * height of 800 * 400 (unit: pixels).

Format: png format

2,In the U disk with the directory new HCUpdate_pic, copy the picture to the folder

3, Insert the U disk to the manual control device to enter the picture settings interface, click

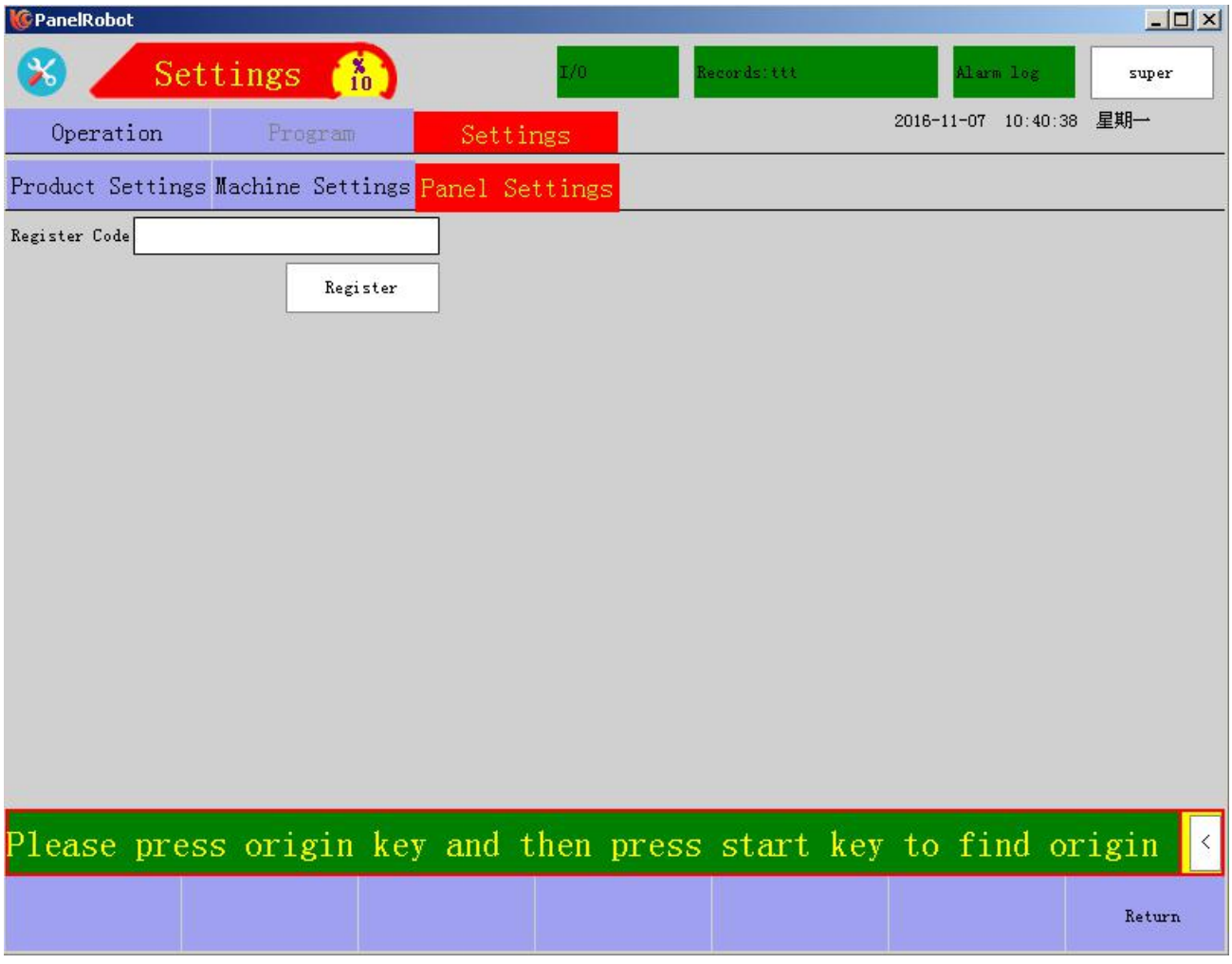
on the scan picture, select the picture, select the start page or set to standby page

4, If the standby page, change the status of the third gear can be set to boot the success of the start up page view you need to re-power to view.

4.3.4 Registration

Click the 

button to enter the following interface, in this interface can be registered under the age hand controller.



Registration method: Enter the registration code Click "Register" button to register successfully.

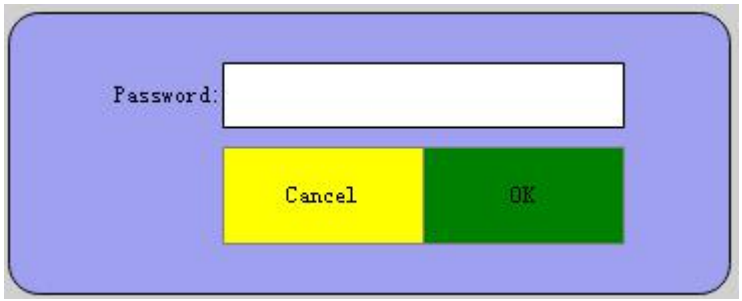
Special note: After entering the registration interface, the lower left corner and the lower

right corner, respectively, there are two hidden buttons.

Hidden Button 1 Function: Click this button to set different registration codes for different usage periods.

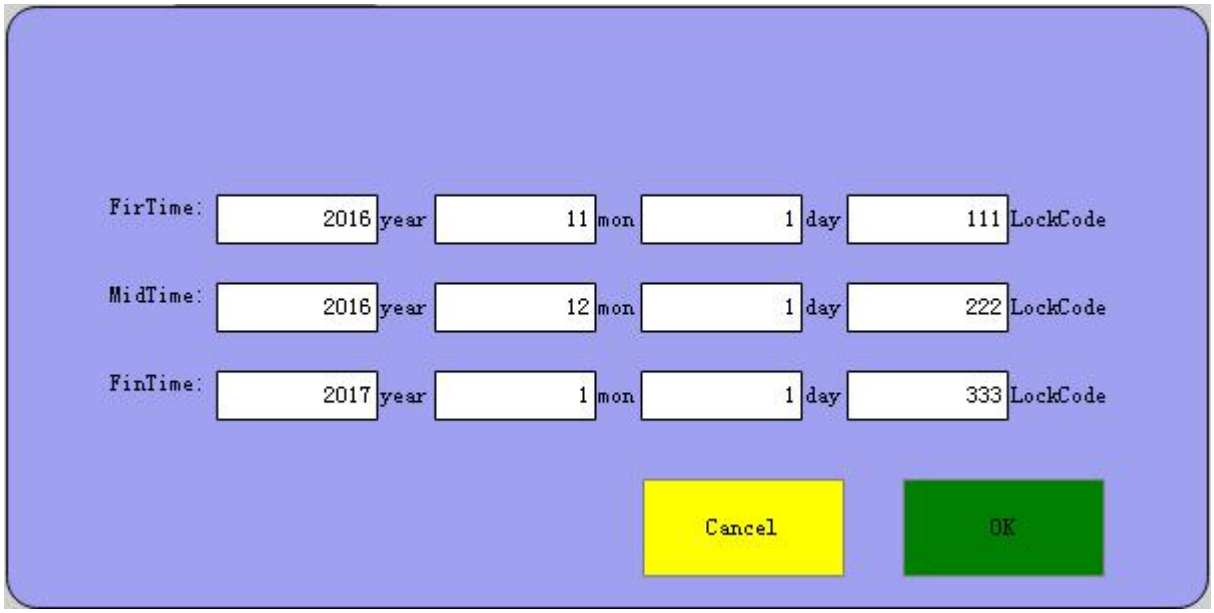
How to use: The first step, click the hidden button 1 to open the blue box to open the following figure password login screen. Enter the password in this interface. Click the [OK] button.

Tip: The account that can set this password must have root privileges



The second step is to set the corresponding registration code for different time periods as shown in the following figure. After setting, click [OK] button, then the system will pop up

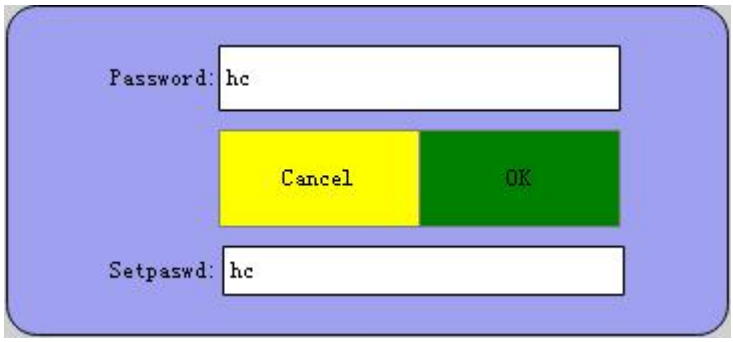
the screen. If you want to modify the settings, please see the hidden button 2 to use.



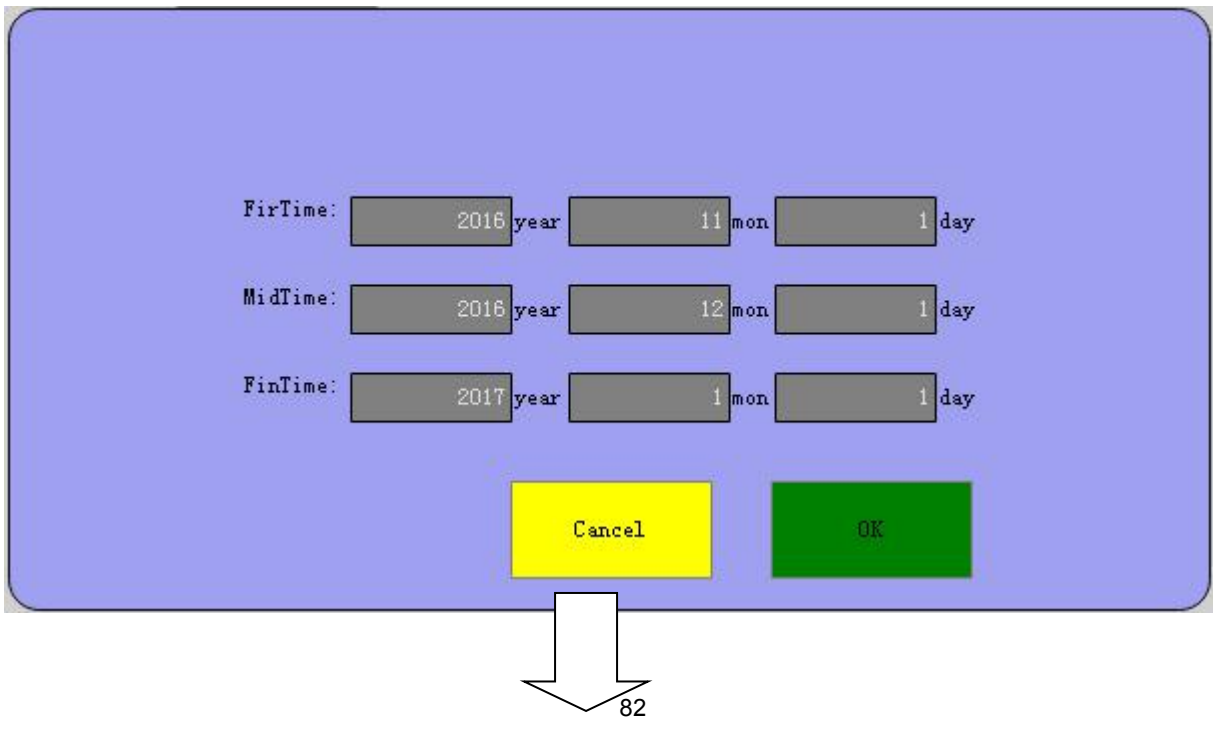
Hide button 2 function: modify the registration time and registration code.

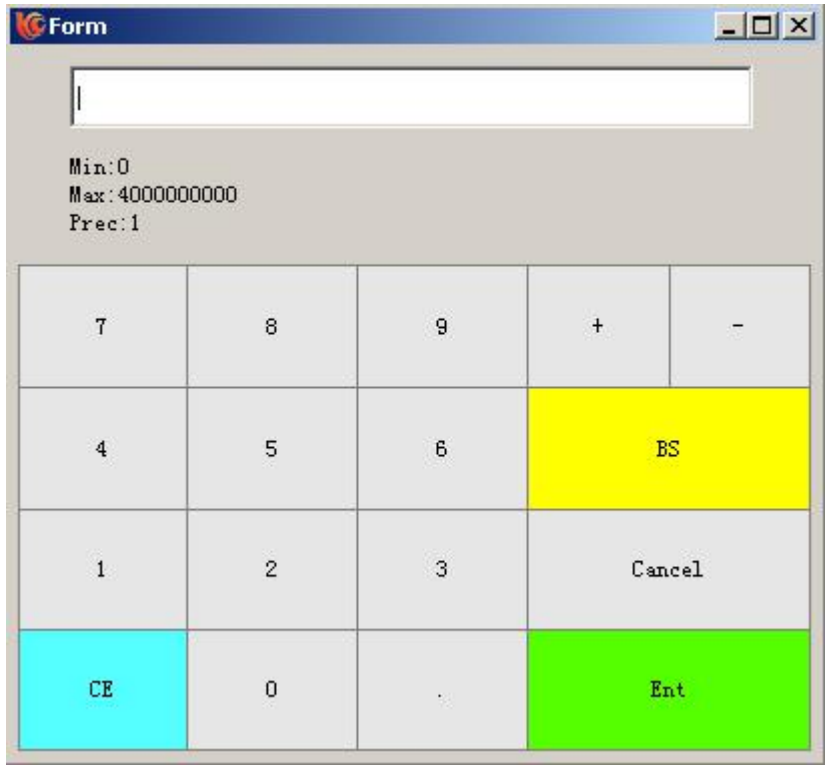
Modify the use of the steps: The first step, click the hidden button 1 to open the blue box as shown below the password login screen. Enter the password in this interface. Click the [OK] button.

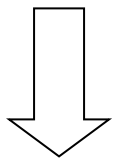
Tip: The account that can set this password must have root privileges

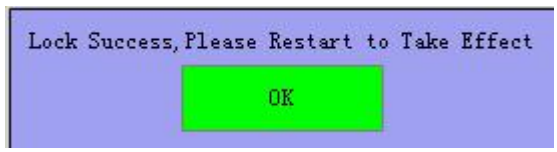


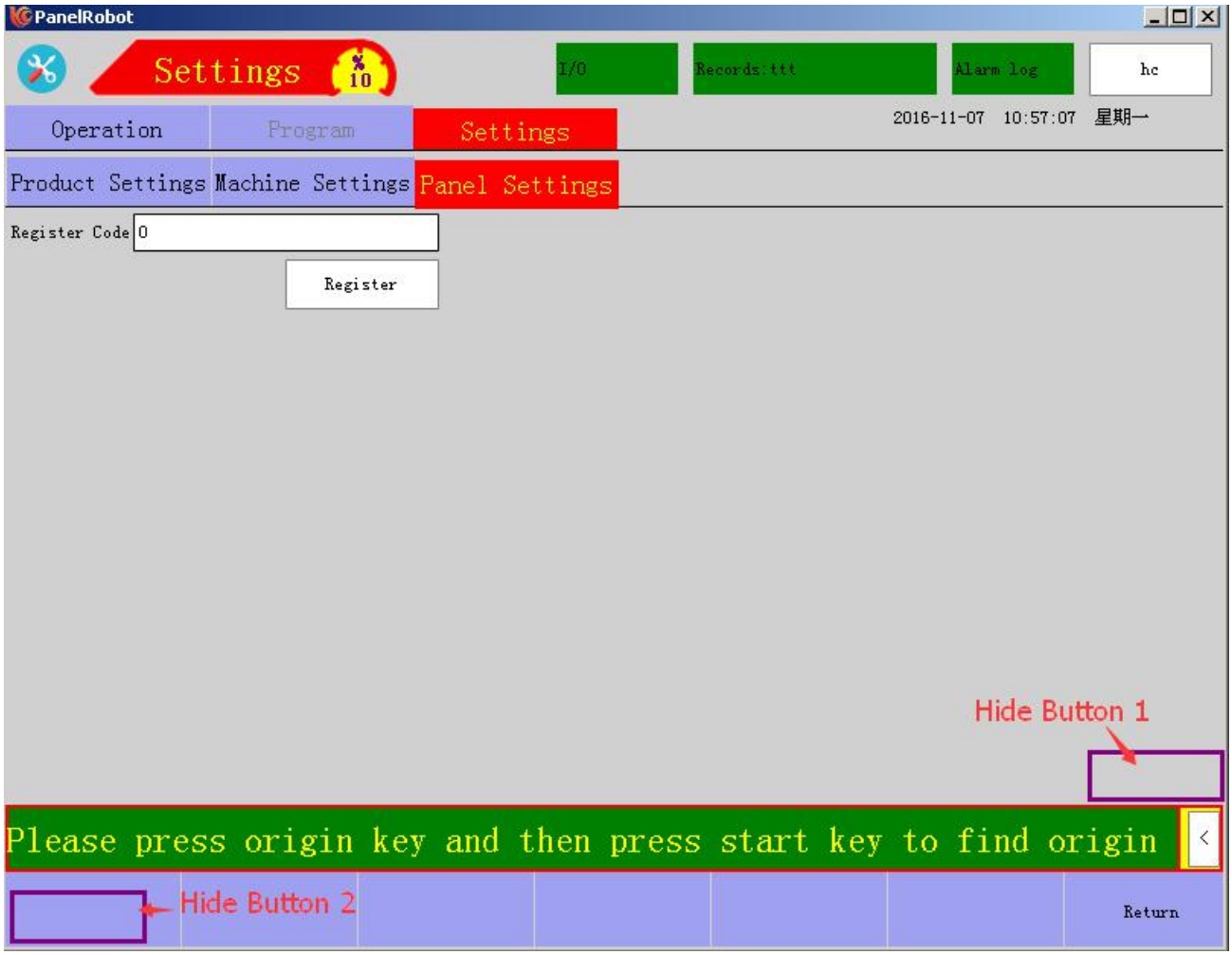
The second step, the login is complete, enter the following interface, in this interface edit box is locked, click on the hidden button 2 blue box live area pop-up keyboard input box, the default password is 88888, the password input keyboard edit box and then pop up a Confirmation box Click OK button to restart the system to click the hidden button 1 area to reset the time and password.




Form
Min:0
Max:4000000000
Prec:1
7
8
9
+
-
4
5
6
BS
1
2
3
Cancel
CE
0
.
Ent



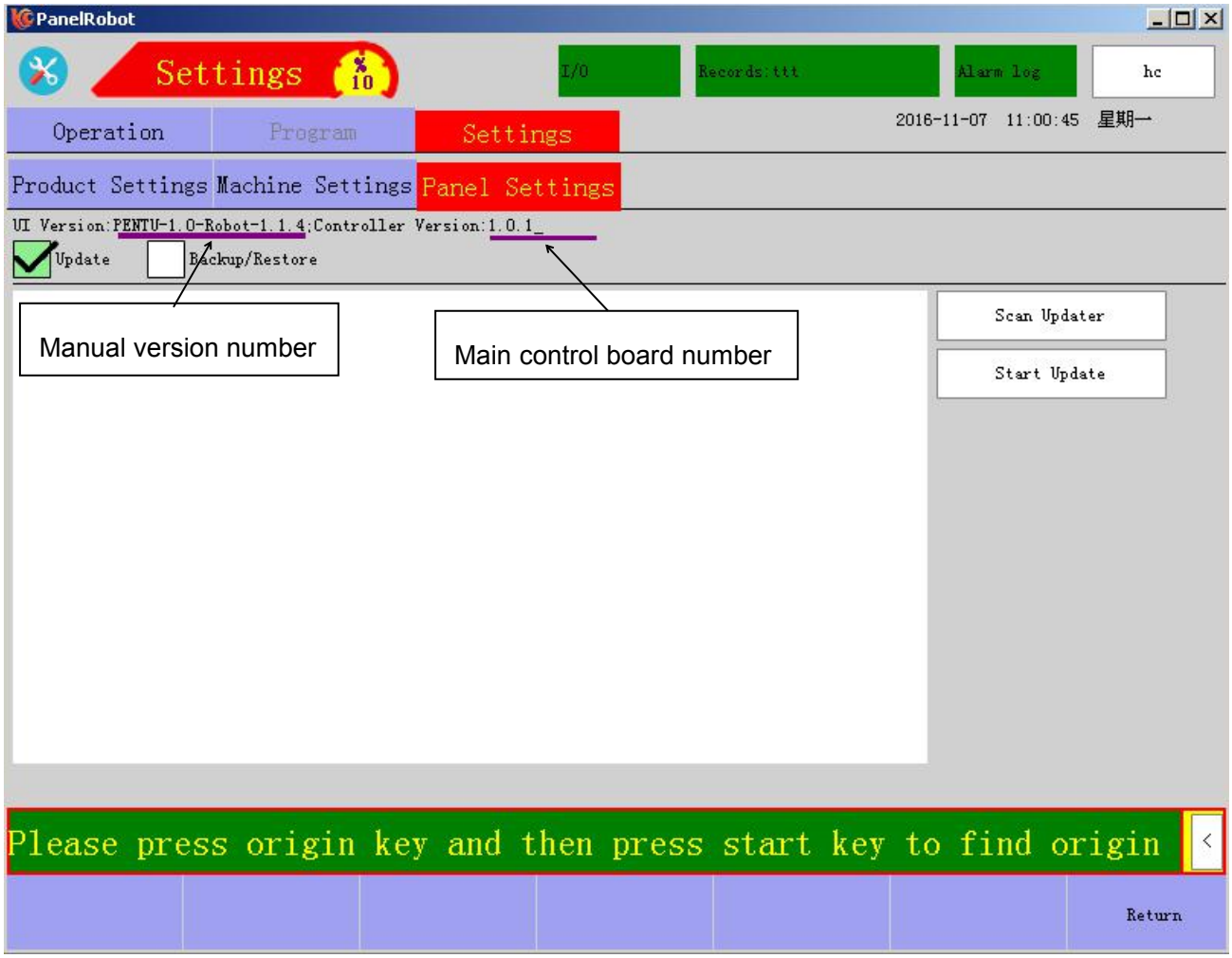

Lock Success, Please Restart to Take Effect
OK


PanelRobot
Settings
10
I/O
Records:ttt
Alarm log
hc
2016-11-07 10:57:07 星期一
Operation
Program
Settings
Product Settings
Machine Settings
Panel Settings
Register Code
0
Register
Hide Button 1
Please press origin key and then press start key to find origin
Hide Button 2
Return

4.3.5 Maintain

Click the 

button to enter the following interface. In this interface, you can update the controller version and backup and restore parameters.

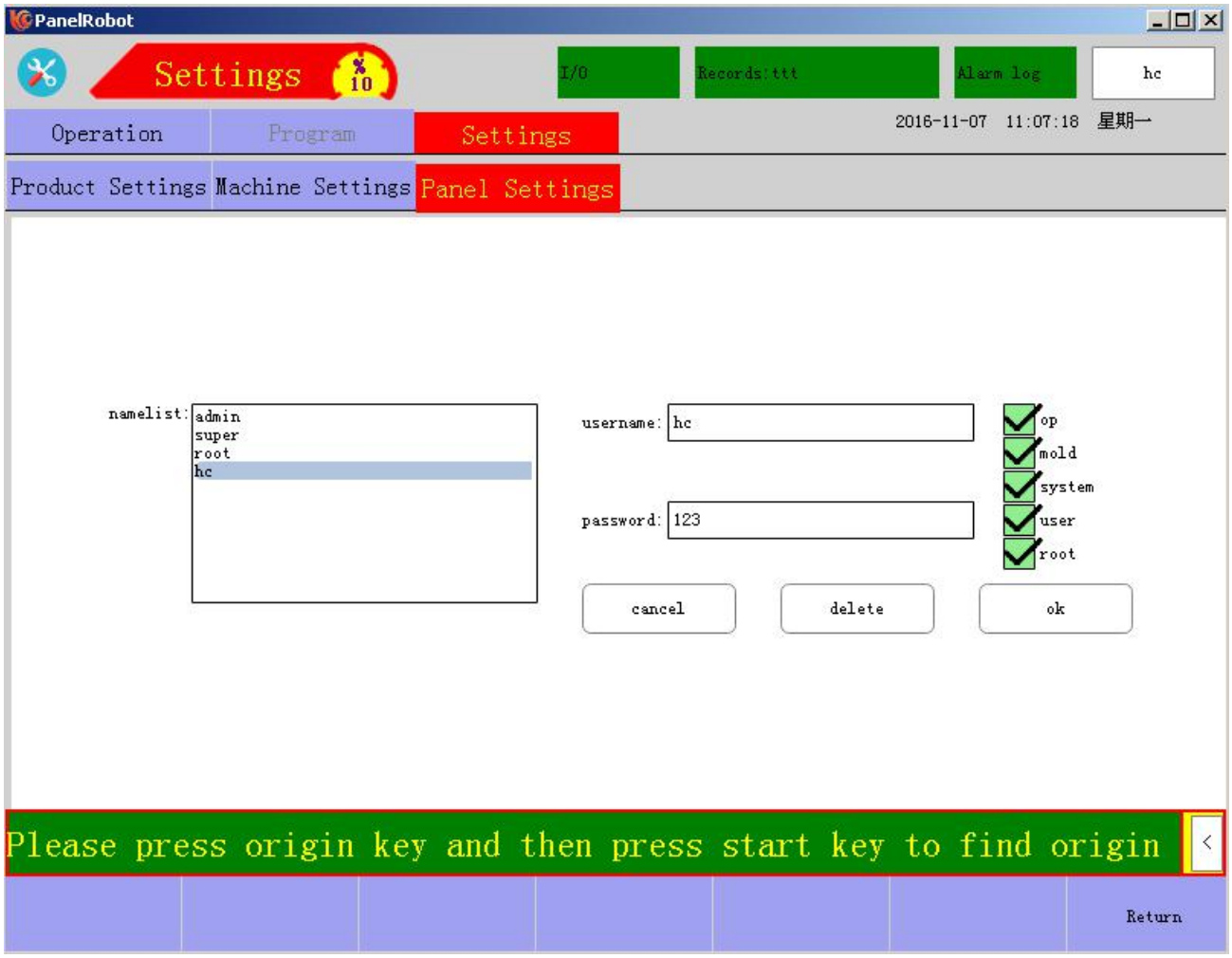


Version upgrade method: plug in the U disk, a few seconds, click “scan update “to select the version you want to upgrade and then click “start update”.

The upper left corner of this screen displays the current manual version number and the master version number.

4.3.6 User Management

Click the button to enter the following interface, in this interface you can create, modify, delete the user name.



System operator default password:

Op: 123

Admin: 123

Super: 123456

Root: 12345678

Permission Interpretation and Size Ranking: Op <Mold <System <User

Op: The permissions are: in the manual state can move the axis, but can not enter the teaching page to teach; automatic state can start the robot, adjust the speed; stop state can enter the home return.

Mold: This privilege has all the permissions of the Op; the settings associated with the model number.

System: This permission has: Op and Mold all rights; May revise the system parameter

User: All operations are possible.

Create a new user name: Edit user name → set password → check the permissions □ Op → click "OK".

□ Admin

□ Super

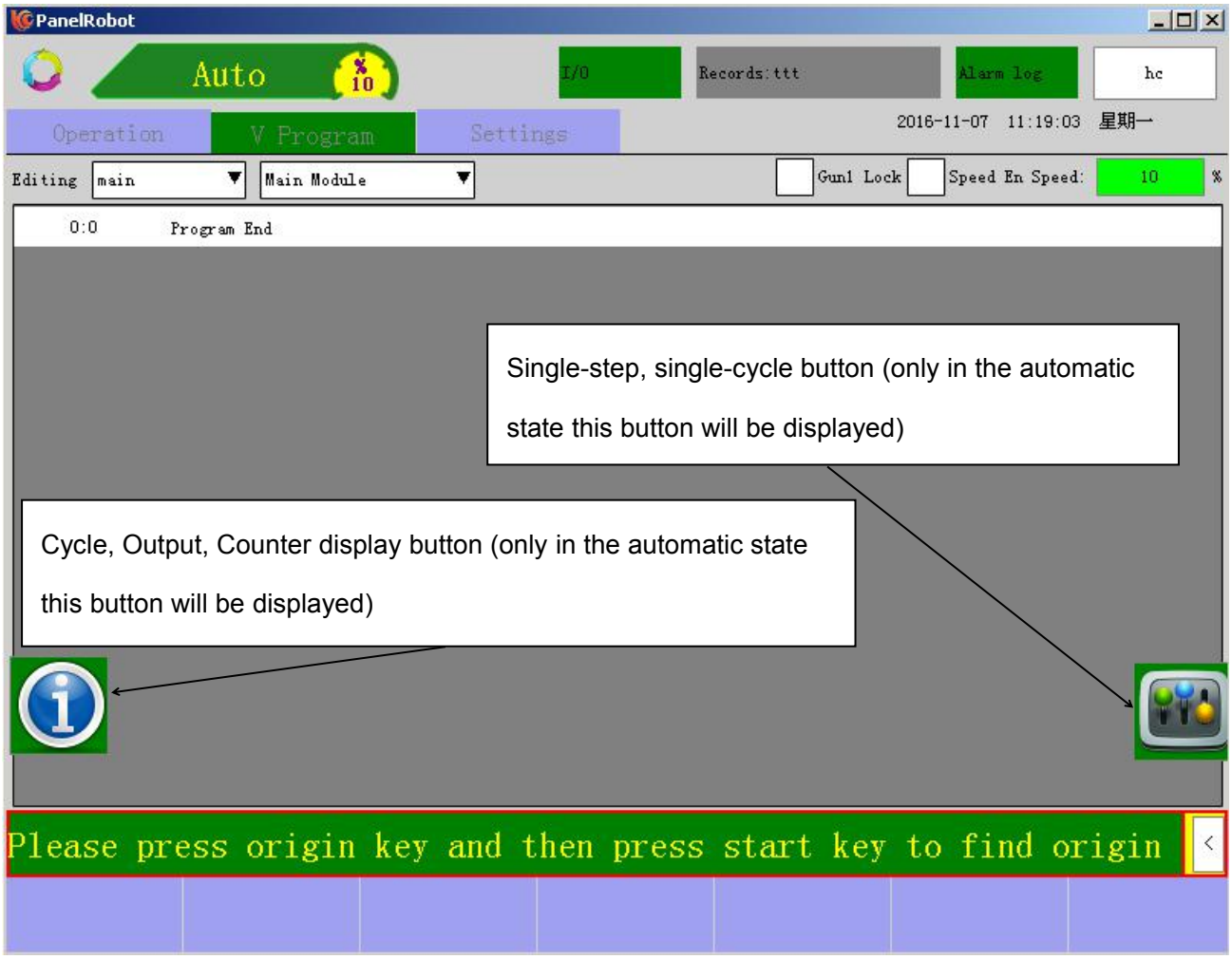
□ System

□ User

Delete User Name: Click the user list → click [Delete] button.

5 Automatic state

The third gear switch to the far right to enter the automatic state, enter the state and then once again "Start" key to enter the automatic operation of the robot state.



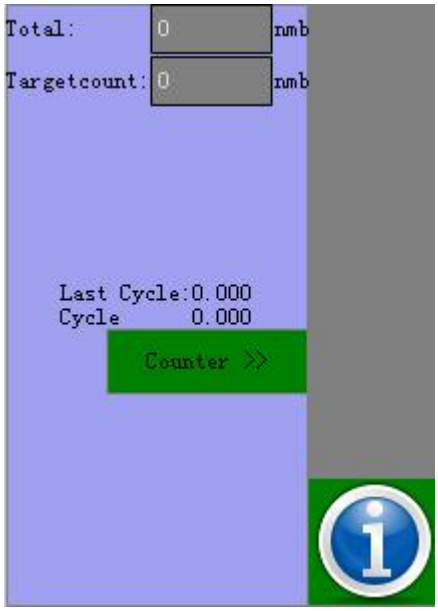
Lock gun: Check the gun will automatically shut down after the operation can not be used.

Speed control enable: After selecting the upper and lower keys on the hand controller, the system can adjust the speed.

Step mode: select a step as the single step starting point, and then click [single step start], the program will start from the start step has already started to carry out this step.

Single-cycle mode: the program will take a round starting position.

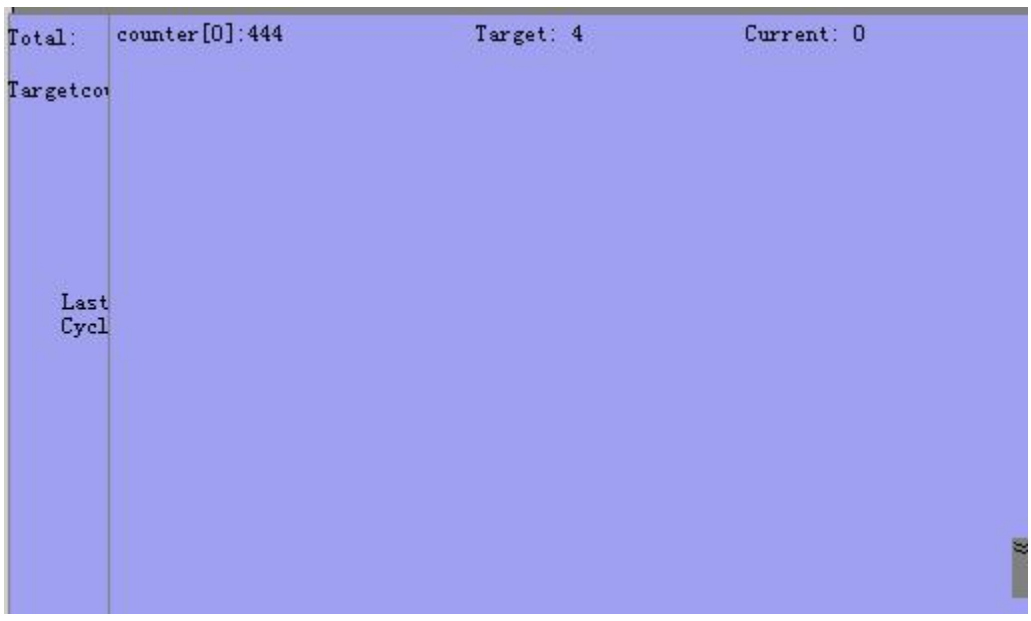
Cycle, output, count display button:



1, open this button to view the upper mold cycle time and current cycle time.

2, in this button to view the current output and target output.

3,Click the Counter button to view the counter status.



6 Alarm information and alarm reasons

Alarm number	Alarm information	Processing methods
Err1	Finish is not initialized	Start up is completed automatically cleared
Err2	Host axis configuration and manually controlled-axis configurations	Select host according to demand or manual control
Err3	Master axis configuration parameter error	No
Err4	Not enough memory	Teaching program for too long, will reciprocate the same action using module integration. Press the stop key to clear the alarm.
Err5	Teach parsing errors	Teach error manual and host application version does not match the type matches the version of the program. Press the stop key to clear the alarm.
Err6	Teaching data editing errors	Edit error overload mode, or create a new model number. Press the stop key to clear the alarm.

Err7	Emergency stop	Release the emergency stop press the stop button to clear alarms Reason: 1, And the emergency stop switch is pressed. 2, no wiring emergency stop switch ports on the host, if not required, separately that is, switch, you will need to STOP port is shorted.
Err8	Autorun jumping errors	Press the stop key to clear the alarm. Reason: 1 , Teaches programs jump label is invalid or was deleted.
Err9	Failed to connect to host	Host free programs or the wrong version
Err10	Teaching program errors	Press the stop key to clear the alarm.
Err11	Configuration parameters are stored fails	Restart or press the stop key to clear the alarm.
Err12	Model set errors	Press the stop key to clear the alarm.
Err13	Single step / Single-loop debugger setting errors	Press the stop key to clear the alarm.
Err14	From the host FLASH Data read error	From the host FLASH Data read error
Err15	IO Communication failure	1, And repair wiring 2, Examination boards, IO
Err16	Servo absolute position read failed	Check the host and servo wiring
Err17	Servo absolute position failed to read the calibration	Check the host and servo wiring

Err18	Read function code error servo absolute position	Check the host and servo wiring
Err19	Servo absolute position read timeout	Check the host and servo wiring
Err20	IO 2 Communication failure	1, And repair wiring . 2, Check motherboard IO.
Err21	IO 3 Communication failure	1 ,And repair wiring . 2, Check motherboard IO.
Err22	IO 4 Communication failure	1, And repair wiring . 2,Check motherboard IO.
Err23	Hand control and inconsistent host teaching program	No
Err24	FPGA Alarm, power failure restart!!!!	No
Err90	Motor 1 Alarm	Motor connection failure, or the host circuit failure Reason: 1, Host, and servo-drive connector; 2,Servo alarm failure;

Err91	Motor 2 Alarm	Motor connection failure, or the host circuit failure Reason: 1, Host, and servo-drive connector; Servo alarm failure;
Err92	Motor 3 Alarm	Motor connection failure, or the host circuit failure Reason: 1, Host, and servo-drive connector; Servo alarm failure;
Err93	Motor 4 Alarm	Motor connection failure, or the host circuit failure Reason: 1,Host, and servo-drive connector; Servo alarm failure;
Err94	Motor 5 Alarm	Motor connection failure, or the host circuit failure Reason: 1, Host, and servo-drive connector; Servo alarm failure;

Err95	Motor 6 Alarm	Motor connection failure, or the host circuit failure Reason: 1, Host, and servo-drive connector; Servo alarm failure;
Err96	Motor 7 Alarm	Motor connection failure, or the host circuit failure Reason: 1, Host, and servo-drive connector; Servo alarm failure;
Err97	Motor 8 Alarm	Motor connection failure, or the host circuit failure
Err100	Axis 1 Sports fail	Press the stop key to clear the alarm. Movement again. Reason: 1, Teaches the same axis at the same time campaigns; 2, Main program and subroutine has the same shafts at the same time campaigns; 3,Teach single axis motion trajectory and run at the same time;

Err101	Axis 2 Sports fail	Press the stop key to clear the alarm. Movement again. Reason: 1, Teaches the same axis at the same time campaigns; 2, Main program and subroutine has the same shafts at the same time campaigns; 3,Teach single axis motion trajectory and run at the same time;
Err102	Axis 3 Sports fail	Press the stop key to clear the alarm. Movement again. Reason: 1, Teaches the same axis at the same time campaigns; 2 ,Main program and subroutine has the same shafts at the same time campaigns; 3 ,Teach single axis motion trajectory and run at the same time;
Err103	Axis 4 Sports fail	Press the stop key to clear the alarm. Movement again. Reason: 1, Teaches the same axis at the same time campaigns; 2,Main program and subroutine has the same shafts at the same time campaigns; 3 , Teach single axis motion trajectory and run at the same time;;

Err104	Axis 5 Sports fail	Press the stop key to clear the alarm. Movement again. Reason: 1, Teaches the same axis at the same time campaigns; 2,Main program and subroutine has the same shafts at the same time campaigns; 3 ,Teach single axis motion trajectory and run at the same time;
Err105	Axis 6 Sports fail	Press the stop key to clear the alarm. Movement again. Reason: 1, Teaches the same axis at the same time campaigns; 2 ,Main program and subroutine has the same shafts at the same time campaigns; 3 , Teach single axis motion trajectory and run at the same time;
Err106	Axis 7 Sports fail	Press the stop key to clear the alarm. Movement again. Reason: 1, Teaches the same axis at the same time campaigns; 2 , Main program and subroutine has the same shafts at the same time campaigns; 3, Teach single axis motion trajectory and run at the same time;

Err107	Axis 8 Sports fail	Press the stop key to clear the alarm. Movement again. Reason: 1,Teaches the same axis at the same time campaigns; 2 ,Main program and subroutine has the same shafts at the same time campaigns; 3,Teach single axis motion trajectory and run at the same time;
Err110	Axis 1 Speed setting error	Press the stop key to clear the alarm. Movement again.
Err111	Axis 2 Speed setting error	Press the stop key to clear the alarm. Movement again.
Err112	Axis 3 Speed setting error	Press the stop key to clear the alarm. Movement again.
Err113	Axis 4 Speed setting error	Press the stop key to clear the alarm. Movement again.
Err114	Axis 5 Speed setting error	Press the stop key to clear the alarm. Movement again.
Err115	Axis 6 Speed setting error	Press the stop key to clear the alarm. Movement again.
Err116	Axis 7 Speed setting error	Press the stop key to clear the alarm. Movement again.
Err117	Axis 8 Speed setting error	Press the stop key to clear the alarm. Movement again.

Err120	Axis 1 Movement speed	Press the stop key to clear the alarm. Movement again. Reason: 1 ,Tracks acceleration setting too large
Err121	Axis 2 Movement speed	Press the stop key to clear the alarm. Movement again.
Err122	Axis 3 Movement speed	Press the stop key to clear the alarm. Movement again.
Err123	Axis 4 Movement speed	Press the stop key to clear the alarm. Movement again.
Err124	Axis 5 Movement speed	Press the stop key to clear the alarm. Movement again.
Err125	Axis 6 Movement speed	Press the stop key to clear the alarm. Movement again.
Err126	Axis 7 Movement speed	Press the stop key to clear the alarm. Movement again.
Err127	Axis 8 Movement speed	Press the stop key to clear the alarm. Movement again.
Err130	Axis 1 Limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, Soft limit, sporting more than single-axis, reset uni axial soft limit; 2, Teaches procedures uni axial soft position out of range limit, modify the guidance program location.

Err131	Axis 2 Limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 ,Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 , Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.
Err132	Axis 3 Limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 ,Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 ,Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.
Err133	Axis 4 Limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 , Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.

Err134	Axis 5 Limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 ,Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 , Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.
Err135	Axis 6 Limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 ,Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.
Err136	Axis 7 Limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 ,Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 ,Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.

Err137	Axis 8 Limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 , Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.
Err140	Axis 1 Negative limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 ,Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.
Err141	Axis 2 Negative limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 ,Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.

Err142	Axis 3 Negative limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 ,Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 , Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.
Err143	Axis 4 Negative limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 ,Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 ,Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.
Err144	Axis 5 Negative limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 ,Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 , Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.

Err145	Axis 6 Negative limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 ,Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.
Err146	Axis 7 Negative limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 ,Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 ,Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.
Err147	Axis 8 Negative limit alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, Soft limit, sporting more than single-axis, reset uniaxial soft limit; 2 ,Teaches procedures uniaxial soft position out of range limit, modify the guidance program location.

Err150	Axis 1 Large deviation	Machine setting -> Operating parameters , Tolerance set, press the stop key to clear the alarm. Movement again. Reason: 1 , Servo feedback signal not in the motor page to test motor positive inversion. 2 ,Tolerance is set too small, campaigns, feedback pulse and pulse output there is a gap, the tolerance value is set to a reasonable position.
Err151	Axis 2 Large deviation	Machine setting -> Operating parameters , Tolerance set, press the stop key to clear the alarm. Movement again. Reason: 1 ,Servo feedback signal not in the motor page to test motor positive inversion. 2 ,Tolerance is set too small, campaigns, feedback pulse and pulse output there is a gap, the tolerance value is set to a reasonable position.

Err152	Axis 3 Large deviation	Machine setting -> Operating parameters , Tolerance set, press the stop key to clear the alarm. Movement again. Reason: 1 ,Servo feedback signal not in the motor page to test motor positive inversion. 2 ,Tolerance is set too small, campaigns, feedback pulse and pulse output there is a gap, the tolerance value is set to a reasonable position.
Err153	Axis 4 Large deviation	Machine setting -> Operating parameters , Tolerance set, press the stop key to clear the alarm. Movement again. Reason: 1 ,Servo feedback signal not in the motor page to test motor positive inversion. 2 , Tolerance is set too small, campaigns, feedback pulse and pulse output there is a gap, the tolerance value is set to a reasonable position.

Err154	Axis 5 Large deviation	Machine setting -> Operating parameters , Tolerance set, press the stop key to clear the alarm. Movement again. Reason: 1 ,Servo feedback signal not in the motor page to test motor positive inversion. 2 , Tolerance is set too small, campaigns, feedback pulse and pulse output there is a gap, the tolerance value is set to a reasonable position.
Err155	Axis 6 Large deviation	Machine setting -> Operating parameters , Tolerance set, press the stop key to clear the alarm. Movement again. Reason: 1 , Servo feedback signal not in the motor page to test motor positive inversion. 2 , Tolerance is set too small, campaigns, feedback pulse and pulse output there is a gap, the tolerance value is set to a reasonable position.
Err156	Axis 7 Large deviation	Machine setting -> Operating parameters , Tolerance set, press the stop key to clear the alarm. Movement again.

Err157	Axis 8 Large deviation	Machine setting -> Operating parameters , Tolerance set, press the stop key to clear the alarm. Movement again. Reason: 1, Servo feedback signal not in the motor page to test motor positive inversion. 2, Tolerance is set too small, campaigns, feedback pulse and pulse output there is a gap, the tolerance value is set to a reasonable position.
Err160	Axis 1 Acceleration alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 And acceleration setting too large.
Err161	Axis 2 Acceleration alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 And acceleration setting too large.
Err162	Axis 3 Acceleration alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 And acceleration setting too large.
Err163	Axis 4 Acceleration alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 And acceleration setting too large.

Err164	Axis 5 Acceleration alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 And acceleration setting too large.
Err165	Axis 6 Acceleration alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 And acceleration setting too large.
Err166	Axis 7 Acceleration alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 And acceleration setting too large.
Err167	Axis 8 Acceleration alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 And acceleration setting too large.
Err170	Axis 1 Limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2, Limit signal normally closed or normally open odds with the switch installation; 3 ,And limit signal connected to the wrong port

Err171	Axis 2 Limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2 ,Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port
Err172	Axis 3 Limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2, Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port
Err173	Axis 4 Limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2 ,Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port

Err174	Axis 5 Limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2 ,Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port
Err175	Axis 6 Limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1,And ultimate disconnect signal 2 ,Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port
Err176	Axis 7 Limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2, Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port

Err178	Axis 8 Limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2, Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port
Err180	Axis 1 Negative limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1 ,And ultimate disconnect signal 2, Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port
Err181	Axis 2 Negative limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2, Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port

Err182	Axis 3 Negative limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2, Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port
Err183	Axis 4 Negative limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2, Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port
Err184	Axis 5 Negative limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2, Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port

Err185	Axis 6 Negative limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2 ,Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port
Err186	Axis 7 Negative limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2, Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port
Err187	Axis 8 Negative limit signal alarm	Press the stop key to clear the alarm. Movement again. Reason: 1, And ultimate disconnect signal 2, Limit signal normally closed or normally open odds with the switch installation; 3, And limit signal connected to the wrong port

Err190	Axis 1 The original signal is not set	Press the stop key to clear the alarm. Reset. Cause: the axis origin signals not set system parameters. Original point teaches the Executive with the original signal.
Err191	Axis 2 The original signal is not set	Press the stop key to clear the alarm. Reset. Cause: the axis origin signals not set system parameters. Original point teaches the Executive with the original signal.
Err192	Axis 3 The original signal is not set	Press the stop key to clear the alarm. Reset. Cause: the axis origin signals not set system parameters. Original point teaches the Executive with the original signal.
Err193	Axis 4 The original signal is not set	Press the stop key to clear the alarm. Reset. Cause: the axis origin signals not set system parameters. Original point teaches the Executive with the original signal.
Err194	Axis 5 The original signal is not set	Press the stop key to clear the alarm. Reset. Cause: the axis origin signals not set system parameters. Original point teaches the Executive with the original signal.

Err195	Axis 6 The original signal is not set	Press the stop key to clear the alarm. Reset. Cause: the axis origin signals not set system parameters. Original point teaches the Executive with the original signal.
Err196	Axis 7 The original signal is not set	Press the stop key to clear the alarm. Reset. Cause: the axis origin signals not set system parameters. Original point teaches the Executive with the original signal.
Err197	Axis 8 The original signal is not set	Press the stop key to clear the alarm. Reset. Cause: the axis origin signals not set system parameters. Original point teaches the Executive with the original signal.
Err200	Motion failed	Press the stop key to clear the alarm. Movement again. Reason: there are some singular points in the trajectory, through single-axis motion around the singularity.
Err201	Manual linear trajectory starting coordinates are not set	No
Err202	Straight line trajectory endpoint coordinates manually is not set	No

Err203	Joint exercise starting coordinates manually is not set	No
Err204	Joint Movement end point coordinates manually is not set	No
Err205	Move line relative coordinates manually is not set	No
Err206	Joints move relative to the coordinates manually is not set	No
Err207	Teach straight line trajectory starting coordinates is not set	No
Err208	Teach a straight line trajectory endpoint coordinates is not set	No
Err209	Teaches joint starting coordinates are not set	No
Err210	Teaches joint movement end point coordinates is not set	No
Err211	Guidance line relative coordinates is not set	No
Err212	Teach joints move relative to the coordinate is not set	No
Err213	Tracking movement of the arc starting point coordinates manually is not set	No
Err214	Manual arc trajectory point coordinates in the middle is not set	No

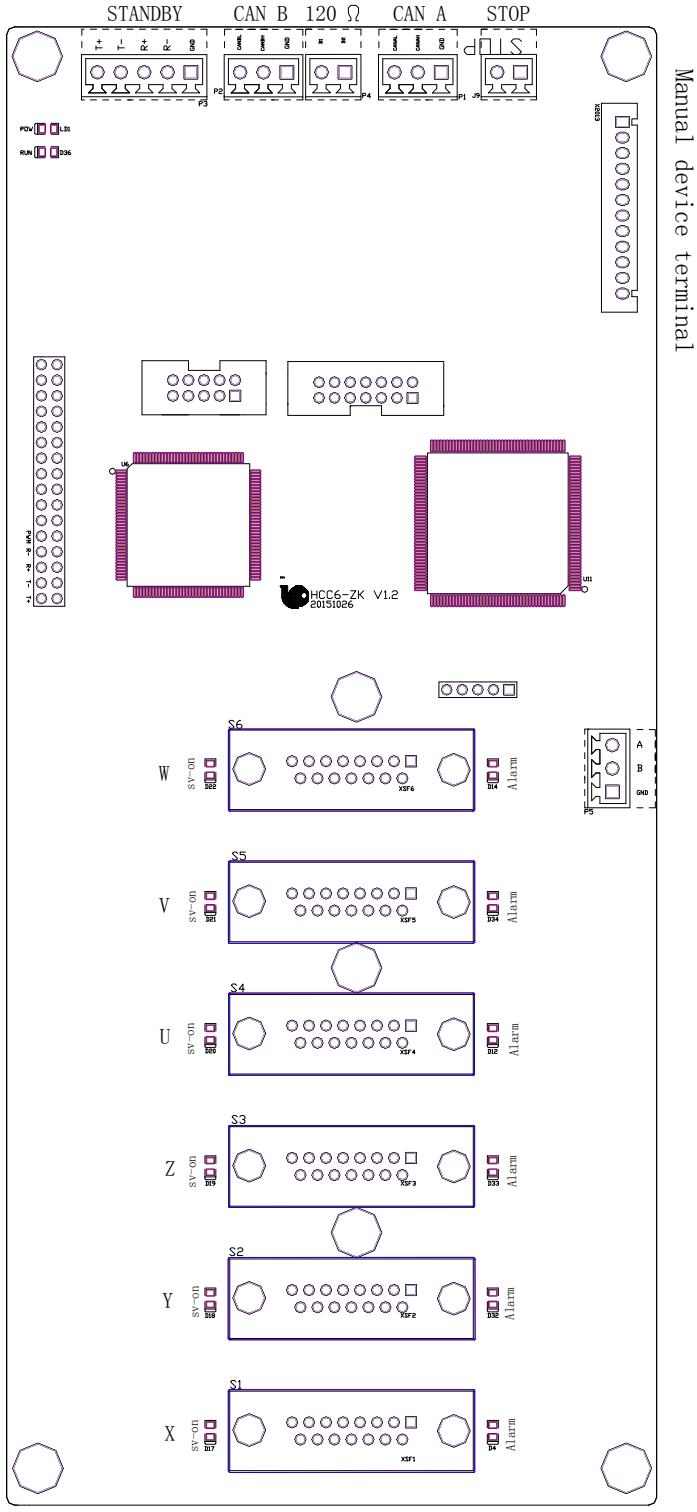
Err215	Manually track movement of the arc endpoint coordinates is not set	No
Err216	Taught arc trajectory starting point coordinates is not set	No
Err217	Taught arc trajectory coordinates is not set	No
Err218	Taught arc trajectory endpoint coordinates is not set	No
Err219	Motion speed setting failed	Press the stop key to clear the alarm. Movement again. Reason: 1 Speed is set to 0 ; 2 , Trajectory in the movement, move on to the next motion, such as a track is running the main program, subroutine starts another trajectory.
Err220	Trajectory planning of failure	Press the stop key to clear the alarm. Slow movement again. Reason: there are some singular points in the trajectory, through single-axis motion around the singularity.
Err221	Trajectory planning failure	Reason: 1 Too fast, track movements, in a number of amendments to track speed, a joint motion is still too fast.
Err222	Timed out waiting for stack data source	Reason: 1 , Visual picture is not successful. 2 Disconnect, Visual Communications.
Err223	Stack data source error	Check the stack counter settings

Err300	Counter is not defined	Press the stop key to clear the alarm. Reset.
Err500	Axis 1 Overcurrent alarm	No
Err501	Axis 2 Overcurrent alarm	No
Err502	Axis 3 Overcurrent alarm	No
Err503	Axis 4 Overcurrent alarm	No
Err504	Axis 5 Overcurrent alarm	No
Err505	Axis 6 Overcurrent alarm	No
Err506	Axis 7 Overcurrent alarm	No
Err507	Axis 8 Overcurrent alarm	No
Err510	Axis 1 z Pulse errors	Check the servo wiring, check the servo
Err511	Axis 2 z Pulse errors	Check the servo wiring, check the servo
Err512	Axis 3 z Pulse errors	Check the servo wiring, check the servo
Err513	Axis 4 z Pulse errors	Check the servo wiring, check the servo
Err514	Axis 5 z Pulse errors	Check the servo wiring, check the servo
Err515	Axis 6 z Pulse errors	Check the servo wiring, check the servo
Err516	Axis 7 z Pulse errors	Check the servo wiring, check the servo
Err517	Axis 8 z Pulse errors	Check the servo wiring, check the servo
Err520	Axis 1 No z Pulse	Check the servo wiring, check the servo
Err521	Axis 2 No z Pulse	Check the servo wiring, check the servo
Err522	Axis 3 No z Pulse	Check the servo wiring, check the servo
Err523	Axis 4 No z Pulse	Check the servo wiring, check the servo
Err524	Axis 5 No z Pulse	Check the servo wiring, check the servo
Err525	Axis 6 No z Pulse	Check the servo wiring, check the servo
Err526	Axis 7 No z Pulse	Check the servo wiring, check the servo
Err527	Axis 8 No z Pulse	Check the servo wiring, check the servo
Err530	Axis 1 Origin offset	Origin has changed, reset the origin

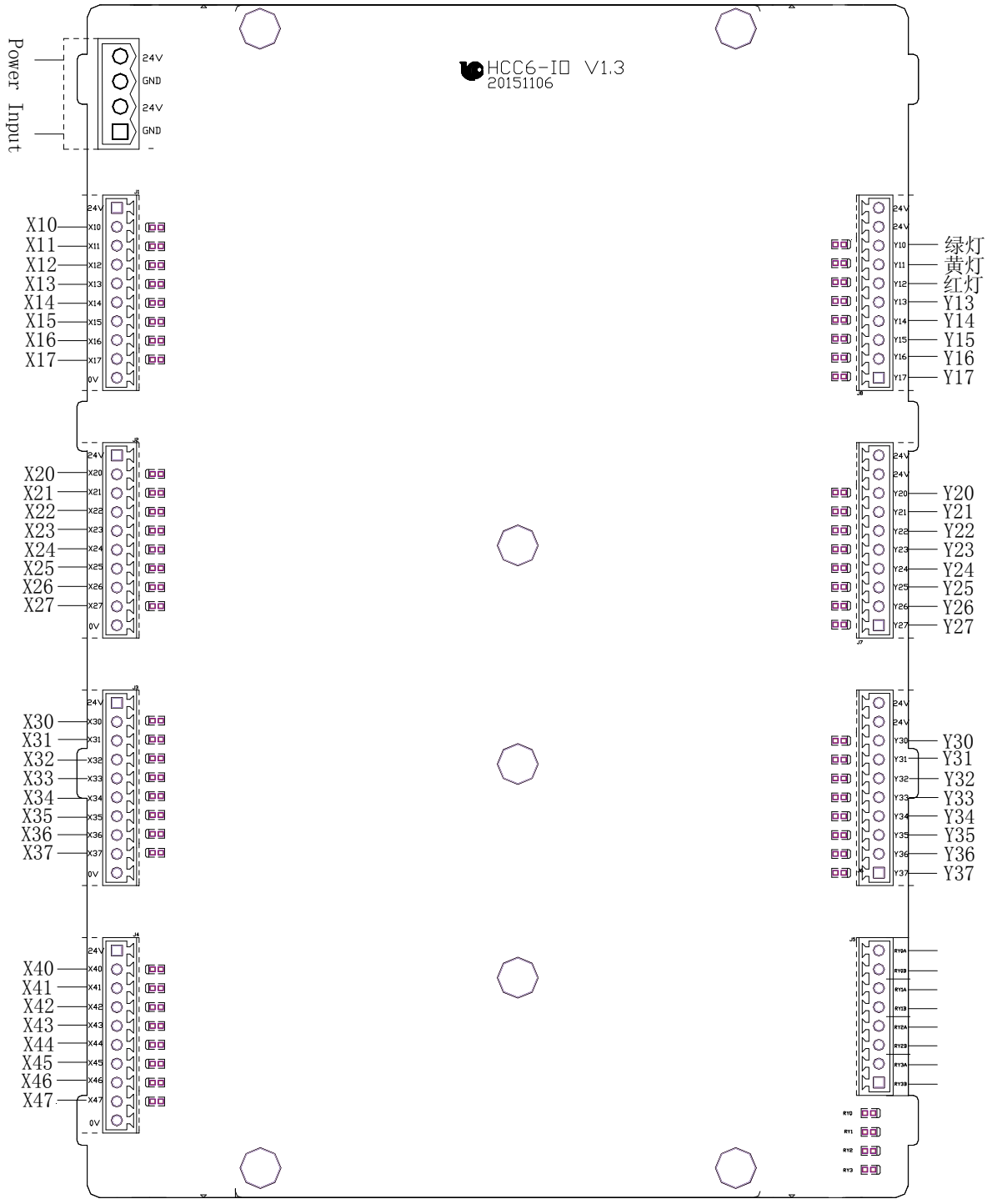
Err531	Axis 2 Origin offset	Origin has changed, reset the origin
Err532	Axis 3 Origin offset	Origin has changed, reset the origin
Err533	Axis 4 Origin offset	Origin has changed, reset the origin
Err534	Axis 5 Origin offset	Origin has changed, reset the origin
Err535	Axis 6 Origin offset	Origin has changed, reset the origin
Err536	Axis 7 Origin offset	Origin has changed, reset the origin
Err537	Axis 8 Origin offset	Origin has changed, reset the origin
Err2048	IO Alarm start address	Press the stop key to clear the alarm.
Err4095	IO Address is currently only up to the end of alarm 3583	Press the stop key to clear the alarm.
Err5000	Custom alarm started	Press the stop key to clear the alarm.
Err10000	Custom alarm end	Press the stop key to clear the alarm.

7 Board Port Definitions

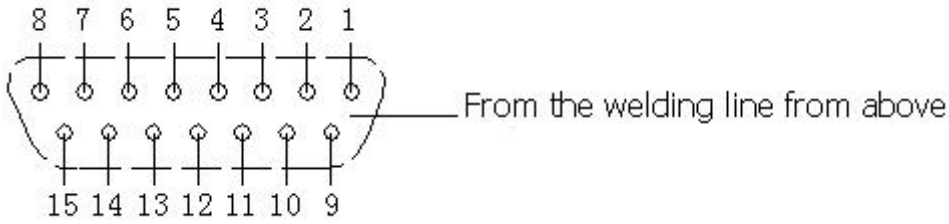
7.1 Main control board serial port definition



7.2 Port definition for the I / O board



7.3 Servo drive interface definition



PIN number	Terminal definition	PIN number	Terminal definition
1	+24V	9	0V
2	OA+	10	P+
3	OA-	11	P-
4	OB+	12	BRAKE
5	OB-	13	N+
6	OZ+	14	N-
7	OZ-	15	ALM
8	SON		

8 Wiring diagram

8.1 The servo connections and parameter setting

Control system output location command to position the servo motor control, command pulse type is forward pulse train and reverse pulse, pulse output frequency 500Kpps, Please set the correct servo drive parameters to match.

8.2 Example Panasonic servo motor used

Panasonic A5 Servo drive parameters

Control no	Parameter name	Set value
Pr0.01	Control mode set	0
Pr0.07	Command pulse input mode setting	1
Pr0.08	Motor pulses per instruction	10000
Pr0.11	Motor pulses per output number	2500

Panasonic A5 Servo drive wiring

Control Panel terminal block interface			Panasonic (A5) Servo drive interface		
PIN number	Signal definitions	Signal descriptions	PIN number	Signal definitions	Signal descriptions
10	P+	Forward impulse output	3	PULS1	Command pulse input 1
11	P-		4	PULS2	
13	S+	Reverse pulse output	5	SIGN1	Command pulse input 2
14	S-		6	SIGN2	
2	A+	A Feedback pulse input	21	OA+	A Pulse output
3	A-		22	OA-	
4	B+	B Feedback pulse input	48	OB+	B Pulse output
5	B-		49	OB-	
6	Z+	Z Feedback pulse input	23	OZ+	Z Pulse output
7	Z-		24	OZ-	
1	+24V	+24V Power supply	7	COM+	External control power supply+
9	0V	24V Power to the	41	COM-	External control power supply-
			36	ALM-	Server alerts-
			10	BRKOFF-	Motor brake-
15	ALRM	Servo-drive alarm	37	ALM+	Server alerts+
8	SON	Servo	29	SRV-ON	Servo
Lead control brake relay coil (output 0V)			11	BRKOFF+	Motor brake+

8.3 Using Mitsubishi servo motor records

Mitsubishi MR-E Servo drive parameters

(Resolution of servo motor 131072 Pulse / Turn)

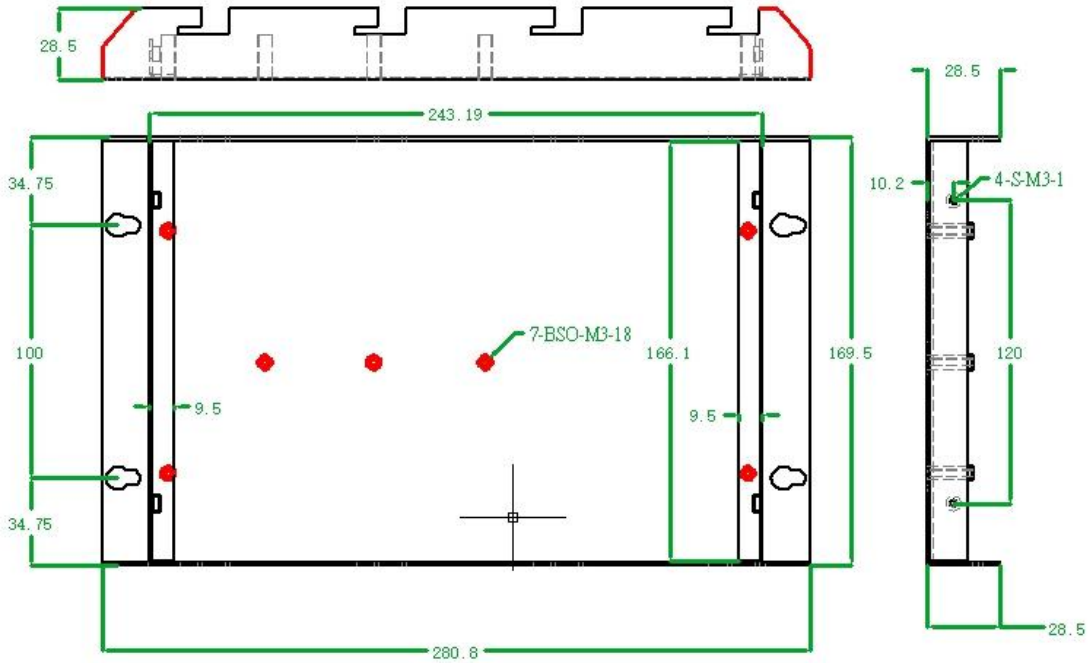
Control no	Parameter name	Set value
No.0	Control mode	0
No.1	Feature selection 1 The brake signal (CN1-12)	0012
No.3	Electronic gear	14
No.4	Electronic gearing denominator	1
No.21	Command pulse option	0000
No.27	Encoder output pulse rate	14
No.54	Feature selection 9 (output pulse rate)	1***

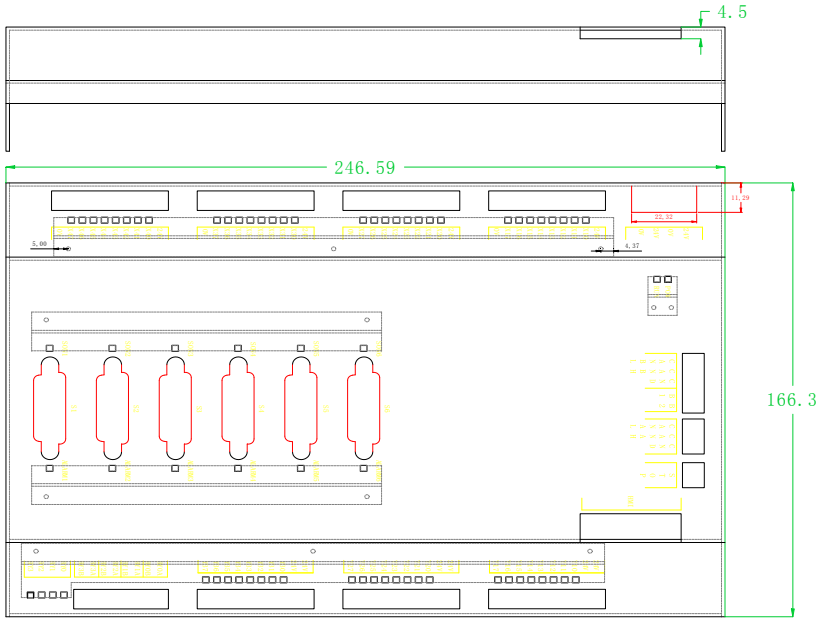
Mitsubishi MR-E Servo drive wiring

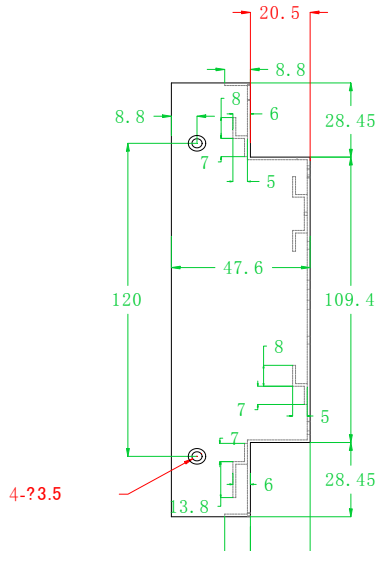
Control Panel terminal block interface			Mitsubishi MR-E Servo drive interface		
PIN number	Signal definitions	Signal descriptions	PIN number	Signal definitions	Signal descriptions
10	P+	Forward impulse output	23	PP	Command pulse input 1
11	P-		22	PG	
13	S+	Reverse pulse output	25	NP	Command pulse input 2
14	S-		24	NG	
2	A+	A Feedback pulse input	15	LA	A Pulse output
3	A-		16	LAR	
4	B+	B Feedback pulse input	17	LB	B Pulse output
5	B-		18	LBR	
6	Z+	Z Feedback pulse input	19	LZ	Z Pulse output
7	Z-		20	LZR	
1	+24V	+24V Power supply	1	VIN	External DC24V Power supply+
9	0V	24V Power to the	13	SG	External DC24V Power supply-
15	ALRM	Servo-drive alarm	9	ALM	Fault
8	SON	Servo	4	SON	Servo
Lead control brake relay coil (output 0V)			12	MBR	Electromagnetic brakes
Mitsubishi servo drive Terminal CN1 : 6 (LSP)、 7(LSN) 、 8(EMG) And you want 13 (SG) Short					

9 Size chart

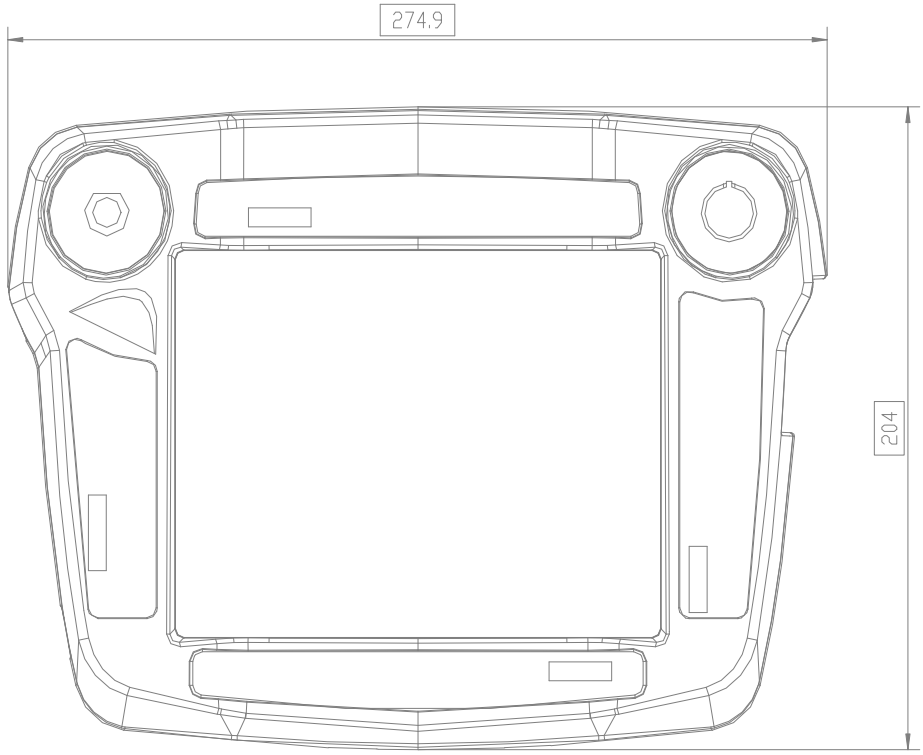
9.1 Board metal case sizes



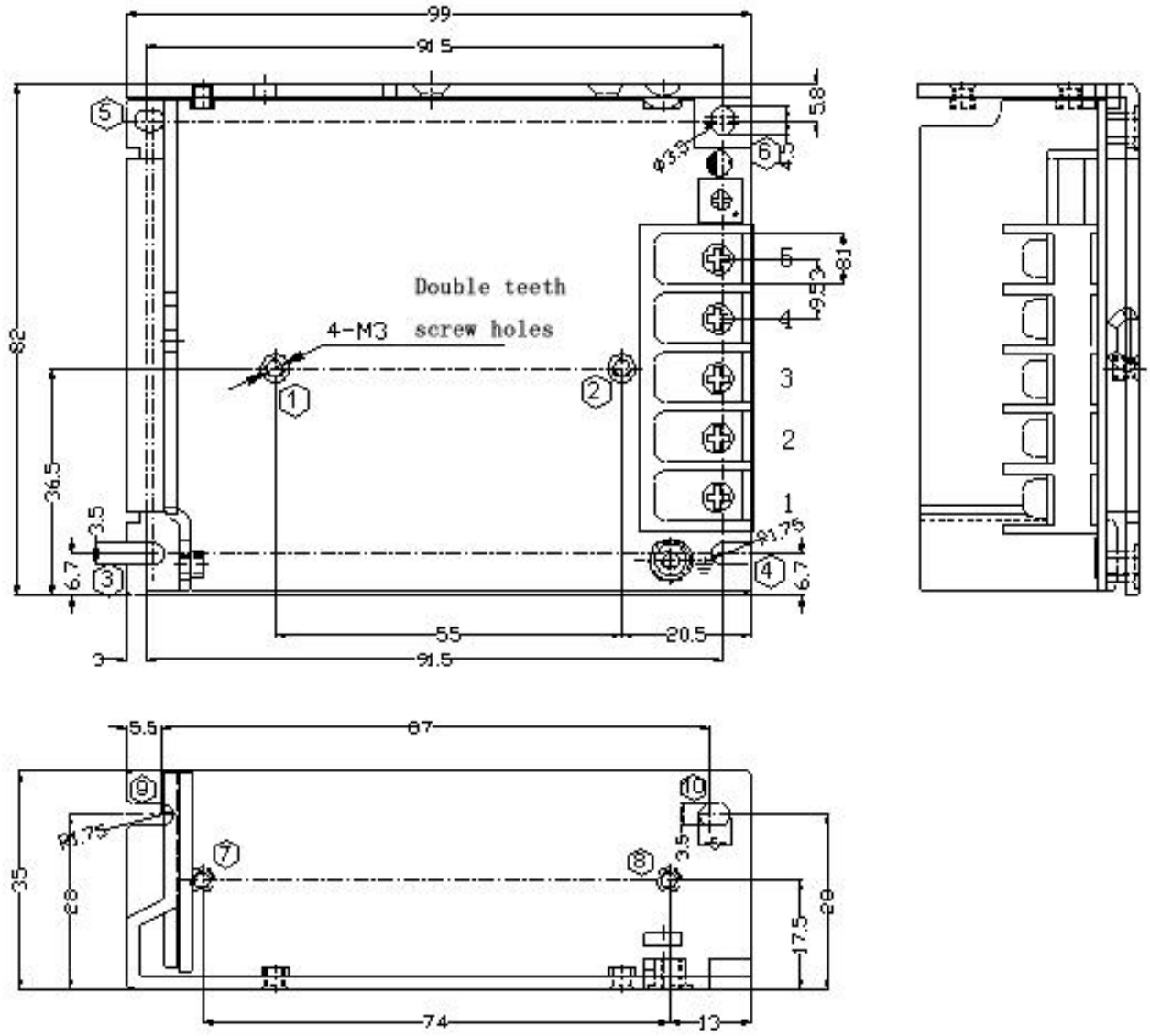




9.2 Hand controller

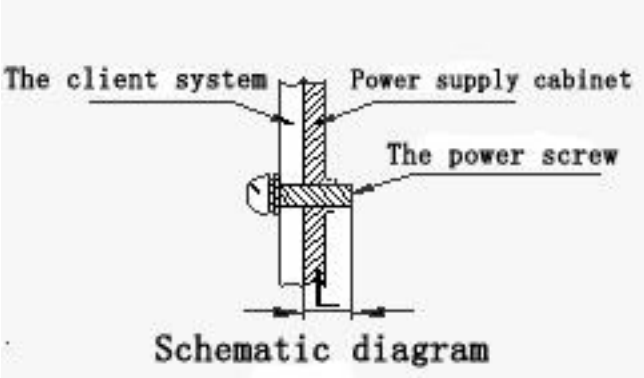


9.3 Switching power supplies installation dimensions



The installation position	installation	Install a no.	Screw specification	Lmax	Install torque
Floor installation	screws	①-②	M3	4mm	6.5Kgf.cm(max)
		③-⑥	M3	4mm	
The side	screws	⑦-⑧	M3	4mm	6.5Kgf.cm(max)
		⑨-⑩	M3	4mm	

Note:n order to ensure the safety, screws into the power supply chassis length L (As shown in the figure below) as shown in the table above are satisfied



Schematic diagram

1, the installation of the ac input terminals

A no	function	termi nal	The first material installation specifications	Maximu m torque
1	N	9.5 with clamshell terminals	22-14AWG	12Kgf.cm （max)
2	L			
3	⏚			

2, install and use dc input terminals

A no	function	termi nal	The first material installation specifications	Maximu m torque
4	+V	9.5 with clamshell terminals	22-14AWG	12Kgf.cm （max)
5	-V			

This product is improved at the same time , information may be subject to change , without prior notice.