

HOW TO ROTATE BEFORE TRAVERSE WHEN HOMING

EPIK / UNIK



CAUTION

Always back up the files first before you editing them

1. **After the modification, you must run test drive at low velocity.**
2. **This modification may cause accident or damage.**
Always be cautious.

If you have any questions, email us at sales@hyrobotics.com

The order of operation when Home button is pressed.

Default Setting

1. Robot arm goes up (Z axis)
2. Robot arm goes forward/backward (Y Axis)
3. EOAT Rotate
4. Traverse back to home position (X axis)
5. EOAT Rotate Return

The order of operation

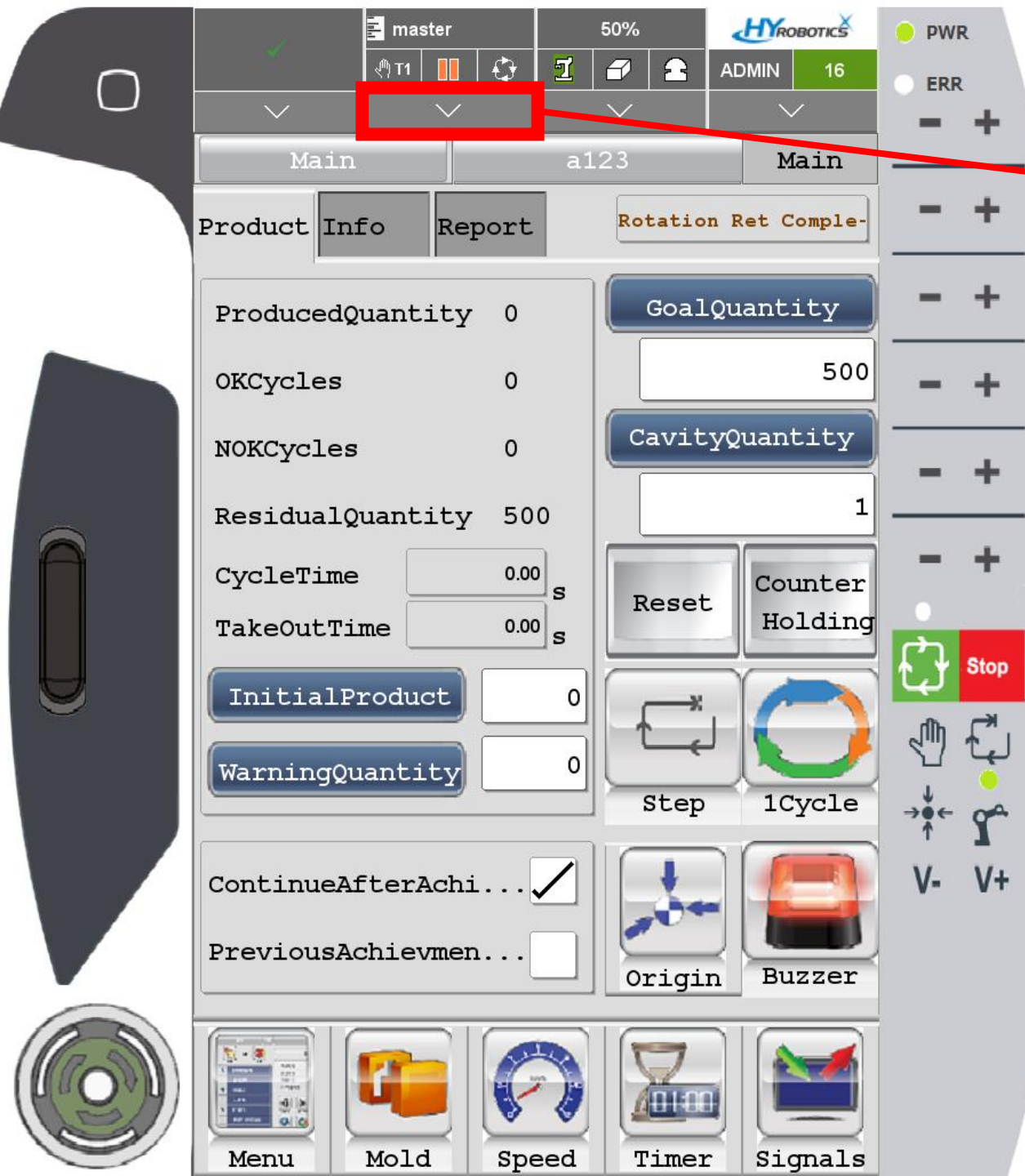
Let's change to
EOAT Rotation Return only once
before Traverse

Default Setting

1. Robot arm goes up (Z axis)
2. Robot arm goes forward/backward (Y Axis)
3. **EOAT Rotate Return**
4. Traverse back to home position (X axis)



Log in as Level 16,
Administrator



Press here

HY ROBOTICS

master 50% ADMIN 16

Projects

Current Project	a123	Details
Current Program	master	Details
Execution Mode	paused	

Euromap Signals

Mold open	<input checked="" type="checkbox"/>
Mold closed	<input type="checkbox"/>
Enable mold closure	<input type="checkbox"/>
Enable ejector forward	<input type="checkbox"/>

Displaylock Lock

Robot control authority

Control authority

Device: T70IMM (SIM)

Device IP: 192.168.100.3

Settings Users User-admin. Version Info Network

Menu Mold Speed Timer Signals

PWR

ERR

- +

- +

- +

- +

- +

- +

Stop

Hand icon

Refresh icon

Stop icon

Light icon

Robot icon

V- V+

Press here

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Programs

Projects	State
+ SYSTEM	loaded
+ MARSHALL	---
+ GLOBAL	loaded
+ a123	loaded
+ aaa	---
+ advancedposition	---
+ andy	---
+ ball	---
+ bbb	---
+ eclipse	---
+ eric	---

Info

Name

Date

Info

Image

Program filter: All programs

File Refresh

Menu Mold Speed Timer Signals

PWR

ERR

- +

- +

- +

- +

- +

- +

- +

- +

- +

Stop

Hand

Refresh

Light

Robot

V- V+

You will see your mold project files

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Programs

Projects	State
+ SYSTEM	loaded
+ MARSHALL	---
+ GLOBAL	loaded
+ a123	loaded
+ aaa	---
+ advancedposition	---
+ andy	---
+ ball	---
+ bbb	---
+ eclipse	---
+ eric	---

Info

Name

Date 3/11/21 4:18:52 PM

Info

Image

NO ICON

Program filter: All programs

Close File Info Refresh

Menu Mold Speed Timer Signals

PWR

ERR

- +

- +

- +

- +

- +

- +

- +

- +

Stop

NO ICON

V- V+

Press **+** button and Expand **currently loaded** mold project file

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Programs

Projects	State
UpPosVacummNChuckCheck	---
UpPosition	---
WaitingForlmm	---
WaitingPosition	---
homing	---
INITMM	---
master	stopped
orderpoint	---
reference	---
startup	---
+ aaa	---

Info

Name: homing

Date: 3/11/21 4:18:54 PM

Info: program to move to the initia

Image: NO ICON

Program filter: All programs

Open | File | Info | Refresh

Menu | Mold | Speed | Timer | Signals

PWR

ERR

- +

- +

- +

- +

- +

- +

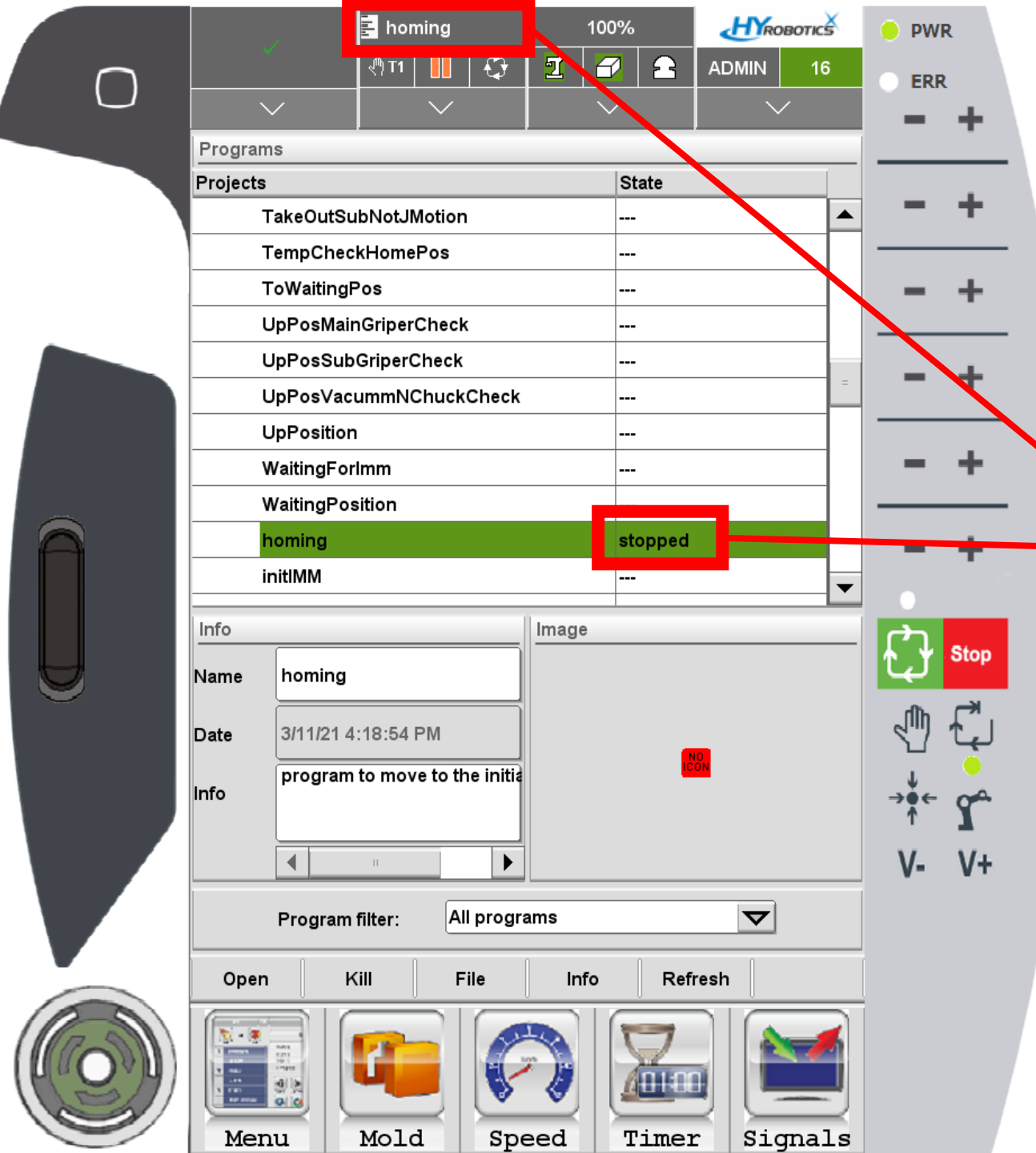
- +

Stop

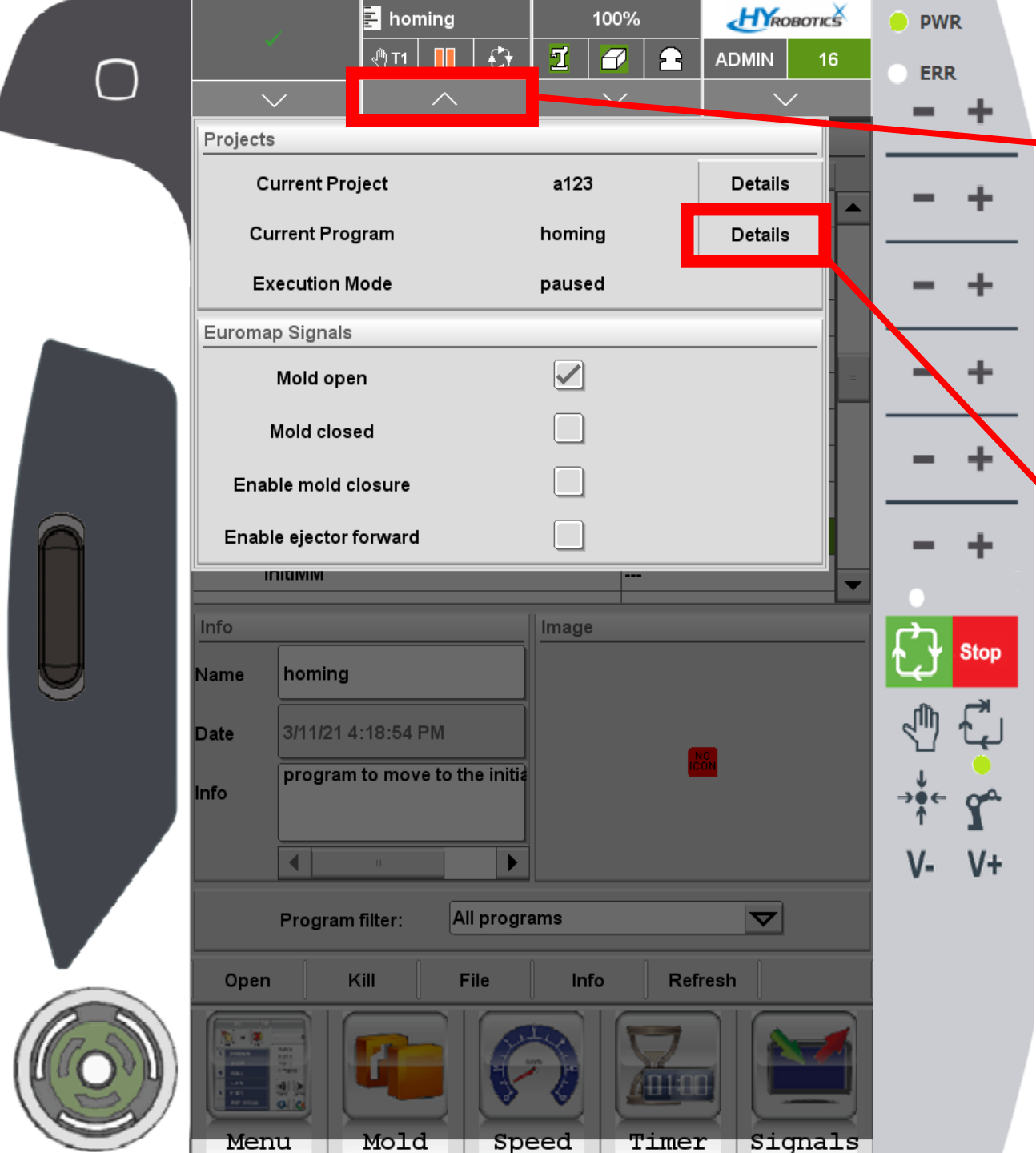
NO ICON

V- V+

Find **homing**
And
OPEN it



Confirm
homing
is loaded



Click here

Click here

```
Program
-----
46 END_IF
47
48 IF MotionMode.i_M05 < 3 THEN
49 // if use rotation. 3 means -> not use rotation.
50 bNoRotationWhileMoving:=TRUE
51 // IF (MotionMode.i_M02 = 1) THEN //1
52 // //Out-side Wait - use
53 // IF dinSafetyPos.val = TRUE THEN
54 // CALL Rotation()
55 // END_IF
56 IF (MotionMode.i_M02 = 0) OR (MotionMode.i_M02 = 2) T
57 IF dinSafetyPos.val = FALSE THEN
58 CALL Rotation() //17
59 END_IF
60 END_IF
61 END_IF
62
63 IF MotionMode.i_M14 > 0 THEN
64 CALL SwivelReturn()
65 END_IF
66
67 MoveAxis(x, pHomePosBuf.x, , oSmooth)
```



Find
CALL Rotation()
And select it

Make sure the previous line is
IF dinSafetyPos.val = FALSE THEN

Program

```
46 END_IF
47
48 IF MotionMode.i_M05 < 3 THEN
49 // if use rotation. 3 means -> not use rotation.
50 bNoRotationWhileMoving:=TRUE
51 // IF (MotionMode.i_M02 = 1) THEN //1
52 // //Out-side Wait - use
53 // IF dinSafetyPos.val = TRUE THEN
54 // CALL Rotation()
55 // END_IF
56 IF (MotionMode.i_M02 = 0) OR (MotionMode.i_M02 = 2) T
57 IF dinSafetyPos.val = FALSE THEN
58 n() //17
59 M14 > 0 THEN
60 urn()
61 mePosBuf.x, , oSmooth)
```

Keep editor in front

Show Commands

Graphical editor

Subroutine

Format

Deactivate

Set PC

Edit Selection Remove

Click **Edit** and **Deactivate**

```
Program
46 END_IF
47
48 IF MotionMode.i_M05 < 3 THEN
49 // if use rotation. 3 means -> not use rotation.
50 bNoRotationWhileMoving:=TRUE
51 // IF (MotionMode.i_M02 = 1) THEN //1
52 // //Out-side Wait - use
53 // IF dinSafetyPos.val = TRUE THEN
54 // CALL Rotation()
55 // END_IF
56 IF (MotionMode.i_M02 = 0) OR (MotionMode.i_M02 = 2) T
57 IF dinSafetyPos.val = FALSE THEN
58 ##CALL Rotation()
59 END_IF
60 END_IF
61 END_IF
62
63 IF MotionMode.i_M14 > 0 THEN
64 CALL SwivelReturn()
65 END_IF
66
67 MoveAxis(x, pHomePosBuf.x, , oSmooth)
```

Check it is deactivated
##CALL Rotation

means
the line is deactivated

```
Program
60 END_IF
61 END_IF
62
63 IF MotionMode.i_M14 > 0 THEN
64 CALL SwivelReturn()
65 END_IF
66
67 MoveAxis(x, pHomePosBuf.x, , oSmooth)
68 HYWaitMoveIsFinished()
69
70 //IF MotionMode.i_M05 < 3 THEN // if use rotation. 3 m
71 IF (MotionMode.i_M02 = 0) OR (MotionMode.i_M02 = 1) TH
72 CALL RotationReturn()
73 ELSIF MotionMode.i_M02 = 2 THEN
74 IF ((MotionMode.i_M00 = 0) OR (MotionMode.i_M00 = 1))
75 CALL Rotation()
76 ELSIF (MotionMode.i_M00 = 2) OR (MotionMode.i_M05 = 3
77 CALL RotationReturn()
78 END_IF
```

Find the other
CALL Rotation()
And select it

Make sure the previous line is
IF ((MotionMode.i_M00 = 0) OR (MotionMode.i_M00 = 1))


```
Program
60 END_IF
61 END_IF
62
63 IF MotionMode.i_M14 > 0 THEN
64 CALL SwivelReturn()
65 END_IF
66
67 MoveAxis(x, pHomePosBuf.x, , oSmooth)
68 HYWaitMoveIsFinished()
69
70 //IF MotionMode.i_M05 < 3 THEN // if use rotation. 3 m
71 IF (MotionMode.i_M02 = 0) OR (MotionMode.i_M02 = 1) TH
72 CALL RotationReturn()
73 ELSIF MotionMode.i_M02 = 2 THEN
74     e.i_M00 = 0) OR (MotionMode.i_M00 = 1))
75     ()
76     ode.i_M00 = 2) OR (MotionMode.i_M05 = 3
77     Return()
78     =
79     f, , oSmooth)
```

Keep editor in front
Show Commands
Graphical editor
Format
Deactivate
Set PC
Edit Selection Remove

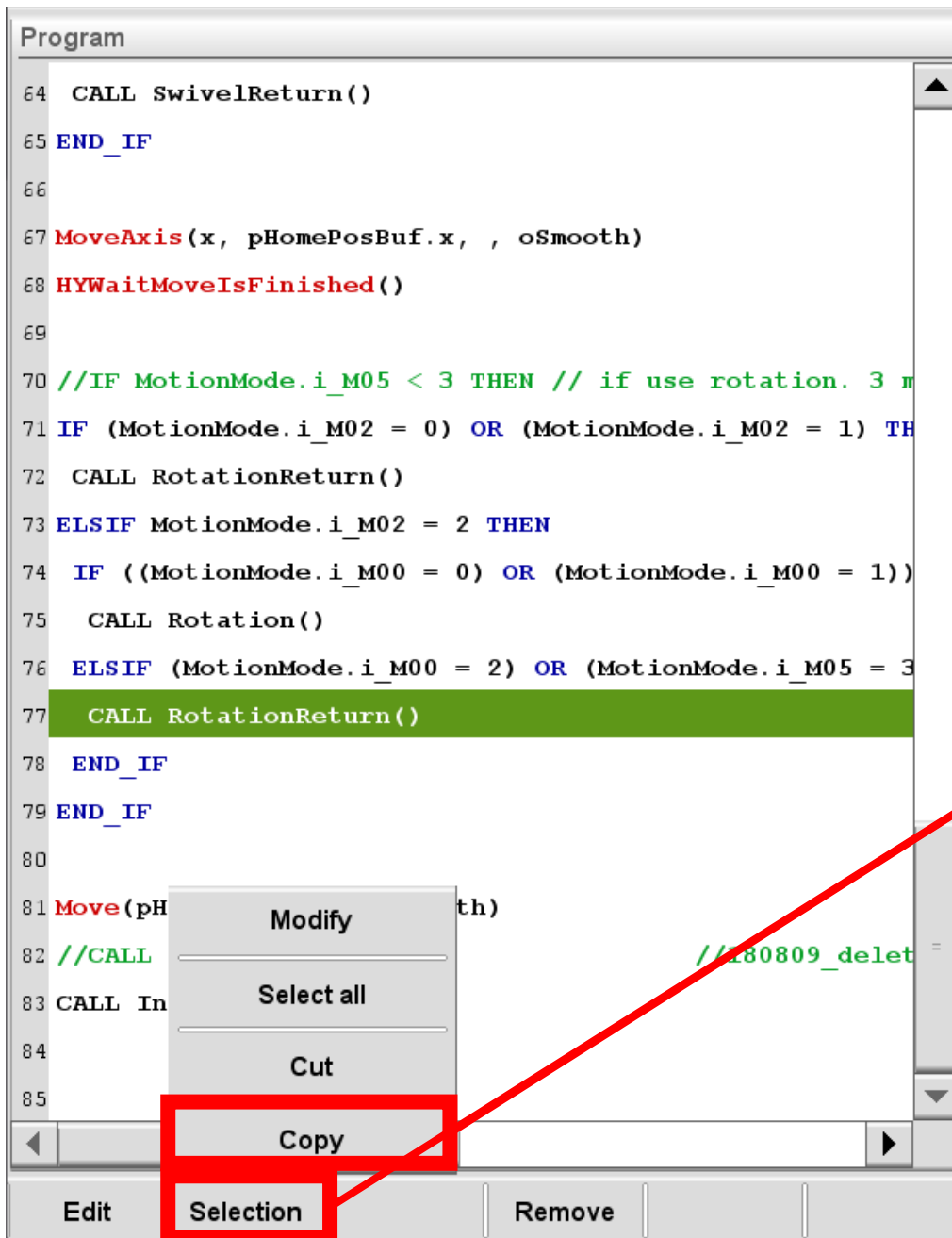
Click **Edit** and **Deactivate**

Check ##

```
Program
64 CALL SwivelReturn()
65 END_IF
66
67 MoveAxis(x, pHomePosBuf.x, , oSmooth)
68 HYWaitMoveIsFinished()
69
70 //IF MotionMode.i_M05 < 3 THEN // if use rotation. 3 m
71 IF (MotionMode.i_M02 = 0) OR (MotionMode.i_M02 = 1) TH
72 CALL RotationReturn()
73 ELSIF MotionMode.i_M02 = 2 THEN
74 IF ((MotionMode.i_M00 = 0) OR (MotionMode.i_M00 = 1))
75 CALL Rotation()
76 ELSIF (MotionMode.i_M00 = 2) OR (MotionMode.i_M05 = 3
77 CALL RotationReturn()
78 END_IF
79 END_IF
80
81 Move(pHomePosBuf, , oSmooth)
82 //CALL ReadCurPos() //180809_delet =
83 CALL InitIOs()
84
85
```

Find any
CALL RotationReturn()
And select it

```
Program
64 CALL SwivelReturn()
65 END_IF
66
67 MoveAxis(x, pHomePosBuf.x, , oSmooth)
68 HYWaitMoveIsFinished()
69
70 //IF MotionMode.i_M05 < 3 THEN // if use rotation. 3 m
71 IF (MotionMode.i_M02 = 0) OR (MotionMode.i_M02 = 1) TH
72 CALL RotationReturn()
73 ELSIF MotionMode.i_M02 = 2 THEN
74 IF ((MotionMode.i_M00 = 0) OR (MotionMode.i_M00 = 1))
75 CALL Rotation()
76 ELSIF (MotionMode.i_M00 = 2) OR (MotionMode.i_M05 = 3
77 CALL RotationReturn()
78 END_IF
79 END_IF
80
81 Move(pH th)
82 //CALL //180809_delet =
83 CALL In
84
85
```



The image shows a code editor window titled "Program" with a list of code lines. Line 77, "CALL RotationReturn()", is highlighted in green. A context menu is open over the code, with options: "Modify", "Select all", "Cut", and "Copy". The "Copy" option is highlighted with a red box. Below the code editor is a toolbar with buttons: "Edit", "Selection", "Remove", and others. The "Selection" button is also highlighted with a red box. A red arrow points from the "Copy" button in the context menu to a text box on the right.

Click Selection and Copy

```
Program
46 END_IF
47
48 IF MotionMode.i_M05 < 3 THEN
49 // if use rotation. 3 means -> not use rotation.
50 bNoRotationWhileMoving:=TRUE
51 // IF (MotionMode.i_M02 = 1) THEN //1
52 // //Out-side Wait - use
53 // IF dinSafetyPos.val = TRUE THEN
54 // CALL Rotation()
55 // END_IF
56 IF (MotionMode.i_M02 = 0) OR (MotionMode.i_M02 = 2) THEN
57 IF dinSafetyPos.val = FALSE THEN
58 ##CALL Rotation()
59 END_IF
60 END_IF
61 END_IF
62
63 IF MotionMode.i_M14 > 0 THEN
64 CALL SwivelReturn()
65 END_IF
66
67 MoveAxis(x, pHomePosBuf.x, , oSmooth)
```

Find the FIRST
##CALL Rotation()
Which we deactivated earlier
in page 13 - 14

Make sure it is not the second one

```
Program
46 END_IF
47
48 IF MotionMode.i_M05 < 3 THEN
49 // if use rotation. 3 means -> not use rotation.
50 bNoRotationWhileMoving:=TRUE
51 // IF (MotionMode.i_M02 = 1) THEN //1
52 // //Out-side Wait - use
53 // IF dinSafetyPos.val = TRUE THEN
54 // CALL Rotation()
55 // END_IF
56 IF (MotionMode.i_M02 = 0) OR (MotionMode.i_M02 = 2) T
57 IF dinSafetyPos.val = FALSE THEN
58 ##CALL Rotation() //
59 END_IF
60 END_IF
61 END_IF
62
63 IF Moti HEN
64 CALL S
65 END_IF
66
67 MoveAxi , , Ssmooth)
68 HYWaitM
```

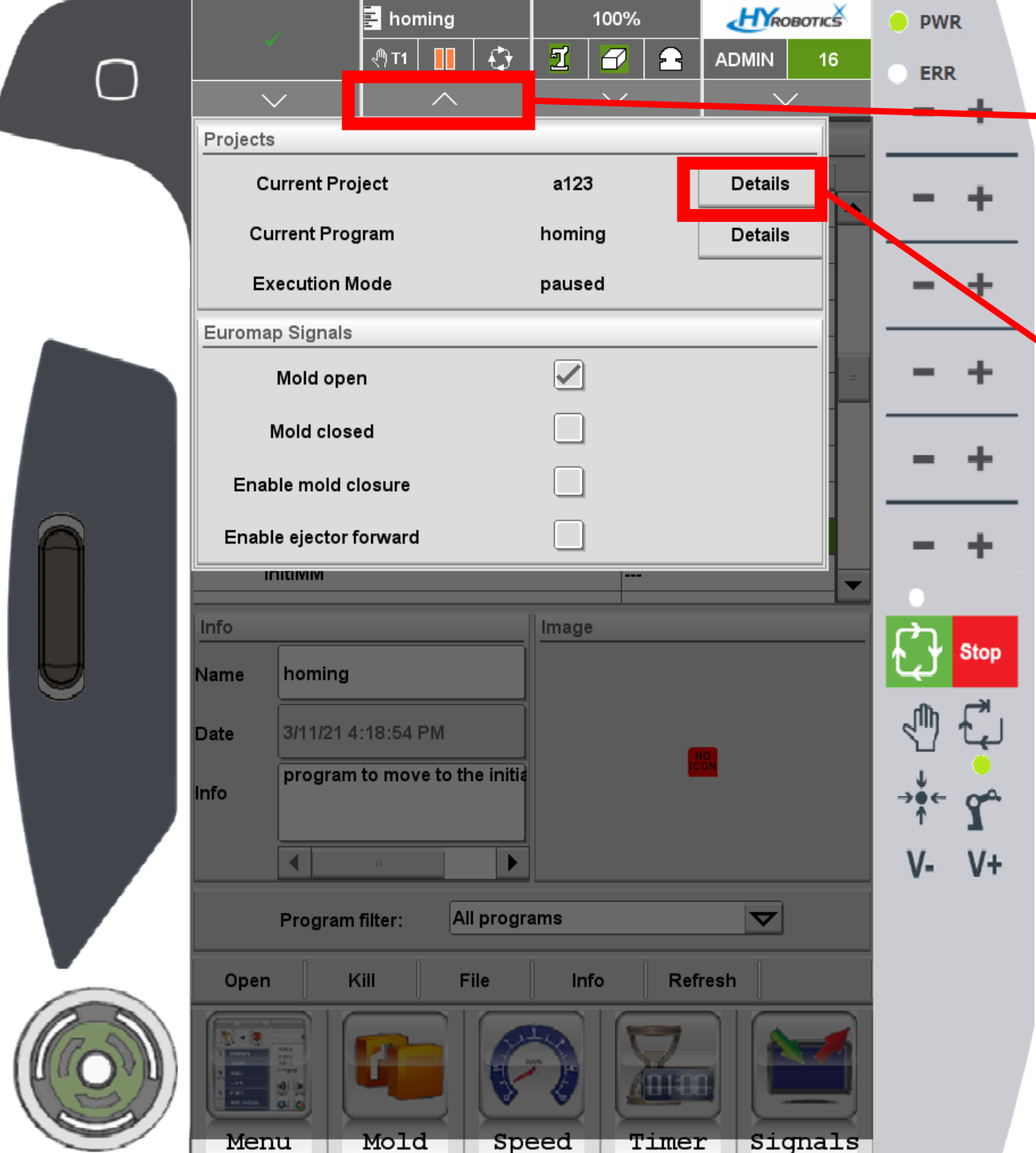
Click Selection and Paste

- Modify
- Select all
- Cut
- Copy
- Paste

Selection

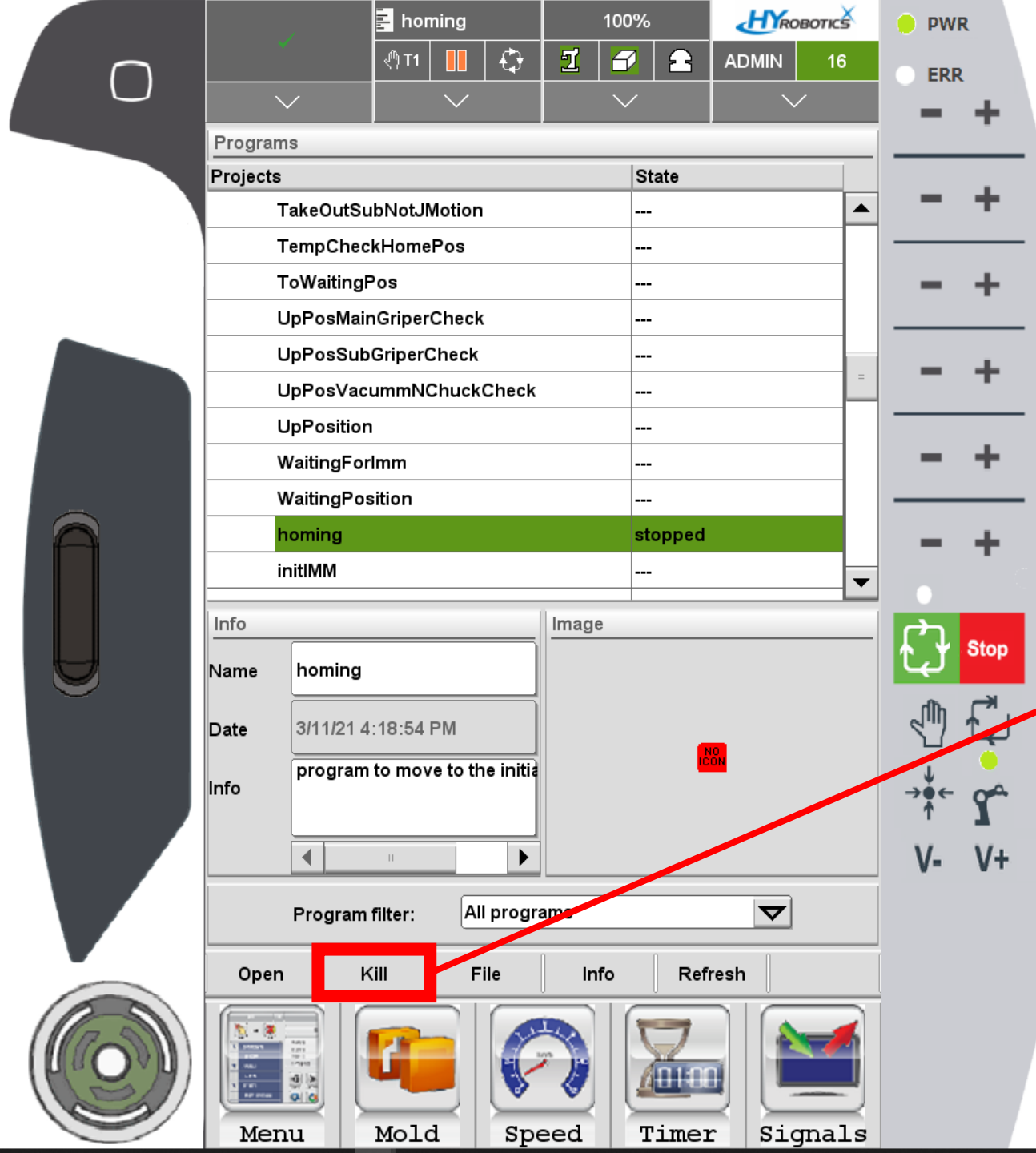
```
Program
46 END_IF
47
48 IF MotionMode.i_M05 < 3 THEN
49 // if use rotation. 3 means -> not use rotation.
50 bNoRotationWhileMoving:=TRUE
51 // IF (MotionMode.i_M02 = 1) THEN //1
52 // //Out-side Wait - use
53 // IF dinSafetyPos.val = TRUE THEN
54 // CALL Rotation()
55 // END_IF
56 IF (MotionMode.i_M02 = 0) OR (MotionMode.i_M02 = 2) THEN
57 IF dinSafetyPos.val = FALSE THEN
58 ##CALL Rotation() //
59 CALL RotationReturn()
60 END_IF
61 END_IF
62 END_IF
63
64 IF MotionMode.i_M14 > 0 THEN
65 CALL SwivelReturn()
66 END_IF
67
68 MoveAxis(x_pHomePosBuf y_oSmooth)
```

Check
Call RotationReturn()
is preceded by
##CALL Rotation



Click here

Click here



Kill currently opened homing

50%
HYROBOTICS

ADMIN 16

Programs

Projects	State
WaitingPosition	---
homing	---
initMM	---
master	stopped
orderpoint	---
reference	---
startup	---
+ program	---
+ projectbase	---
+ sAM	---
+ sam0927	---

Info

Name

Date 3/2/21 10:40:24 PM

Info

Program filter: All programs

Open Kill File Info Refresh

Menu Mold Speed Timer Signals

stop

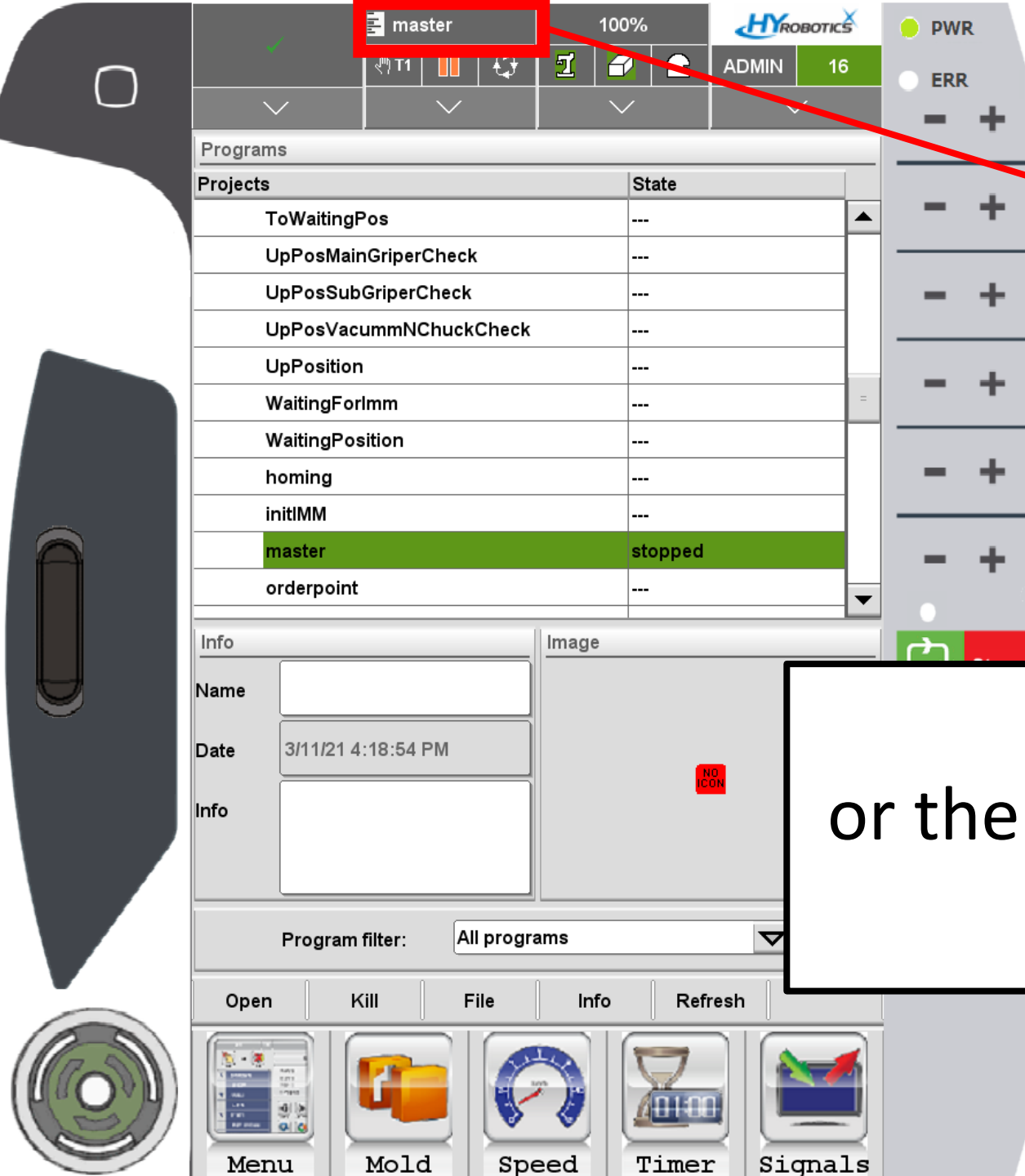
NO ICON

V- V+

1. Find **master** under current mold project

2. Kill currently opened **master**

3. Open **master** again



If you see **master** here,
The robot is ready to go.

If it is blank,
or the robot does not go auto mode,
Repeat page 23-24.

The order of operation
when Home button is pressed.

New Setting

1. Robot arm goes up (Z axis)
2. Robot arm goes forward/backward (Y Axis)
3. EOAT Rotate Return
4. Traverse back to home position (X axis)

CAUTION

Always back up the files first before you editing them

1. **After the modification, you must run test drive at low velocity.**
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