The MACH3 Remote instructions

for the MACH3 systems

Model：WHB04-S： 40 meters wireless distance without electronic handwheel

WHB04-L： 40 meters wireless distance with electronic handwheel

LHB04： With 5 m USB cable with electronic handwheel

。The RF is Standard with **2.4G ISM** ,the Tx power is 0DB and the RX sensitivity is -98DB

。The RF has 64 channels,the channel gap is 1Mhz

。The protocol Designed with high performance ; Low power consumption ; Automatic learning ID Number

。To jump frequency Adaptively when noised ,which can work with 2.4G wireless Mic ,Wlan and Bluetooth etc. devices.

。has the function of the hand wheel, 100PPR the manual pulse generator output

。display, real-time display of the machine the workpiece coordinates, mechanical coordinates. Coordinates X, Y, and Z three-axis with the screen display

1. Product model and the corresponding appearance
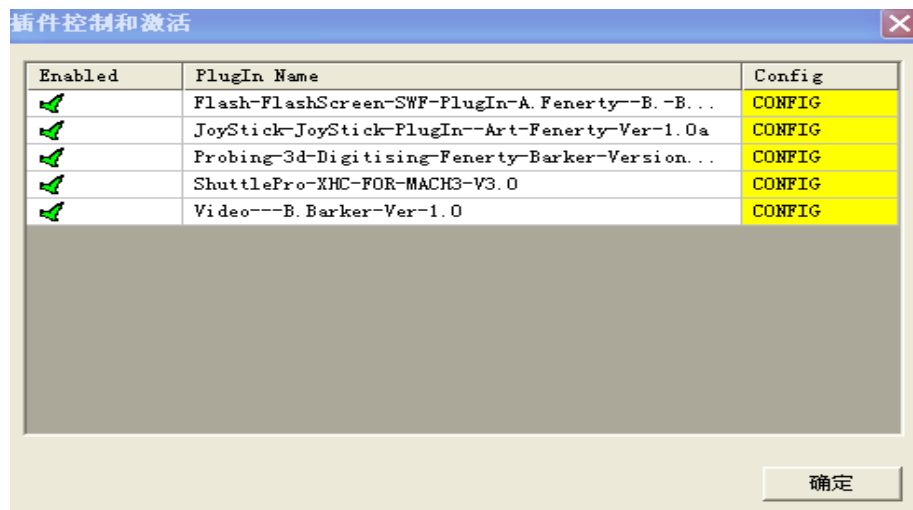

WHB04-L   LHB04   WHB04-S

In order to signal stability of the receiver to be installed outside the chassis

2. XHC-ShuttlePro Installation

Before using the hand wheel, install the driver file, mode of operation is as follows:

2. XHC-ShuttlePro Installation

2. 1：When Mach3 is installed , there will be a folder created named "PlugIns" in the Mach3 folder. This folder is the location to put and Plugin files that you want Mach3 to know about. Place

"XHC-ShuttlePro.dll" in the \Mach3\PlugIns folder. Check and make sure it is there.

Setup diver for Probe Z surface function；M930.m1s copy the installation directory to the
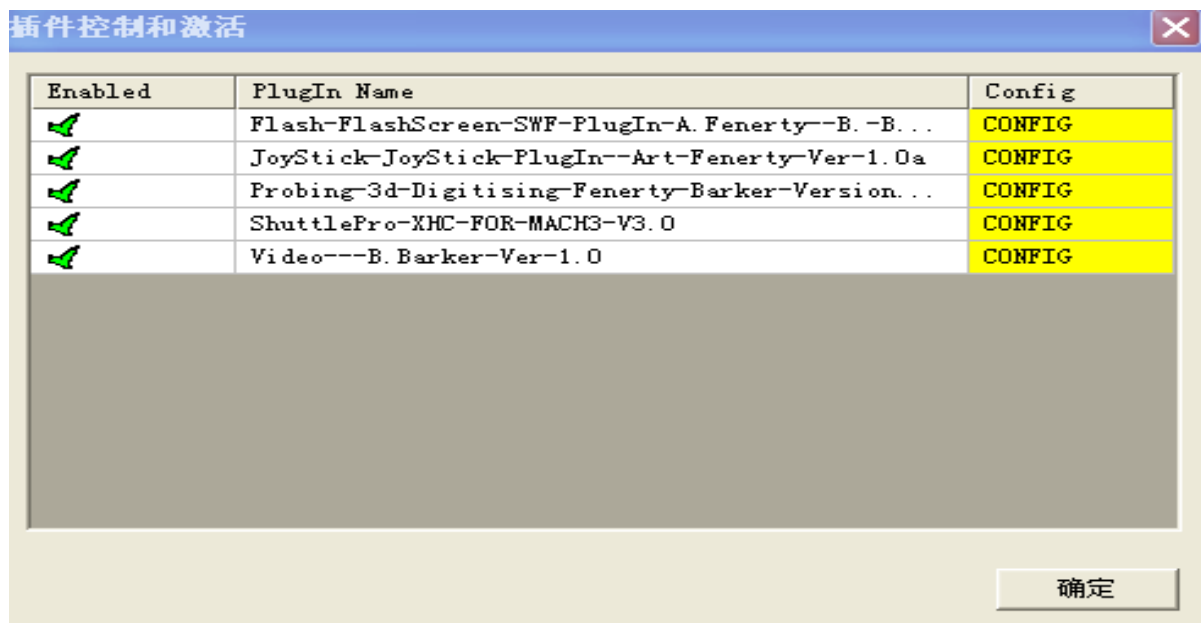MACH3 ..\Mach3\macros\Mach3Mill

2. 2：Now that the XHC-ShuttlePro.dll file is in \Mach3\PlugIns, the next step is to connect the huttlePro. If you are certain that your ShuttlePro is working and your hardware is working then you can simply plug in the ShuttlePro to one of the USB ports.

2. 3：Once the ShuttlePro is connected, start Mach3 and go to the "Config" menu choice and select "ConfigPlugins". You should see the ShuttlePro choice with a green checkmark in front of it. If it is not checked, you can check it. The checkmark means that Mach3 found the ShuttlePro on tartup. Click the "CONFIG" in yellow and set the buttons as you wish.

2. 5：Once you have the proper button selected in the Mach3 ShuttlePro Plugin CONFIG menu, your Shuttle device should be working properly.

3. Plug-in configuration instructions：

Plug-in configuration instructions：
start Mach3 and go to the "Config" menu choice and select "ConfigPlugins". You should see the ShuttlePro choice with a green checkmark in front of it. If it is not checked, you can check it. The checkmark means that Mach3 found the ShuttlePro on tartup. Click the "CONFIG" in yellow and set the buttons as you wish.

插件控制和激活		✕
Enabled	PlugIn Name	Config
✔	Flash-FlashScreen-SWF-PlugIn-A.Fenerty--B.-B...	CONFIG
✔	JoyStick-JoyStick-PlugIn--Art-Fenerty-Ver-1.0a	CONFIG
✔	Probing-3d-Digitising-Fenerty-Barker-Version...	CONFIG
✔	ShuttlePro-XHC-FOR-MACH3-V3.0	CONFIG
✔	Video---B.Barker-Ver-1.0	CONFIG

确定

Custom Key As You Do

Macro-1
Rewind

Macro-2
Goto Safe_Z

Macro-4
Jog increment cycle

Macro-5
Auto Lim Override Toggle

Macro-3
NONE

Macro-6
NONE

Macro-7
Custom Macro #1

Please input Mach3 OEM Button Code Number:
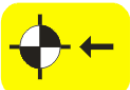
Please input M Code Number,then choose it in Macro box

Custome OEM Code #1	Macro number 1	Macro number 3	Macro number 5	Macro number 7
28	8	0	0	0
Custom OEM Code #2	Macro number 2	Macro number 4	Macro number 6	Macro number 8
0	0	0	0	0

ResetToDefault   OK

4. MACH3
The MACH3 handwheel key function

Button description

Icon	Function	Icon	Function
RESET	Reset	Stop	Stop
	Go to zero	Start Pause	Start/pause program
Rewind	return to the program start	Probe-Z	Probe Z surface

Icon	Function	Icon	Function
Spindle	Spindle On/off	**=1/2**	coordinate Divided by 2；Determine the coordinates X, Y, Z, A-axis through the position of the band switch。
=0	coordinate Clear；Determine the coordinates X, Y, Z, A-axis through the position of the band switch。		
Icon	**Function**	**Icon**	**Function**
Safe-Z	go to Z safehigh		Go home
STEP ++	Step cycle regulation；	**MPG Model**	And JOG work to MPG mode
Macro-1	Macro-code	**Macro-2**	Macro-code
Macro-3	Macro-code	**Macro-6**	Macro-code
Macro-7	Macro-code		

Band switch function

Through the stalls of the band switch switch to control the various functions of the hand wheel

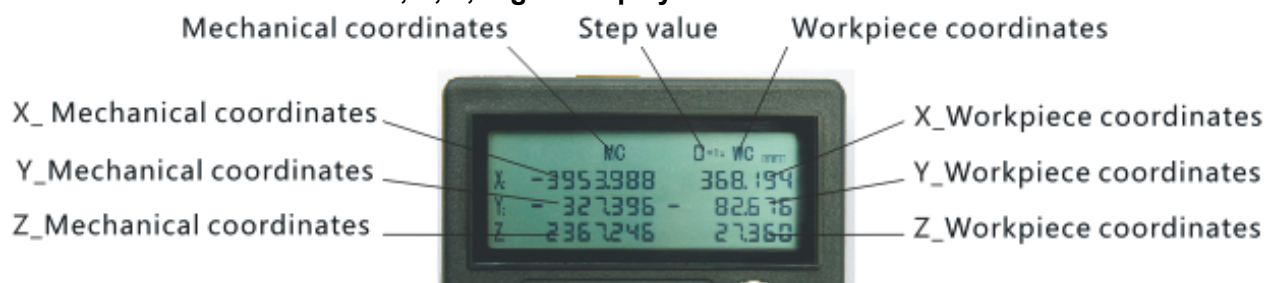| Icon	Explain
OFF	Close the hand wheel
X	Positioning the band switch to the stall, shaking the hand wheel on the X-axis movement control: the distance traveled according to the magnification
Y	Positioning the band switch to the stall, shaking the hand wheel on the Y-axis movement control: the distance traveled according to the magnification
Z	Positioning the band switch to the stall, shaking the hand wheel on the Z-axis movement control: the distance traveled according to the magnification
4	Positioning the band switch to the stall, shaking the hand wheel on the A-axis movement control: the distance traveled according to the magnification
%	The band switch to locate the stall by shaking the hand wheel, spindle speed of adjustment
W%	The band switch to locate the stall by shaking the hand wheel, Feed adjustment

5. LCD display instructions

**When the band switch in the X, Y, Z, A gear display coordinate information**

When the band switch position in the [icon] and [icon] position display feed and spindle Information:

Feed Actual value
Feed icon
turn Speed icon
turn Speed Actual value

F: 3000   208
S: 24000   24000

Moving step value
Feed Pre-set value

turn Speed Pre-set value

Attachment:
Probe Z surface

1. （Copy the file M930.m1s to MACH3 the directory \Mach3\macros\Mach3Mill.）

2. （Connect the probe）

IN7
GND
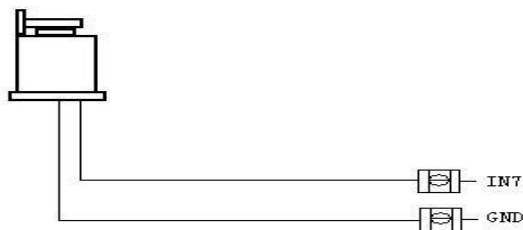
3. Input the z offset the Tool change location:

Tool Change Location
X   +200.0000
Y   -100.0000
Z   -50.0000
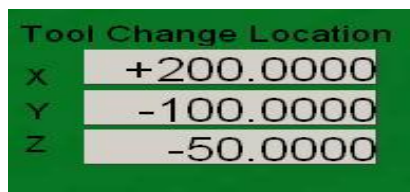
（Notice:the z offset(- 63.000 mm) Is higher 5-10MM than the surface (- 68.000 mm) of the probe）

Set Probe Z surface Value, we can "program" screen "MDI" box, enter "M930" ENTER to proceed ;
Prior to this, please select the number of the tool, as shown in

Tool Information

Tool   1   Change Tool
Dia. +0.0000
H +0.0000

Auto Tool Zero
Remember Return
Elapsed 1:00:08:20

4. Define the MACH3 Probe pin. ; In the config :ports and pins.define probe pin.

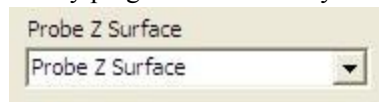| Signal	Enabled	Port #	Pin Number	Active Low	Emulated	HotKey
Input #2	✗	0	0	✗	✗	0
Input #3	✗	0	0	✗	✗	0
Input #4	✓	1	24	✓	✗	0
Probe	✓	1	7	✓	✗	0
Index	✗	0	0	✗	✗	0
Limit Ovrd	✗	0	0	✗	✗	0
EStop	✓	1	8	✓	✗	0
THC On	✗	0	0	✗	✗	0
THC Up	✗	0	0	✗	✗	0
THC Down	✗	0	0	✗	✗	0

5. in my plugin define the key function "Probe Z Surface".

Probe Z Surface

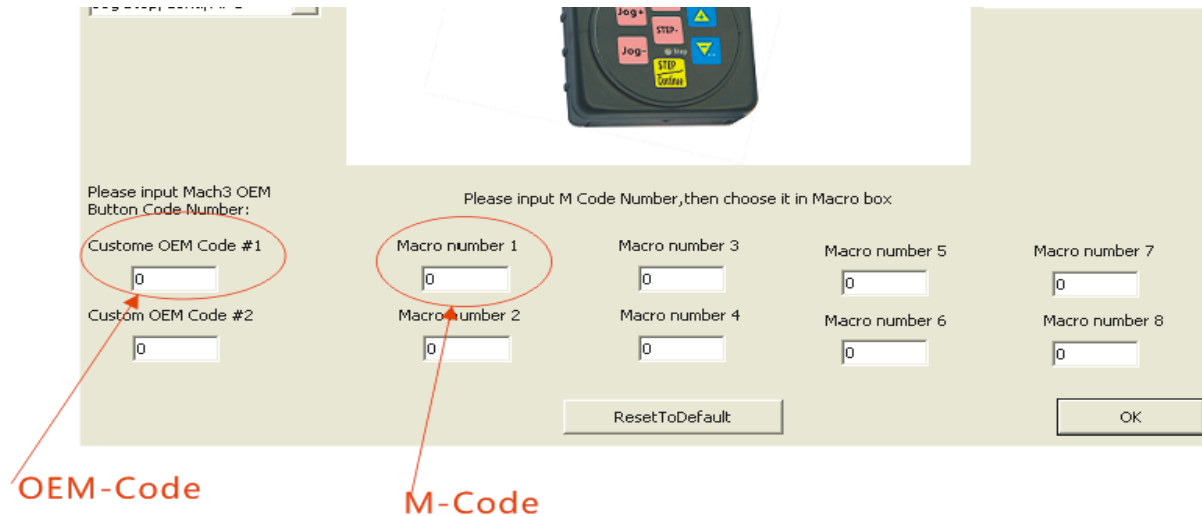| Probe Z Surface | ▼ |

It will auto probe z surface when you press the key.

Attachment:
Macro-code

select the plug-in configuration M #; such as the example to select the Custom Macro # 1
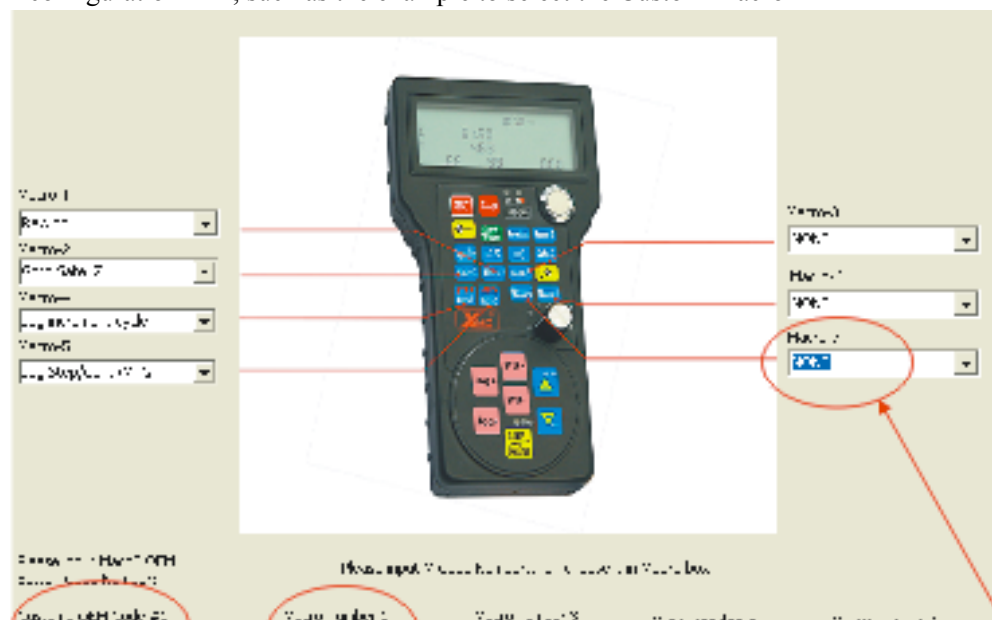
In my plugin setting,you input number in
the "custom macro number1",the number is M code.then choose "Custom macro #1"f
unction in the key combox,, you get the M8 function when you press the key.）

Please input Mach3 OEM Button Code Number:

Please input M Code Number,then choose it in Macro box

OEM-Code

M-Code

M8,Food coolant on.

use VB Scripting to do M code:

To activate an output5, you should enable output#5 in ports and pins config.then write the following script:
ActivateSignal(OUTPUT5)
Then you save it as m200.m1s (to signify the output active) in the directory C:\Mach3\macros\Mach3Mill
To deactivate an output, you write the following script:
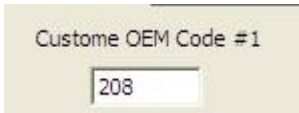DeactivateSignal(OUTPUT5)
Then you save it as m201.m1s (to signify the output inactive) in the directory C:\Mach3\macros\Mach3Mill
then you could define the m code number 200 and 201 in the "macro number" box.

OEM （Custom Oem code setting）:

In my plugin setting,you input number in the "Custom OEM CODE #1",the number is mach3 OEM code.then choose

 "OEM button #1"function   in the key combox,, you get the code 208 function when you press the key.

Clear Z tool offset (Turn)

Key define:

Attachment:
Macro-Codes Function

M-code	Functions
M0	Program stop
M1	Optional program stop
M3/M4	Rotate spindle clockwise/counterclockwise
M5	Stop spindle rotation
M6	Tool change (by two macros)
M7	Mist on
M8	Flood on
M9	Mist & flood off
M30	Program end and rewind
M47	Repeat program from first line
M48	Enable speed and feed override
M98	Call subroutine
M99	Return from subroutine/repeat

Custom M-code*

Custom M-code*	Functions
M200	Output 5 on
M201	Output 5 off
M202	Output 6 on
M203	Output 6 off
M204	Output 7 on
M205	Output 7 off
M206	Output 8 on
M207	Output 8 off
M208	Output 9 on
M209	Output 9 off
M210	Output 10 on
M211	Output 10 off
M212	Output 11 on
M213	Output 11 off
M214	Output 12 on
M215	Output 12 off