

# Manual Pulse Generator

Mach3 system use only

## SPECIFICATION



Model  
No

6 Axis manual Pulse generator

## Feature

Radio Frequency: 433MHZ,ISM,TX power 10DB,RX sensitivity -98DB

100pulse per round MPG, support 10 customs key buttons

LCD monitor will display X/Y/Z/A/B/C mechanical and workpiece coordinates, support 3 axis coordinates display in one time

RF support 64 channels, Each channel gap 1Mhz

Support Frequency hopping transmission, Stable and reliable

One room can run 64pcs MPG at the same time, and will not affect each other due to frequency hopping function

100PPR MPG function, customs macro function keys up to 10pcs

LCD monitor display:Spindle speed value, processing feed rate value



# Using



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

## Driver installation and use

- ① Insert USB receiver to PC usb interface until our driver file installation over.
- ② Find **PlugIns** folder in the disk where you install mach3 software, open CD in our packing box, copy driver file XHC-shuttlepro.dll into folder **plugIns**
- ③ Macro file installation  
Copy all the files in our CD macro folder into **mach3/macros/Mach3Mill**
- ④ Please open the battery cover and install 2pcsAA batteries, press down power on button, then you can use it directly.

## MPG function Explanation

ICON	Function
	Reset button
	Stop button
	Start/Pause button: Press down start button, machine start to work, press down pause button, then machine stop working.
	Macro-1/Feed+ button: When press button alone, macro function-1 works; When press  +  , Processing speed increase.
	Macro-2/Feed- button: When press button alone, macro function-2 works; When press  +  , Processing speed decrease.

## MPG function Explanation

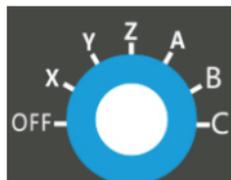
ICON	Function
	Macro-3/Spindle- button: When press button alone, macro function-3 works; When press  +  , Spindle speed increase.
	Macro-4/Spindle- button: When press button alone, macro function-4 works; When press  +  , Spindle speed reduce.
	Macro-5/M-HOME button: When press button alone, macro function-5 works; When press  +  , refer all home.
	Macro-6/M-HOME button: When press button alone, macro function-6 works; When press  +  , back to safe height of Z axis.

## MPG function Explanation

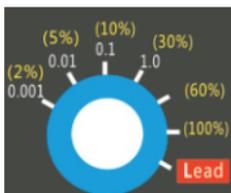
ICON	Function
	Macro-7/W-HOME button: When press button alone, macro function-7 works; When press  +  , go to zero work. .
	Macro-8/S-ON/OFF button: When press button alone, macro function-8 works; When press  +  , Spindle on or off. .
	Macro-9/ probe-Z button: When press button alone, macro function-9 works; When press  +  , probe Z
	Macro-10 button: press the button, macro function-10 works.
	Function button: When you press this button, then press the other button to achieve the combination function.

# MPG function Explanation

ICON	Function
	Continuous button : press the button, Hand wheel change into Continuous mode.
	Step button: press the button, Hand wheel change into Step mode



Position 1: OFF  
Position 2: choose X Axis  
Position 3: choose Y Axis  
Position 4: choose Z Axis  
Position 5: choose A Axis  
Position 6: choose B Axis  
Position 7: choose C Axis



## Step mode:

0.001: move unit is 0.001

0.01: move unit is 0.01

0.1: move unit is 0.1

1.0: move unit is 1.0

## Continuous mode:

2%: 2 percent of max move speed

5%: 5 percent of max move speed

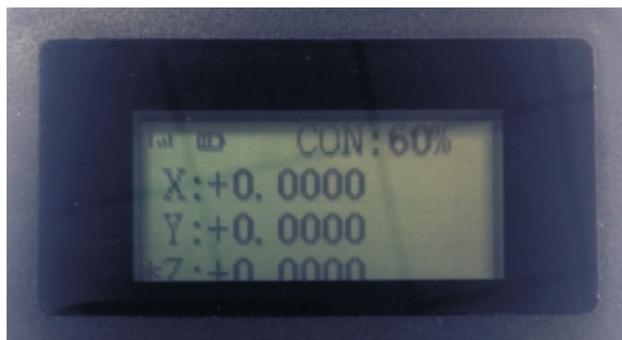
10%: 10 percent of max move speed

30%: 30 percent of max move speed

60%: 60 percent of max move speed

100%: 100 percent of max move speed

# LCD Monitor Instruction



**wireless signal strength**



**Battery level**

**XYZ**

**Current axis**

**\*Z**

**Current selected axis**

**CON/Step**

**Current running mode**

**+0.0000**

**Axis coordinate value**

**60%**

**Current handwheel move speed percent**

## LCD Monitor Instruction

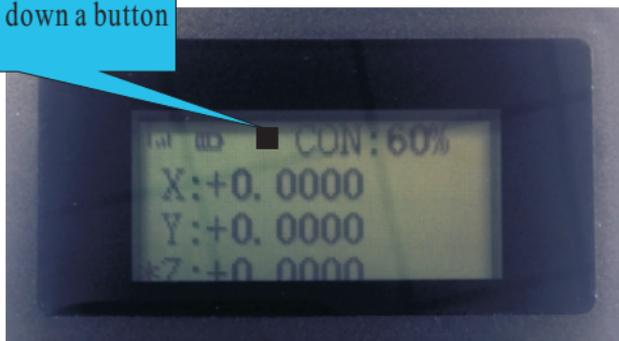
Explanation:

Key success indication: When you press the button, the receiver receives the key value, the indicator flashes 1 time, indicating successful key operation.

Speed indicator: When you press Continuous button, band switch to select 2%, 5%..., LCD display CON and different speed. When you press Step button, band switch to select 0.001, 0.01..., LCD display Step and different speed.

Axis selected location: Axis selection switch position, LCD display axis selected. X: X axis workpiece coordinate axis, X1: X axis mechanical coordinate

Black iron will display after you press down a button



## LCD Monitor Instruction



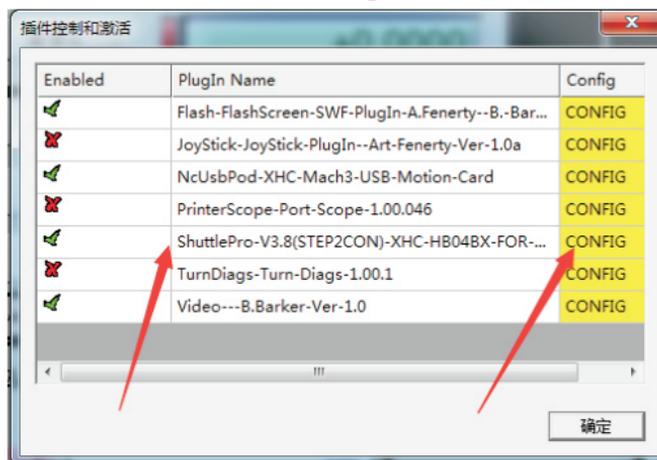
When USB receiver and MPG connect unsuccessfully, For example, USB receiver do not plug into PC, our wireless handwheel will display status like above photo showed)

Now you need to check your USB receiver and try to take it off your PC and plug it again until the MPG back to working status.

## PlugIn instruction and setting

Open your mach3 software, choose **config plugIns** under Config menu, and find handwheel plugIn "ShuttlePro-VXX-XHC-HB04BX-FOR-MACH3" and click config in yellow color then you will enter handwheel config window, and you can set macro function key here

Please check the below photo for reference



After you open config window, like the photo showed. First step, click Macro-1 button and choose custommacro#1; and the same way to set Macro2-8. Then choose Macro-9 and set it into OEM button#1 and Macro-10 into OEM button#2. Then we can start set customs macro function now.

If you wanna set Macro-1 button, choose Macro number 1 and input Mcode you need. and the same way to set Macro2-8. If you wanna use your macro-9 for OEM, please use Custom OEM Code #1 and the same way to set macro-10 as Custom OEM Code #2. Check the photo in next page.

**Note:** Mcode you input must have already copy to mach3/Macro/Mach3Mill folder. Otherwise it will not work.

# Macro Function Key Setting

XHC HB048X-3.8-Configuration

Custom Key As You Do

Macro-1

- Custom Macro #1
- Custom Macro #2
- CV feed toggle
- Cycle MPG jogging mode
- Flood on/off
- FeedUp
- FeedDn
- Feedrate reset
- Goto Z's
- Go Home
- Goto Safe\_Z
- Home All
- Home Z (Turn)
- Home X,Home Z
- Ignore Tool Change togg
- Jog Follow
- Jog Toggle
- Jog Step Incr++
- Jog Step Incr--
- Jog increment cycle
- Joystick Toggle
- Jog Step/Cont/MPG
- Lock/Unlock Movement
- Lock/Unlock Shuttle

Macro-1

Macro-2

Macro-3

Macro-4

Macro-5

Macro-6

Macro-7

Macro-8

Macro-9

Macro-10

OEM Button #1

OEM Button #2

Custom OEM Code #1

Custom OEM Code #2

Macro number 1

Macro number 2

Macro number 3

Macro number 4

Macro number 5

Macro number 6

Macro number 7

Macro number 8

ResetToDefault

OK

1001

930

Custom OEM Code #1

Macro number 1