



N Novusun
CNC

MPG with display

NVMPG

Manual

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Chapter 1. | Brief Introduction

1.1 Products brief introduction

We design a new Manual Pulse Generator named NVMPG. This MPG has a screen, and 10 buttons. The coordinates and some other parameter are displayed on the screen.

And user can change axis and rate by the buttons. There are also few other functions e.g. ZERO/ GOTO0/HOME on the buttons.

The encoder of NVMPG is the same as general MPG. but the choice of axis and rate use USART port instead of general port.

1.2 Specification feature

- 1) High performance, low prices
- 2) 2.2' TFT Screen
- 3) 10 buttons
- 4) Voltage 5VDC
- 5) 8 wire control line
- 6) 6 axis coordinates /RESET/FRO/SRO/SJR/SPINDLE are display on the screen

1.3 Product appearance and dimension

NVBDH+ product appearance pls see picture 1-1 to 1-3.



Figure1-1. NVMPG appearance 1



Figure1-2. NVMPG appearance 2



Figure1-3. NVMPG appearance 3



Figure1-4. NVMPG appearance 4 working state




Figure1-5. NVMPG connected to NC200





Figure1-6. Size of NVMPG

Product size is 150*75*35mm,as picture 1-6 shows.

1.4 Notice and Waring

- 

Prohibit staying in the rain, it will cause short-circuit..
- 

Pls use proper voltage power supply and motor.
- 

Note the power supply connection. Prohibit reverse connection of power supply and Hall.

Chapter 2. Connection

2.1 Connection interface definition

NVMPG has 8 wires connected to CNC system, the definition of NVMPG see as Chart

2-1.

Mark	Color	Definition	Remark
1	RED	A-	Negative of MPG' s A phase
2	BLUE	A+	Positive of MPG' s A phase
3	BLACK	B-	Negative of MPG' s B phase
4	GREEN	B+	Positive of MPG' s B phase
5	WHITE	+5V	5V Power wire
6	VIOLET	TXD	Transmission Port
7	BROWN	RXD	Receive Port
8	YELLO	GND	Ground

Chart 2-1 Wiring definition of NVMPG

There are 2 mode of terminal, which are open wire(see as Figure2-1) and RJ45 port(see as Figure 2-2).

RJ45 port mode is only compatible with NC200. See as Figure 1-5.



Figure2-1. Wire mark of NVMPG in open wire mode



Figure2-2. Wire mark of NVMPG in RJ45 port mode

2.2 NVMPG connection

NVMPG can be connected to NVEM/NVUM and NC200. NVMPG and NVEM connecting method see as Figure 2-3 and Chart 2-2.



Figure 2-3 NVMPG connect to NVEM

NVMPG		NVEM	
			
Definition of NVMPG		Definition of NVEM	
RED	A-	WHA-	
BLUE	A+	WHA+	
BLACK	B-	WHB-	
GREEN	B+	WHB+	
WHITE	+5V	VDD5	
VIOLET	TXD	TXD	
BROWN	RXD	RXD	
YELLOW	GND	GND	

Chart 2-2 Connecting method with NVEM

Connection between NVMPG and NC200 is very simply, it's only need to put NVMPG's RJ45 plug into NC200's RJ45 socket. See as Figure 1-5.

Chapter 3 Configuration & Use

3.1 Configuration

There are 2 DLL files we provide. If we use standard MPG, we should use NVEM_F.DLL, or if we use NVMPG, we should use NVEM_UART_F.DLL.

First we need to set MPG to valid, see as Figure 3-1. No need to set other parameter.

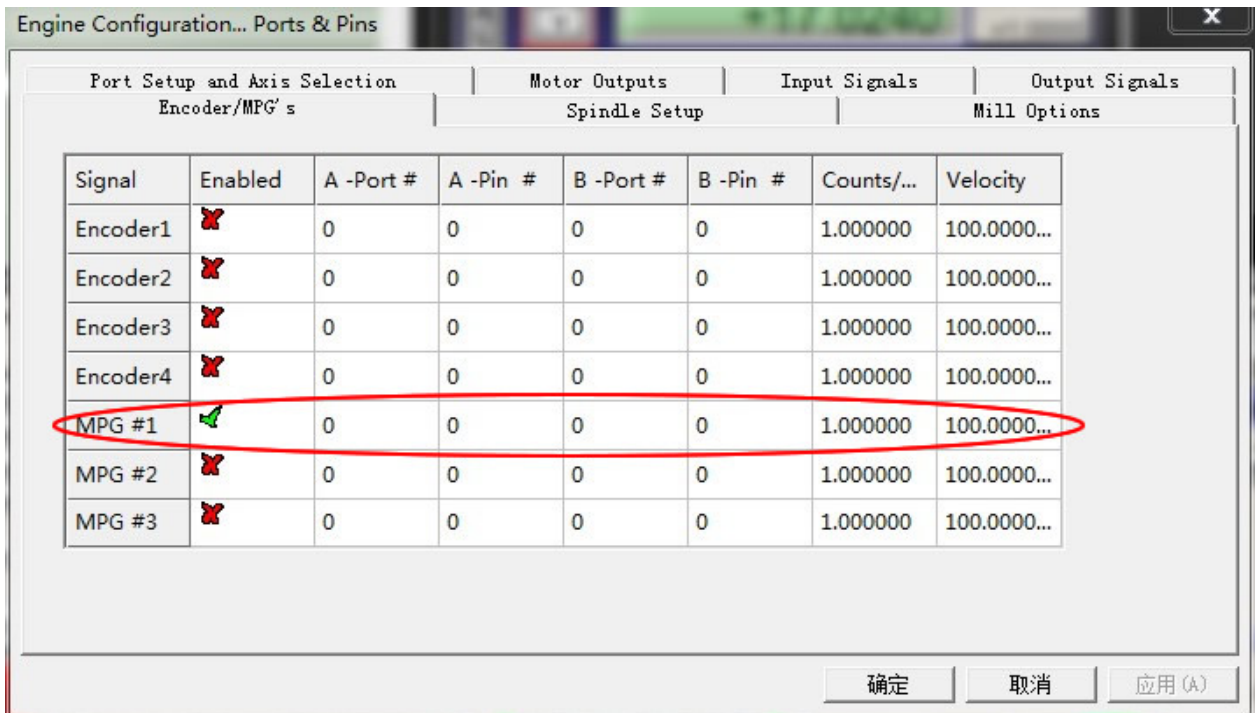


Figure3-1. Set MPG to valid

Second, if we need to use MPG, we should change Manual operation mode into MPG mode, see as

Figure 3-2.

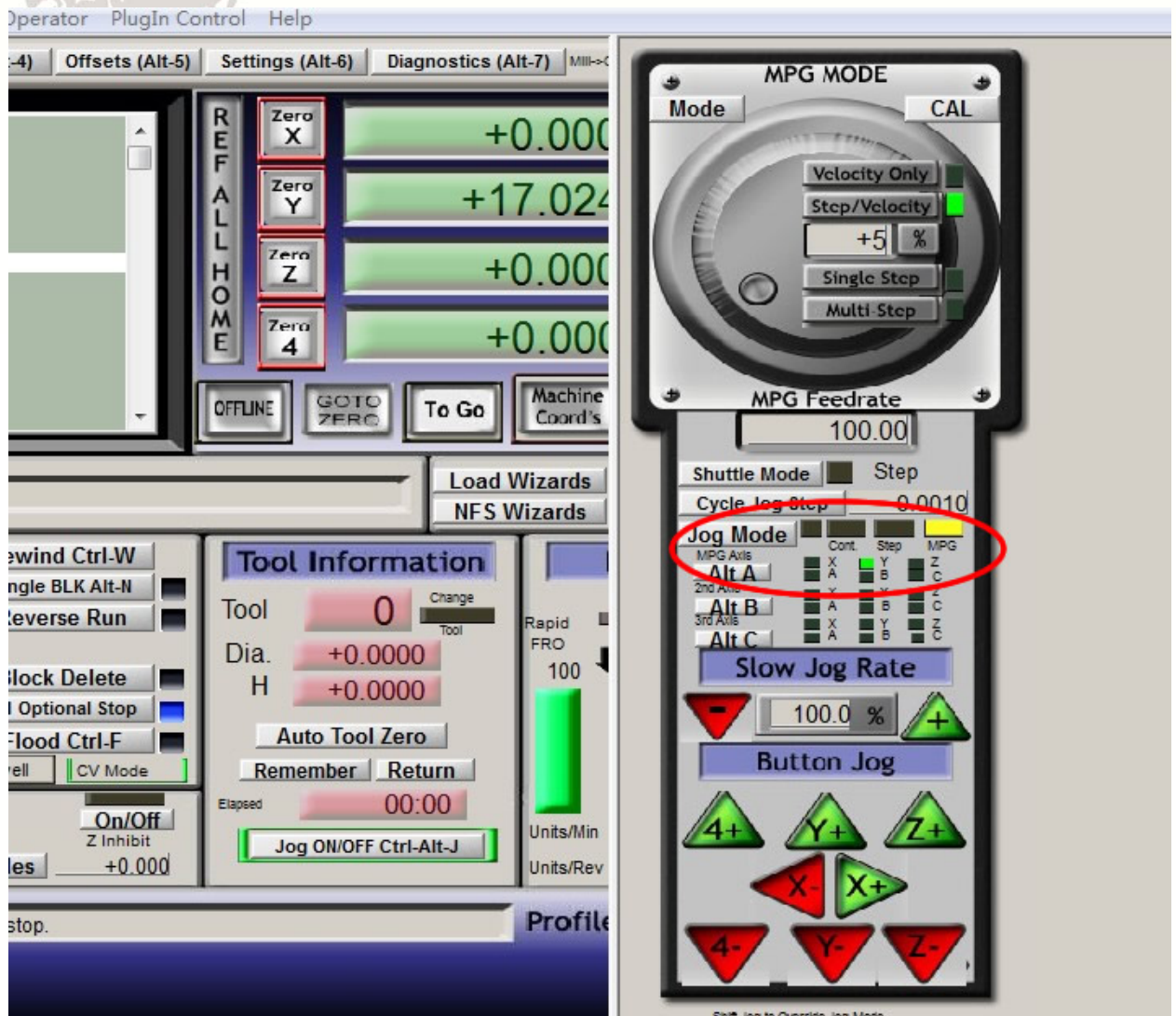


Figure3-2. Set to MPG mode

3.2 Use

See as Figure 3-3, it's definition of NVMPG's screen. Specific description is as follows.

- 1: Coordinate value of 6 axis
- 2: Axis identification
- 3: MPG rate.
- 4: State of RESET.
- 5: State and value of Spindle
- 6: Value of SRO

7: Value of SJR

8: Value of FRO



Figure3-3. Screen of NVMPG



Figure3-4. buttons of NVMPG

See as Figure 3-4, there are 10 buttons in NVMPG. Each key has a function. We list the function of these buttons in Chart 3-1.

No.	Mark	Definition
1	(LEFT BUTTON)	Start/Run G code
2	AXIS ↑	Change active axis AXIS++
3	AXIS ↓	Change active axis AXIS--
4	SPINDLE	START/STOP spindle
5	X1/X10/X100	Change rate of MPG
6	HOME	Trigger HOME function of system
7	GOTOZ	Trigger go to 0 function of system
8	ZERO	Trigger ZERO function of system
9	1/2	Make active axis' coordinate halve
10	(RIGHT BUTTON)	RESET/ESTOP

Chart 3-1 Function of keys

Button 1(START) : After loading G code, push this button to run G code.

Button2(AXIS ↑):

Button3(AXIS ↓): AXIS ↑ and AXIS ↓ are 2 button for change active axis. Each axis has a block above the axis label. Active axis' block is yellow, and invalid axis' block is black. You can notice the color of the block when you change active axis.

Button4(SPINDLE):Open or shut down the spindle.

Button5(X1/X10/X100):Change the rate of MPG, The rate of MPG is displayed on the screen.

Button6(HOME):Push this button is making machine to find it's Machine zero port. If we set a active axis, e.g. X, then push this button is going to find X axis' machine zero port. Or if

we set no active axis, then push this button is going to find all axes' machine zero port.

Button7(GOTOZ): Push this button is making machine to go to workpiece zero port. The method refer to button 6.

Button8(ZERO): Push this button is making current coordinates to 0. The method refer to button 6.

Button9(1/2): Push this button is making current coordinates halve. The method refer to button 6.

Button10(RESET): This button is RESET function.

Chapter 4. | Contract us

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