CENTROID Wireless MPG Control Pendant
Model: WMPG-6 for Centroid CNC equipped Mills, Lathes & Routers

Labels (left side):
- Feed Hold
- Cycle Cancel
- Continuous Jog
- 4 User Programmable Buttons
- Set Axis Part Zeros
- Axis Selector

Labels (right side):
- LCD DRO display (Displays up to 6 axes)
- Cycle Start
- Pendant On / Off
- Spindle Control
- Tool Check
- Feed Rate Override and Spindle Speed Override control with MPG wheel!
- Increment / Speed selector x1, x10, x100
- 100 Step MPG

DRO display:
X:+3.6490
Y:-0.7000
Z:+0.2000
W:-1.750

Take the control to where the work is! A game changing tool, the Centroid Wireless MPG Control Pendant allows the operator to conveniently and precisely set up jobs and tools remotely.
No software drivers to install. Plug and Play with Centroid CNC12 CNC software, just plug in the included USB transmitter/receiver and start using it! Perfect for all types of Mills, Lathes, Routers and other specialty CNC machines.

- On-the-fly Feed Rate override
- On-the-fly Spindle Speed override
- 6 axis DRO display
- 6 axis MPG and continuous jogging control
- Robust wireless communication
- No software drivers to install
- Free Tech Support via CNC Forum
- Hanger bracket mount w/ magnets

- Smooth motion
- Long range wireless
- Robust CENTROID developed drivers
- Takes 2 AA batteries, run time approx. 1 month
- USB Plug and Play Transmitter / Receiver
- Rubber case protector
- Tactile Feedback domed buttons w/ gold contacts
- High quality 3M Overlay

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www.centroidcnc.com

LCD DRO display
(Displays up to 4 axes)

Feed Hold

Cycle Start

Cycle Cancel

Pendant On / Off

Continuous Jog

THC Auto on/off

Laser Set XY position

TORCH Check

Jog Forward along cutter path

VOLT = Target Voltage override
control with MPG wheel.

Restart Mode

Jog Backward along cutter path

FEED = Feed Rate override
control with MPG wheel.

"Macro 1" = User Programmable
button

Axis Selector

Increment / Speed selector
x1, x10, x100

Set Axis Part Zeros

100 Step MPG Wheel:
Control for Feedrate Override, Voltage Override, Jogging any Axis.

Part # 9558

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No software drivers to install. Plug and Play with Centroid CNC12 CNC software, just plug in the included USB transmitter/receiver and start using it!

- On-the-fly Feed Rate override
- On-the-fly Target Voltage override
- Restart Mode
- Jog Forward & Backward along cut path
- 4 axis DRO display
- 4 axis MPG and continuous jogging control
- Robust wireless communication
- No software drivers to install
- Free Tech Support via CNC Forum

- Smooth motion, Long range wireless
- Robust CENTROID developed drivers
- Takes 2 AA batteries, run time approx. 1 month
- USB Plug and Play Transmitter / Receiver
- Rubber case protector
- Tactile Feedback domed buttons w/ gold contacts
- High quality 3M Overlay
- Hanger bracket mount w/ magnets
- Requires a Plasma Pro License

www.shopcentroidcnc.com

CENTROID WMPG-6 kit part # 9690 shown

WMPG-6 Kit for use with Centroid CNC systems

- WMPG-6 Wireless MPG Control Pendant
- USB Wireless Transmitter / Receiver
- Mounting Bracket

Compatible with CNC12 software
in conjunction with Centroid Hardware:

Acorn CNC

Allin1DC

Acorn SIX   Hickory CNC   OAK

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Acorn/AcornSix/Hickory Requirements:

- Acorn CNC12 v4.64+ w/ Mill/Lathe/Router/Plasma/Laser Pro or Ulitmate License
- A CNCPC that meets Centroid CNCPC requirements (see Acorn Install manual or the Acorn "start here" page for more info).

Acorn/AcornSix/Hickory wireless MPG Installation Instructions using the Centroid setup Wizard

1. **Remove MPG finger knob from battery compartment** and install onto MPG wheel.
2. Install 2 good quality AA batteries. Warning! Cheap NiMH/NiCd rechargeable batteries are not recommended as they are rated at 1.2 volts. Good quality alakline 1.5 volt rated AA batteries are required.
3. Plug USB transmitter in USB port on the CNCPC. Reboot CNCPC at this point.
4. Start CNC12, verify Pro or Ultimate License is installed, Open the Wizard and under "Control Peripherals" and select Wireless MPG menu

Control Peripheral
- Input Devices
- Centroid USB-BOB
- Wireless MPG

Wireless MPG Configuration
A restart of CNC12 is required for changes to take effect.

Centroid Wireless MPG	WMPG-6 ⌄	* Requires a Pro, Ultimate, or Ultimate Plus License
MPG Performance	Quick Response ⌄	
Inhibit MPG Z axis fast movement. Z axis x100 = x10	On	
Display reminder to turn off the WMPG on shut down	On	

Macro Button Configuration

MPG Macro Button 1	Edit MPG macro 1
MPG Macro Button 2	Edit MPG macro 2
MPG Macro Button 3	Edit MPG macro 3
MPG Macro Button 4	Edit MPG macro 4

Use the Drop down to select WMPG-6 and leave on "Quick Response" choose to inhibit Z axis fas movement and the reminder message, Press Write Settings to CNC control Configuration. Follow instructions on the screen.

5. Turn on MPG by depressing and releasing the large chrome ON/OFF button on the MPG.
6. Start CNC12, home the machine.
7. Select which axis to move, X, Y, Z or 4th with the axis selection knob.
8. Select the increment desired x1, x10 or x100.
9. Rotate the MPG wheel Clockwise for positive direction axis motion. Turn on MPG by depressing and releasing the large chrome ON/OFF button on the MPG.
10. Start CNC12, home the machine.
11. Select which axis to move, X, Y, Z or 4th with the axis selection knob.
12. Select the increment desired x1, x10 or x100.
13. Rotate the MPG wheel Clockwise for positive direction axis motion.

Notes:

- **MPG wheel finger knob is located in the battery compartment** remove and install onto MPG wheel.

- Only use AA batteries rated at 1.5 volts. There are rechargeable AA batteries on the market now with higher and lower voltage ratings, do not use these types of batteries.

- Keep the USB Transmitter / Receiver at least 3 feet AWAY from the MPG itself.
  WMPG Operational range is 3' - 100'

- LCD Screen has a protective plastic film on it, use clean fingernail to lift up at corner and remove.

- "No RF" message means the WMPG is not seeing the transmitter/receiver, most common cause is the Windows PC did not mount the USB transmitter. Solutions: Use a USB port that directly connects to the PC motherboad, do not use hubs or extension cables. Move to different USB port and reboot PC. see for more info   **https://centroidcncforum.com/viewtopic.php?t=10632|**

- Value for the x1 Jog Increment for the MPG wheel is set in the Wizard Axis configuration menu, Default value for Plasma and Router is .001" or .0254 mm. For Mill and Lathe Default value is .0001"

- * Plasma WMPG-4 requires CNC12 version v4.80 or higher. Set P450 = 1 =ON x100 = x10,

- Z axis speed limiter feature: Inhibits fast Z axis MPG moves, controls for this are in the Wizard in the WMPG menu (v5.0+)

- Touble Shooting discusssion and advice is here. **https://centroidcncforum.com/viewtopic.php?t=10632**

Oak, Hickory, Allin1DC and MPU11 system Requirements:
CNC12 v5.3+ with Pro or Ultimate License

Oak, Hickory (without Wizard), MPU11 and Allin1DC wireless MPG Installation Instructions

1. Remove MPG finger knob from battery compartment and install onto MPG wheel.
2. Install 2 good quality alkaline AA batteries.
3. Plug USB transmitter in USB port on the CNCPC, reboot PC.
4. Start CNC12, and open CNC12 Utility Menu, press "Options" and "Import License" and install Pro or Ultimate license
5. F1 Setup, F3 Config, F3 Parameters (pass is 137).
    Set MPG CNC12 parameter #218
    218 = 15 for 4 axis Mills/Routers,
    218=7 for 3 axis Mills/Routers/Plasma
    218 = 3 for Lathes.
6. Set MPG CNC12 parameter #348, 349,350,411,855
    348 = 15 (MPG ON)
    349 & #350 = 100 (100 steps per rev),
    411 = 2 for WMPG-6, 1 for WMPG-4, 3 for WMPG Plasma.
    P855 = 2
    F10 Save. Exit out of Parameters.
7. Shut Down and restart CNC12 for new parameters to take effect.
8. Turn on MPG by depressing and releasing the large chrome ON/OFF button on the MPG.
9. Select which axis to move, X, Y, Z or 4th with the axis selection knob.
10. Select the increment desired x1, x10 or x100.
11. Rotate the MPG wheel Clockwise for positive direction axis motion.

Notes:

- **MPG wheel finger knob is located in the battery compartment** remove and install onto MPG wheel.

- Only use AA batteries rated at 1.5 volts. There rechargeable AA batteries on the market now with higher and lower voltage ratings, do not use these types of batteries.

- LCD Screen has a protective plastic film on it, use clean fingernail to lift up at corner and remove.

- "No RF" message means the WMPG is not seeing the transmitter/receiver, most common cause is the Windows PC did not mount the USB transmitter. Solutions: Use a USB port that directly connects to the PC motherboad, do not use hubs or extension cables. Move to different USB port and reboot PC. see for more info   **https://centroidcncforum.com/viewtopic.php?t=10632**

- Z axis speed limiter feature: Inhibits fast Z axis MPG moves, bit wise parameter number P19 add 2 and x100 will = the x10 Z speed preventing mistakes with the x100 knob and Z axis movements with the MPG wheel.

- Touble Shooting discusssion and advice is here. **https://centroidcncforum.com/viewtopic.php?t=10632**

Programming the User programmable WMPG-6 Macro 1,2,3 and 4 buttons.

The WMPG Macro buttons are preassigned to the following user editable macros located in the cnc12 main directory (starting with cnc12 v5.4 mill = c:cncm, lathe = c:cnct, router = cncr, plasma = c:\cncp, laser = c:\cncl)
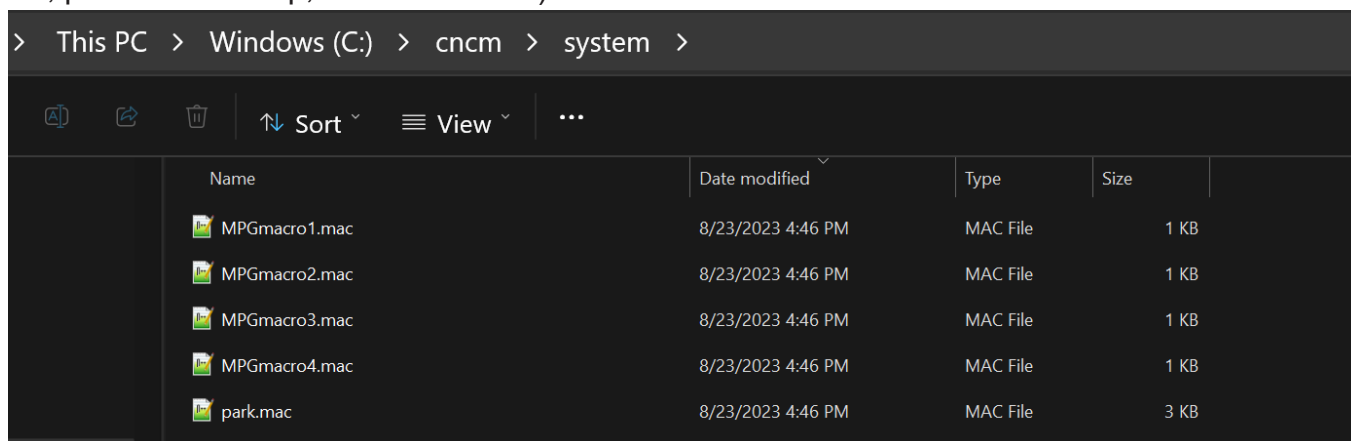
Simply edit any of these files to change the behavior of the WMPG macro buttons.
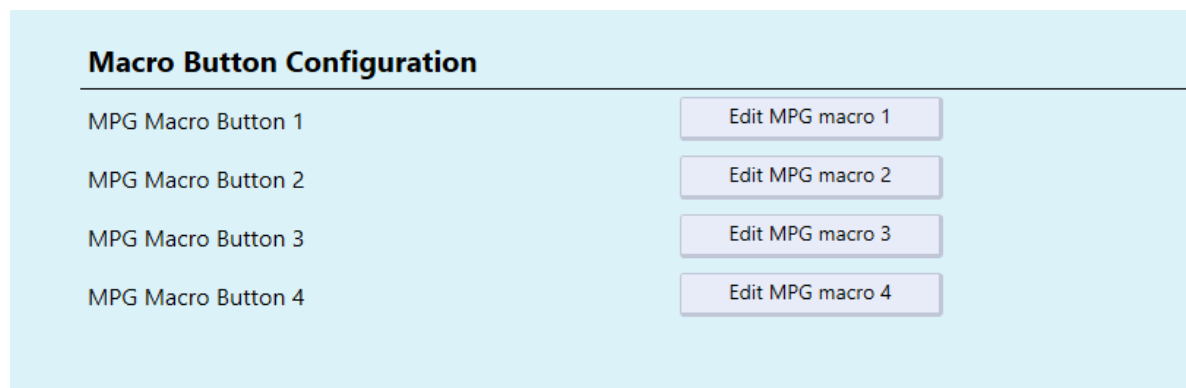
Macro 1 button = MPGmacro1.mac
Macro 2 button = MPGmacro2.mac
Macro 3 button = MPGmacro3.mac
Macro 4 button = MPGmacro4.mac

Acorn/AcornSix/Hickory users can open these files directly from the Centroid setup Wizard as well.

1.) Enter the "Wireless MPG" setup menu and press the Edit MPG macro 1,2,3, or 4

Learn more about Centroid CNC macro programming:
https://www.centroidcnc.com/centroid_diy/downloads/acorn_documentation/centroid_cnc_macro_pro-gramming.pdf