## **Wireless Pendants**

Wireless pendants are currently sold in three configurations in the myCNC Shop.

## Setting up the wireless pendant

Upon opening Settings > Config > Panel/Pendant > Wireless Pendant/XHC, the user is presented with the following screen:

Info Support Camera Config																			SAVE CFG
CNC Settings	00	01	02	03	04	05	06	07	08	09	10	11	12	13	140	15			
Connections	-			_			_			_			_		_				
Network	16	17	18	19	20	21 😡	22	23	24	25	26	27 🍚	28	29	30	31 😡			
Motion	32	33	34	35	36	37 🔾	38	39	40	41 🔘	42	43 🍚	44	45	46	47 😡			
▶ PLC	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63			
G-codes settings	-	-	-	-				-	-	-	-	-	-	-		-	_		
DXF import settings					DSP sty	/le pend	ant							Di	sabled		<u> </u>		
Macro List	LibUSB	devices	list	lib	USB De	ebug Inf	ormati	on											
Macro Wizard												load	defaul	t for V	VHB02	L L			
Probing Wizard																_			
Preferences	libUSB	device	count: 8	-								load o	lefault	for P	HB02B	5			
Screen	10CE:E	891										load o	lefault	for P	HB03S	5			
Work Offsets	1A81:1	1A81:1006									HB04I	n i							
Parking Coordinates		0E8F:00A8																	
<ul> <li>Technology</li> <li>Plasma Cutting</li> </ul>	8087:8	001		<u> </u>								load o	lefault	for P	HB04B	5			
Gas/Oxyfuel												load d	efault	for W	HB049	5			
Cutcharts		Links			-1-+		_												
тнс	1 🔶		leset cur	<u> </u>	ointer		<u> </u>									~			
Mill/Lathe	2 ф		top runr	ning			•									×			
Multi Head	3 🔶	Job: S	tart run	ning			-									×			
Laser control	4 🔶	Feed	Override	e: inc			-									×			
Tangential Knife	5		Override	v doc			-												
Special Purpose							<u> </u>												
Camera	6 ф	_	lle Speed				<u> </u>									×			
5 axes RTCP	7 🚖	Spind	lle Speed	l: dec			*									×			
<ul> <li>Panel/Pendant</li> </ul>	8 🔶	File: 0	Open fro	m Pen	dant		-									×			
Wireless Pendant/XHC	9 🔶	Pend	ant: Wor	k Cool	rdinate	Reset	-									×			
Operator Panel							_												
Gamepad		-	tun G-co				- M3	802								<u>~</u>			
Hotkeys	11 ф	Toggl	e Spindle	e On/C	Off		•									×			
Hardkeys Hardware	12 🔶	Job: R	lun G-co	de			▼ G9	0G0Z[#	7020]							×			
<ul> <li>Hardware</li> <li>Advanced</li> </ul>			-	•			_												

• The indicators at the top of the page serve to visually point out the pendant button which is being pressed. There indicators will light up green when the corresponding button is pressed:

Info Mige Support Camera Config C Support Camera Config		SAVE CFG
CNC Settings  Connections Network Motion PLC G-codes settings DXF import settings Macro List Macro Wizard Probing Wizard Proferences Screen Work Offsets Parking Coordinates	00       01       02       03       04       05       06       07       08       09       10       11       12       13       14       15         16       17       18       19       20       21       22       23       24       25       26       27       28       29       30       31         32       33       34       35       36       37       38       39       40       41       42       43       44       45       46       47         48       49       50       51       52       53       54       55       56       57       58       59       60       61       62       63         DSP style pendant       Disabled       v         LibUSB devices list       libUSB Debug Information       load default for WHB02       load default for PHB02B       load default for PHB02B       load default for PHB02B       load default for PHB035       load default for WHB04L	1
<ul> <li>→ Technology</li> <li>&gt; Plasma Cutting</li> <li>Gas/Oxyfuel</li> <li>Cutcharts</li> <li>THC</li> <li>&gt; Mill/Lathe</li> <li>Multi Head</li> </ul>	0E8F:00A8     Ioad default for PHB04B       Ioad default for PHB04B       1     ↓ Job: Reset current pointer       2     ↓ Job: Stop running       3     ↓ Job: Start running	
Laser control Tangential Knife > Special Purpose Camera 5 axes RTCP Y Panel/Pendant Wireless Pendant/XHC	4 <ul> <li>Feed Override: inc</li> <li>Feed Override: dec</li> <li>Feed Override: dec</li> <li>Spindle Speed: inc</li> <li>Spindle Speed: dec</li> <li>File: Open from Pendant</li> <li>Pendant: Work Coordinate Reset</li> <li>Pendant: Work Coordinate Reset</li> <li>Xeet</li> </ul>	
Operator Panel Gamepad Hotkeys Hardkeys > Hardware > Advanced	9     → Pendant: Work Coordinate Reset     ×       10     → Job: Run G-code     ✓ M302       11     → Toggle Spindle On/Off     ✓       12     → Job: Run G-code     ✓ G90G0Z[#7020]	

- DSP style pendant should be disabled if the controller is used with a screen (enabled ONLY if the controller is using a PHB-04B pendant WITHOUT any monitor). This setting, when set to PHB-04B, disables a number of on-screen buttons as well as reassigns a number of the pendant button commands to a custom build. This allows for an emulation of a DSP style controller system, which eliminates the need for the monitor and is well suited for simple production runs which require limited settings changes or system configurations. It is recommended to keep this setting disabled unless strictly necessary, as it is designed for a purely pendant-oriented interface (on a system entirely without a monitor).
- The Device List lists the available devices, while the libUSB Debug information lists the messages that the pendant sends to the computer:

Info Support Camera Config		
CNC Settings	00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15	<u> </u>
Connections	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	
Network	32 33 34 35 36 37 38 39 40 41 42 43 44 45 45	
Motion	48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63	
▶ PLC		
G-codes settings	DSP style pendant Disabled	
DXF import settings	LIbUSB devices list IIbUSB Debug Information	
Macro List	-	
▶ Macro Wizard	load default for WHB02	
Probing Wizard	hibUSB device count: 8 - button: 0 axis: 18 wheel: 27 - I load default for PHB02B	
Preferences	10CE-EB91   button: 12 axis: 18 wheel: 27   load default for PHB035	
Screen	1481:1005 button: 0 axis: 18 wheel: 27	
Work Offsets	In Exercise a local default for WHB04L	
Parking Coordinates	8087-8001 Journal of axis: 18 wheel: 27 Joad default for PHB04B	
<ul> <li>Technology</li> </ul>		
Plasma Cutting	load default for WHB04S	
Gas/Oxyfuel	1 🔶 Job: Reset current pointer 🔹	
Cutcharts	2 $\div$ Job: Stop running $\checkmark$	
THC		
▶ Mill/Lathe	3 🔶 Job: Start running 🔄 🔀	
Multi Head	4 🔶 Feed Override: inc 👻	
Laser control	5 🔶 Feed Override: dec 🔹	
Tangential Knife	6	
Special Purpose		
Camera 5 axes RTCP	7 🔶 Spindle Speed: dec 🔄 🔀	
▼ Panel/Pendant	8 🔶 File: Open 👻	
Wireless Pendant/XHC	9 🔶 Pendant: Work Coordinate Reset 🚽	
Operator Panel	10	
Gamepad		
Hotkeys	11 → Toggle Spindle On/Off ×	
Hardkeys	12 🔶 Job: Run G-code 🗾 G9060Z[#7020]	
▶ Hardware		
Advanced		_
- Auvanceu		-

• It is possible to load the default button configurations from some of the popular wireless pendants available, as listed on the right side of the screen:

Info Support Camera Config																			
CNC Settings	009	019	02	03 🥥	04 🍚	05 💛	069	079	089	09	109	пe	129	13 🖳	14 🥑	159			
Connections	16	17	18	19	20	21	22	23	24	25	26	27 🌑	28	29	30	31 🔘			
Network	32	33	34	35	36	37 🌑	38	39	40 🍚	41	42	43	44	45	46	47 🍚			
Motion	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63			
PLC	10	12	50		-				50					_		05	_		
G-codes settings					DSP sty	yle peno	lant							Di	sabled		<u> </u>		
DXF import settings	LibUSB	devices	list	lik	USB D	ebug In	formati	on								_			
Macro List						-					(	load (	lefault	for V	VHR02				
Macro Wizard																2			
Probing Wizard	libUSB	device	count: 8			0 axis:					<u> </u>	load c	efault	for P	HB02E	3			
Preferences	10CE:E	B91				12 axis						load c	lefault	for P	HB039	5			
Screen Work Offsets	1A81:1	006				0 axis: 12 axis						load d	ofault	for M		ă			
Parking Coordinates	0E8F:00	DA8				0 axis:										2			
Technology	8087:8	001		L"	utton.	u axis.		ei. 2/				load d	lefault	for P	HB04E	3			
<ul> <li>Plasma Cutting</li> </ul>												load d	efault	for W	HB04	s			
Gas/Oxyfuel		1			• •							_				_			
Cutcharts		_	eset cu		pointer		<u> </u>	<u></u>								×			
тнс	2 🚔	Job: S	top run	ning			<b>*</b>	r								×			
▶ Mill/Lathe	3 🔶	Job: S	tart run	ning			*									×			
Multi Head	4 🌲	Feed	Overrid	e: inc			*									*			
Laser control	5		Overrid				-	4											
Tangential Knife							<u> </u>	4								<u>^</u>			
Special Purpose	6 🔶		le Spee	d: inc			<u> </u>									×			
Camera	7 🔶	Spind	le Spee	d: dec			*									×			
5 axes RTCP	8 🌲	File: (	Open				*									×			
Panel/Pendant	9		ant: Wo	rk Coo	rdinat	o Pocot	-									¥			
Wireless Pendant/XHC Operator Panel		_			uniau	e neset	_									-			
Gamepad		_	un G-co				▼ M3	302								*			
Hotkeys	11 🔶	Toggl	e Spindl	le On/	Dff		*									×			
Hardkeys	12 🔶	Job: F	lun G-co	de			- G9	0G0Z[#	7020]							×			
Hardware				<b>–</b>															
Advanced			- 1																

## Assignable actions

If the pendant used is not listed in the defaults list, or the user wants to re-assign some of the button actions, the following options are available:

Option	Description
CNC Action	This brings up a preset action (listed in MyCNC Actions list). These are preset actions, and the majority of items further on the list can be done simply by inputting the relevant text into the CNC Action field. Whether to use CNC Actions or to simply choose one of the items below is left to the user.
CNC Variable: Switch	This switches some global variable between set values. Example of syntax: 1000/33;22;11 where 1000 is the variable, and 33, 22, and 11 are the values the variable will switch between upon each button press or input
CNC Variable: Toggle	This toggles the specified variable On and Off. Example of syntax: 1001
CNC Variable: Clear	Clears a global variable
CNC Variable: Set	Command to set the variable
CNC Variable: Assign	Writes the variable from the Global Variables list. Example of syntax: /1001
File: Open	Open a file from the host computer (brings up the dialog window)
File: Open DXF/HPGL	Open a DXF/HPGL file from the folders specified in Preferences > Common
File: Refresh	Refresh the program file
Hardware: Direct Binary Set	Directly sets a binary to be ON

Option	Description
Hardware: Direct Binary Clear	Sets a binary to be OFF. For example, upon inputting 15 into the field, the 15th binary will be flipped ON
Hardware: Direct DAC Set	Sets the DAC. For example, input 0/160. Here, 0 is the channel number (always 0 for DAC), while 160 is the value in units. NOTE: The value displayed in the diagnostics panel in myCNC software displays the DAC value in volts, not units. Conversion is necessary based on the voltage of the power source used.
Hardware: Direct PWM Set	Sets the Pulse Width Modulation. For example, 1/1600. Here, the 1 is the channel number for PWM, and 1600 is the value PWM is set to
Hide: Custom Widget by name	Hide the custom widget
Job: Play 1 line	Run through a single command line (next line)
Job: Play 1 line backwards	Run through a single command line (previous line)
Job: Back to path	Return back to the cutting path
Job: Skip forward	Move forward in the command program
Job: Skip backward	Move backward in the command program
Job: Skip forward 10	Skip 10 lines forward
Job: Skip backward 10	Skip 10 lines backward
Jog: X-	Jog in the negative x-axis direction
Jog: X+	Jog in the positive x-axis direction
Jog: Stop X	Stop the jog in the X-direction
Jog: X- Y-	Jog in the negative x, negative y direction
Jog: X- Y+	Jog in the negative x, positive y direction
Jog: X+ Y-	Jog in the positive x, negative y direction
Jog: X+ Y+	Jog in the positive x, positive y direction
Jog: All stop	Stop jog for all axes
Jog: Shift Set	Jog: Shift and Jog: Ctrl both refer to the settings window in Panel/Pendant > Hotkeys. The shift set indicates that the Shift button has been pressed, which will control the Jog Overspeed
Jog: Shift Clear	Indicates that the shift button has been released
Jog: Shift Toggle	Toggles the shift button on and off
Jog: Ctrl Set	Indicates that the control button has been pressed
Jog: Ctrl Clear	Indicates that the control button has been released
Jog: Ctrl Toggle	Toggles the control button
Jog Override: inc	Increase the jog override
Jog Override: dec	Decrease the jog override
Key press	Simulates a key press to be sent to the host computer
Key release	Simulates a key release
(Dlg)Key Press	Simulates a dialog key press, such as Shift, Enter, Delete, 0-9, etc
Move to toolpath	Move back to the toolpath
Parking position: Save	Save the current position as the parking position
Parking position: Move to	Move to the parking position
Pendant: Axis (*)	Switches through all the available axis values on repeat (continuously looping through the values as the button is pressed)
Pendant: Mul (*)	Switches through all available step size values on repeat (continuously looping through the available step size values)
Pendant: Wheel CW	Record the input as wheel moving clockwise

Option	Description								
Pendant: Wheel CCW	Record the input as wheel moving counter-clockwise								
Pendant: Mul increment	Designed for pendants which lack a dedicated step size switch. This will increase the step size.								
Pendant: Mul decrement	Designed for pendants which lack a dedicated step size switch. This will decrease the step size.								
Pendant: Axis change +	Changes the axis to the next axis available								
Pendant: Axis change -	Changes the axis to the previous axis available								
Pendant0: x0.001-1	Sets the increment for the machine movements which is controlled by the software pendant (older versions of the software have a pendant widget which can be used as a substitute for a pendant control)								
Pendant0: Axis off	This turns off the selected axis in the software pendant widget (older version of the software)								
Pendant0: Axis X-C	Sets the axis that the software widget pendant will be sending commands to								
Pendant: Work coordinate Half	Takes the pendant work coordinate (in the axis specified on the pendant) and halves it								
Pendant: Work coordinate Reset	Resets the work coordinate specified in the pendant axis								
PLC: Run procedure	Run a PLC procedure (if multiple controllers are present, this defaults to the master controller)								
PLC: Run external unit procedure	Run a PLC procedure on a slave controller. The syntax for the command will be as follows: controller number / command / variable (for example, 0x01/M74/#7009)								
Run Numpad	This brings up a numpad for a specific variable/item into which the user can then type in a value. The user can set this to bring up the numpad for any device variable/gvariables/screen items. Example of syntax: cnc- gvariable-5522 - this will bring a numpad typing into which will change the value for the Global Variable #5522 (step size)								
Show: Pendant control widget	Brings up the pendant control widget in the myCNC software								
Select axis	Select the particular axis								
Show: Widget	Shows a particular widget, such as Library Shape, Diagnostics, Config, etc								
Feed overdrive: inc	Increase the feed overdrive								
Feed overdrive: dec	Decrease the feed overdrive								
Feed overdrive: Set %	Set the feed overdrive as a percentage of the default (100%)								
Spindle Speed: inc	Increase the current spindle speed								
Spindle Speed: dec	Decrease the current spindle speed								
Spindle Speed: set	Set the current spindle speed								
Tie Toolpath Position to current work position	Used on control programs with a large number of parts, this allows to tie the toolpath position to the current work position. Effectively, this allows to cut out a small part of the control program anywhere on the sheet, by simply specifying the position of the toolpath - extremely useful for small remainders of metal sheets which can still fit one of the parts of a larger control program file.								
Toggle Machine/Work DRO (if applicable)	A setting for pendants which only show one coordinate system at a time (machine or program coordinate). This allows to switch between the two coordinate systems - used only on select controllers.								
Toggle Jog enable/disable	Turn jog on and off								

Option	Description
Toggle Jog mode unlimited/step	Switch between the unlimited and a set step jog for machine movements
Toggle Soft Limits enable/disable	Turn the soft limits (specified in Inputs/Outputs/Sensors > Limits) on and off
Toggle Flood on/off	Turns the liquid cooling (flood) ON and OFF
Toggle Spindle on/off	Toggle whether the spindle is currently ON or OFF
Toggle Spindle CCW on/off	Toggle the spindles CCW rotation ON or OFF
Toggle Constant Velocity on/off	CV (constant velocity) is described in MyCNC Constant Velocity Mode (CV) manual
Toggle Virtual Keyboard	Brings up the virtual keyboard up on the screen, or hides it if already present.
Toggle: custom widget by name	Specifies a custom widget to bring up on the screen (or close it if already displayed).
View: Zoom In	Zoom in on the control program visualization
View: Zoom Out	Zoom out on the control program visualization
View: Fit to window	Fit the entire view into the visualization window
Work coordinate: Set	Set the work coordinate (using the specified axis value from the user panel, NOT the typical pendant control)
Work coordinate: Reset	Reset the work coordinate (from user panel)
Work Coordinate: 1/2	Half the work coordinate (from user panel)

These options allow the user to edit every button on their pendant control to their particular configuration if required. For simple pendants included in the defaults list, it is usually recommended to use the default settings.

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