TetraLite Products
www.tetramouse.com

Manual Vers. 1.1

TetraStick Uno

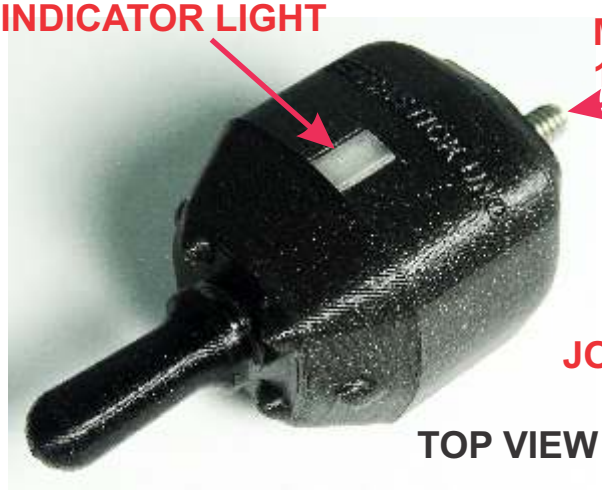
USB Gaming Joystick

by TetraLite Products

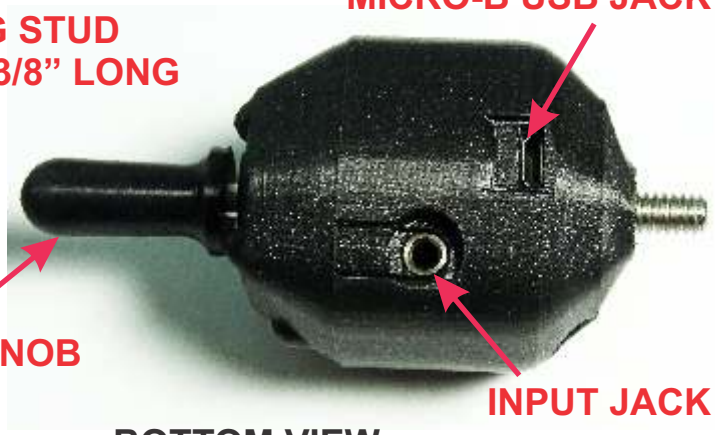
OVERVIEW

The TetraStick Uno is a proportional USB joystick providing X and Y axes pointer movement,Z, rX, rY, and rZ axes control, hat switch (POV) control, joystick buttons 1 through 8, and various user programable settings. A 1/8-inch (3.5mm) jack provides the ability to add a single “Control Switch”, or add up to 8 external switches using the optional TetraStick Expansion Module, which provides one Control Switch input and 7 more external switch inputs.

FEATURES

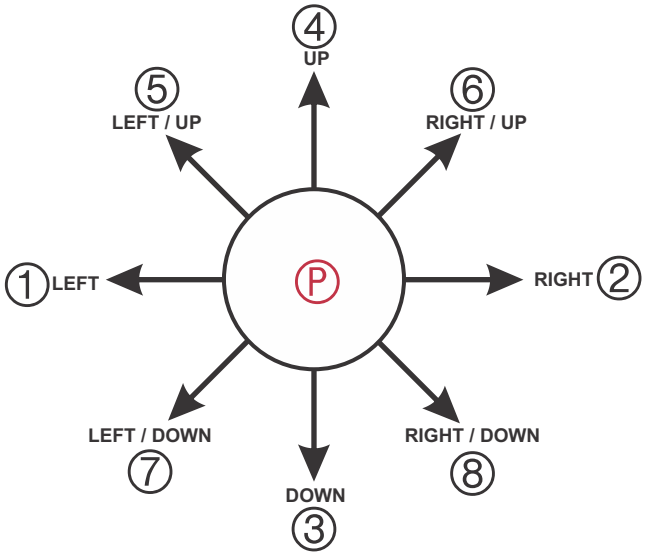


TOP VIEW



BOTTOM VIEW

JOYSTICK BUTTON DIRECTIONS



①②③④⑤⑥⑦⑧ ←Button numbers

Ⓟ Push the joystick inward for less than the Hold Delay Time setting to switch between Pointer and Button Modes, or hold the joystick inward for the Hold Delay Time to enter the Program Modes.

TETRASTICK EXPANSION MODULE

The TetraStick Expansion Module may be plugged into the TetraStick Uno Input Jack to allow connecting up to 8 external switches providing a Control Switch and up to 7 more joystick buttons (Buttons 9 - 15).

POWERING UP

When the TetraStick Uno is powered up it performs a quick calibration sequence indicated by changing color patterns of the indicator light. Make sure the joystick is in its idle center position and not being touched while the Uno is calibrating.

Calibration is complete when 1 to 4 chirps are heard and the indicator light is turquoise, indicating that the Uno is in XY Mode. The number of chirps emitted represents the current Sensitivity setting number. The Uno always starts in XY Mode. Various settings are stored in memory and are recalled during power up.

OPERATIONAL AND PROGRAM MODES

The joystick on the TetraStick Uno may be operated in five **Operational Modes** and two **Program Modes**.

In **XY Mode** the joystick controls the X and Y axes.
In **RXY Mode** the joystick controls the rX and rY rotation axes.
In **POV Mode** the joystick functions as a hat switch.
In **ZRZ Mode** the joystick controls the Z and rZ axes.
In **Button Mode** the joystick selects buttons 1 through 8.

Operational Modes and settings are selected or controlled with two Program Modes.

In **Program Mode 1**, the joystick Operational Modes XY, RXY and POV Modes may be selected, and Push Sensitivity can be set.

In Program Mode 2, XY Mode may be set to one of four Sensitivity settings, the audio chirps may be enabled or disabled, Button Mode may be set to 4- or 8-button operation, and the Hold Delay Time can be set to one of four settings.

MODE SELECTION & PROGRAM MODE 1

BUTTON MODE:
Switch to Button Mode from XY Mode, RXY Mode, POV Mode or ZRZ Mode with a quick inward push of the joystick. The Uno emits one chirp and the indicator turns purple, indicating the Uno is now in Button Mode. Push the stick in any of the 8 directions (see Page 1) to activate buttons 1 through 8. Hold the stick in any of these directions for more than the current Hold Delay Time setting to put a button on hold. The hold is maintained until a normal button push in the same button's direction is performed while in Button Mode. Button holds persist through Operational Mode changes. Changes to 4- and 8-way button mode selections clear all current holds. Return from Button Mode back to the previously selected XY Mode, RXY Mode, POV Mode or ZRZ Mode with another quick inward push. The Uno emits one chirp, the indicator turns turquoise, and the Uno is now in its previously selected XY, RXY, POV or ZRZ mode.

PROGRAM MODE 1:
Selection of the XY Mode, RXY Mode, POV Mode and ZRZ may be done from any Operational Mode by entering Program Mode 1. Push the joystick straight inward and hold it in for more than the currently selected Delay Hold Time setting (described later). The Uno chirps once, the indicator turns red and the Uno is now in Program Mode 1.

In Program Mode 1, push the joystick up to select XY Mode, or push the joystick right to select RXY Mode, or push the stick down to select POV Mode, or push the stick left to select ZRZ Mode. Upon selection of these modes, the indicator turns green for XY Mode, yellow for RXY Mode, red for POV Mode and blue for ZRZ Mode, then fades out and chirps twice and the light turns turquoise (or purple if Program Mode 1 was entered from Button Mode), indicating that the Uno has changed to the selected Mode and has exited Program Mode 1.

The Uno remains in Program Mode 1 until an Operational Mode is selected, or Program Mode 1 is exited with a quick inward push, or a long push is used to enter Program Mode 2 (described later). Exiting returns the Uno to the previously selected XY, RXY, POV, ZRZ or Button Mode whether or not a mode selection was made. If Program Mode 1 was entered from Button Mode, it will exit to Button Mode, and any change to XY, RXY, POV or ZRZ Mode selection will be available when switched to by a quick inward push, exiting as described in BUTTON MODE above.

PROGRAM MODE 2

Program Mode 2 can only be entered from Program Mode 1, and is done by pushing and holding the joystick inward for the amount of time set by the Hold Delay Time. The indicator changes from red (for Program Mode 1) to green, and one chirp is emitted to indicate the Uno is now in Program Mode 2.

The **Joystick Sensitivity** settings control the maximum amount of deflection output by the Uno in XY and RXY Modes.

In Program Mode 2, set the XY joystick movement sensitivity by pushing the stick up. The indicator changes to the color associated with the current Joystick Sensitivity setting, then fades out and the Uno chirps the same number of times associated with that Joystick Sensitivity setting.

Setting 1	**Blue**	Least sensitive
Setting 2	**Green**	↕
Setting 3	**Yellow**	
Setting 4	**Red**	Most sensitive

JOYSTICK SENSITIVITY

To change the Joystick Sensitivity setting, push the stick right to increase and left to decrease. If you push right when in the most sensitive setting (setting 4), it 'wraps around" to the least sensitive setting (setting 1). Similarly, pushing left while in setting 1 wraps around to setting 4. When a change is made, the Uno chirps the same number of times as the associated setting number, and the indicator turns to the color associated with that setting, then fades out.

The Uno remains in the Joystick Sensitivity setting mode until a quick inward push is performed, which returns the Uno to Program Mode 2. The Uno chirps twice, the indicator turns green and the Uno is now in Program Mode 2.

The **Hold Delay Time** is the amount of time the joystick needs to be pushed in and held before the desired action is taken. Hold Delay Time works with joystick button press holds and when entering Program Modes.

In Program Mode 2, set the Hold Delay Time by pushing the stick down. The indicator changes to the color associated with the current Hold Delay Time setting, then fades out and the Uno chirps the same number of times associated with that setting.

Setting 1	**Blue**	1/4 second
Setting 2	**Green**	1/2 second
Setting 3	**Yellow**	3/4 second
Setting 4	**Red**	No Hold

HOLD DELAY TIME

To change the Hold Delay Time setting, push the stick right to increase and left to decrease. If you push right when in the longest time setting (setting 4), it 'wraps around" to the shortest time setting (setting 1). Similarly, pushing left while in setting 1 wraps around to setting 4. When a change is made, the Uno chirps the same number of times as the associated setting number, and the indicator turns to the color associated with that setting, then fades out. Setting 4 disables the hold function for all buttons.

The Uno remains in the Hold Delay Time setting mode until a quick inward push is performed, which returns the Uno to Program Mode 2. The Uno chirps twice, the indicator turns green and the Uno is now in Program Mode 2.

Audio Chirps that occur when changing Operational Modes and performing Button Holds can be toggled on and off in Program Mode 2 by pushing the joystick left. The audio chirps are always enabled while in Program Modes 1 and 2 in order to indicate programming selections. Disabling chirps stops them while in any Operational Mode and during Button Hold operations. Push the stick left to toggle the audio chirp mode. The indicator light turns red, then fades out, and one chirp is heard indicating the chirps are disabled. The indicator light turns red, then fades out, and two chirps are heard when audio chirps are enabled. After selection of the chirp mode, the light turns green again indicating the Uno is in Program Mode 2.

Toggle between **4-way Button Mode** and **8-way Button Mode** while in Program Mode 2 by pushing the stick right. In 4-way Button Mode, only buttons 1 through 4 are enabled. In 8-way Button Mode, buttons 1 through 8 are enabled. Push the stick right to toggle between these modes. The indicator turns red, then fades out and one chirp is heard when switching to 4-way Button Mode. The indicator turns red, then fades out and two chirps are heard when switching to 8-way Button Mode. After selection of the 4- and 8-way Modes, the light turns green again indicating the Uno is in Program Mode 2. Any button holds are released.

Exit Program Mode 2 by pushing the joystick inward. The indicator turns red, two chirps are heard, and the Uno is now in Program Mode 1.

MEMORY

Changes to the Joystick Sensitivity, Hold Delay Time, 4-way/8-way Mode and Audio Chirp settings are stored in the Uno's internal memory. These settings are restored to their previous states when the Uno is powered up.

The Uno always powers up in XY Mode.

EXTERNAL SWITCH INPUTS

A single external switch connected to the TetraStick Uno's **Input Jack** becomes a "control switch" that performs the same functions as pushing and/or holding the Uno's joystick inward while in all modes of operation.

Adding the **TetraStick Expansion Module** to the TetraStick Uno's Input Jack provides 8 external switch input jacks numbered 1 through 8. The input jack numbers are engraved on the top of the module's housing above each input jack.

A switch connected to input jack 1 of the TetraStck Expansion Module becomes the "control switch", and performs the same functions as pushing or holding the joystick inward while in all modes of operation.

Switches connected to input jacks 2 through 8 perform standard joystick button functions 9 through 15 respectively, and are functional while the Uno is in XY, RXY, POV and Button Modes. Buttons 8 through 15 must be physically held by the user to perform a button hold, unlike the timed button holds available using the joystick when the Uno is in Button Mode.

External switches perform mode selections and settings while in Program Mode 1:

A switch connected to input jack 2 can be used to select XY Mode.
A switch connected to input jack 3 can be used to select RXY Mode.
A switch connected to input jack 4 can be used to select POV Mode.
A switch connected to input jack 5 can be used to toggle the inward Push Sensitivity setting.

External switches perform mode selections and settings while in Program Mode 2:

A switch connected to input jack 2 can be used to enter the Joystick Sensitivity settings.
A switch connected to input jack 3 can be used to enter the Hold Delay Time settings.
A switch connected to input jack 4 can be used to toggle the 4- or 8-way Button Modes.
A switch connected to input jack 5 can be used to toggle the Audio Chirp setting.

The joystick is still able to perform these functions while the Expansion Module is connected.

Switches connected to inputs 6, 7 and 8 do nothing while in either Program Mode.

INPUT JACK NUMBER	INDICATOR COLOR	OPERATIONAL FUNCTION	PROG. MODE 1 FUNCTION	PROG. MODE 2 FUNCTION
1	None	Control Switch	Control Switch	Control Switch
2	Green	Joystick Button 9	Select XY Mode	Joystick Sensitivity
3	Yellow	Joystick Button 10	Select RXY Mode	Hold Delay Time
4	Red	Joystick Button 11	Select POV Mode	4/8-way Select
5	Blue	Joystick Button 12	Select ZRZ Mode	Chirps On/Off
6	Green	Joystick Button 13		
7	Yellow	Joystick Button 14		
8	Red	Joystick Button 15		

NOTES ON USAGE

Button Re-mapping: In order to take full advantage of the TetraStick Uno it is strongly recommended that the buttons be re-mapped for function and ease of use. Remapping may be available in some game settings, gaming consoles and on devices like the Xbox Adaptive Controller. The functions most often used should be assigned to buttons that are easiest for the user to operate.

XBOX ADAPTIVE CONTROLLER DEFAULT MAPPINGS

Table showing the default mappings of the TetraStick Uno functions when connected to the left USB port or the right USB port on the Xbox Adaptive Controller. Re-mapping the button functions is strongly recommended to achieve practical and efficient usage.

TetraStick Uno	XAC Left USB	XAC Right USB
Joystick Up	Pointer Up	Pointer Up
Joystick Down	Pointer Down	Pointer Down
Joystick Left	Pointer Left	Pointer Left
Joystick Right	Pointer Right	Pointer Right
Button 1	X1	View
Button 2	X2	Menu
Button 3	LS	RS
Button 4	LB	RB
Button 5	A	X
Button 6	B	Y
Button 7	View	X1
Button 8	Menu	X2