

X-keys Setup Webapp Help

The [X-keys Setup Webapp](#) is a tool for programming hardware resident macros on X-keys by P.I. Engineering devices. It requires Google Chrome, Edge, or any browser which supports WebHID.

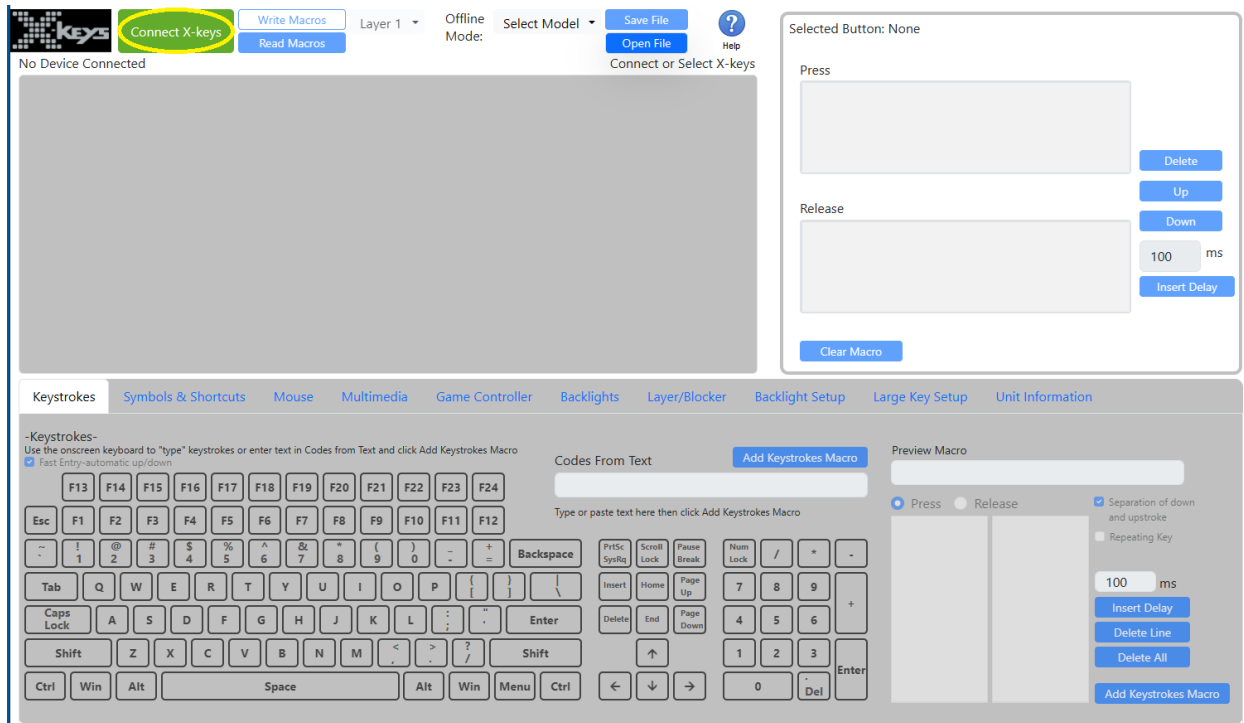
Contents

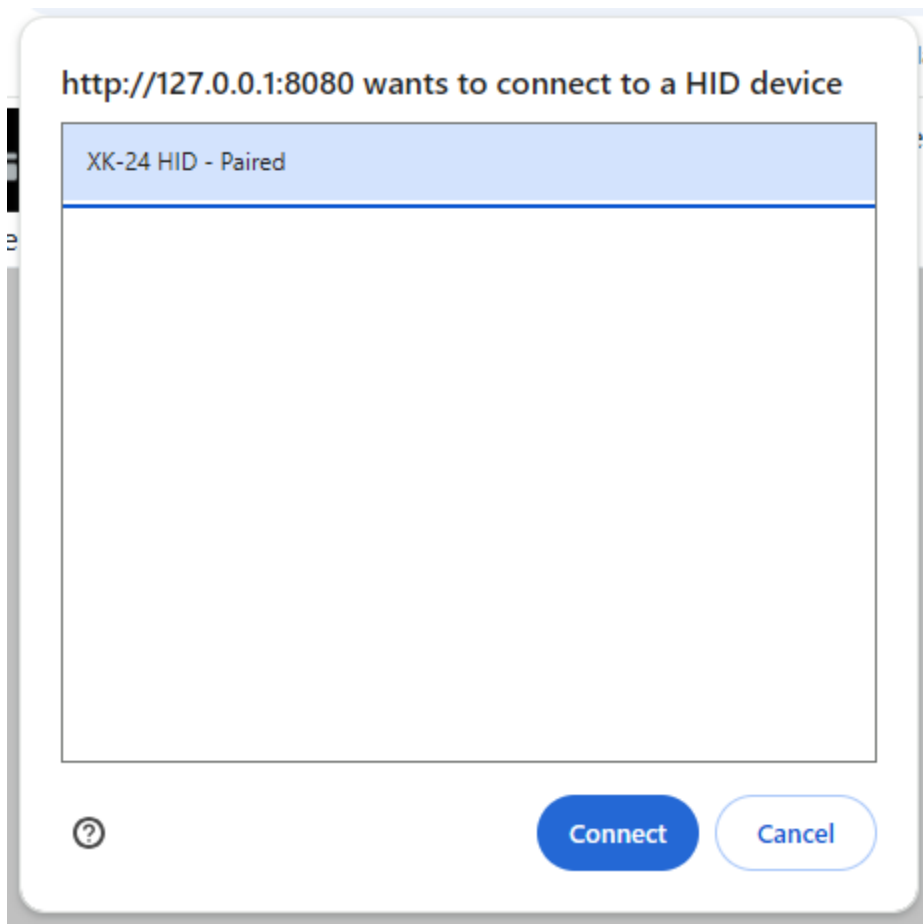
Quick Start Guide	1
Introduction	8
Layout Description	8
Programming a Keystrokes Macro	11
Programming a Symbols & Shortcuts Macro.....	12
Programming a Mouse Macro	12
Programming a Multimedia Macro	13
Programming a Game Controller Macro	14
Programming a Backlight Macro	14
Programming a Layer/Blocker Macro.....	15
Programming Multiple Macro Types	17
Backlight Setup	18
Devices with Blue/Red LED Backlighting	18
Devices with RGB LED Backlighting	19
Large Key Setup.....	19
Unit Information	21
Understanding Endpoints	22
Exiting KVM Mode	22
Technical Support.....	23
Notes	23

Quick Start Guide

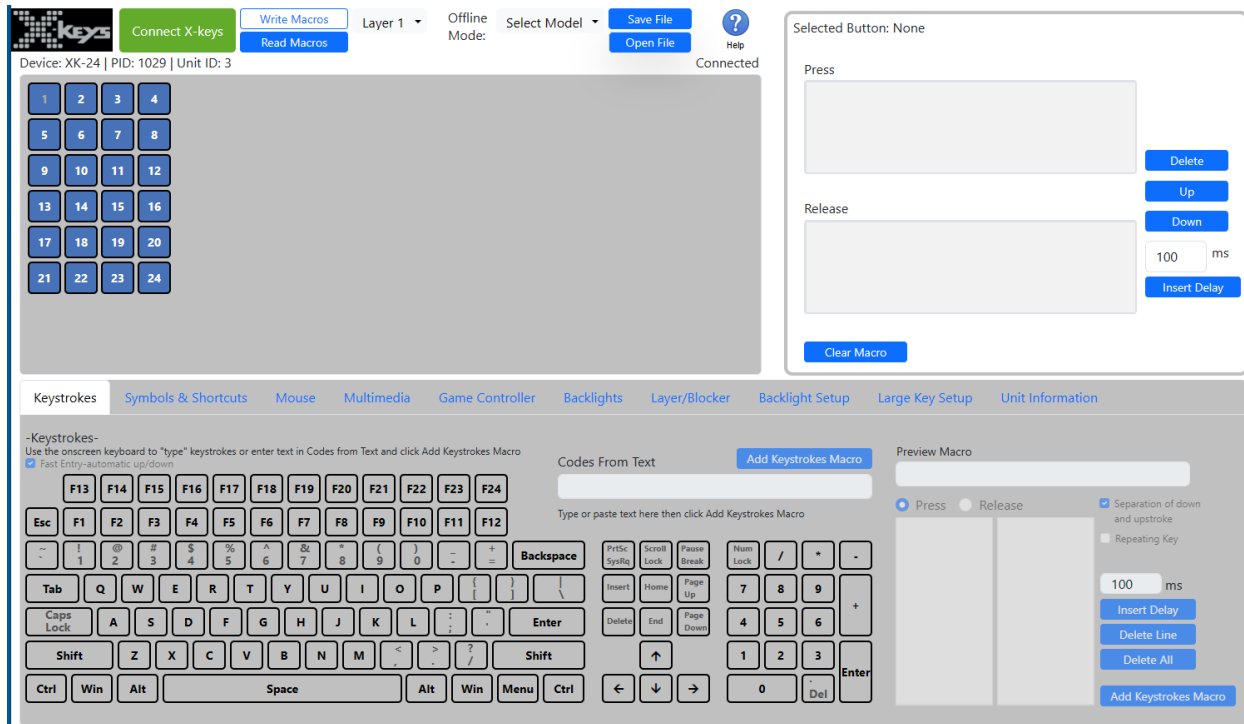
1. Plug in X-keys device and start the X-keys Setup Web App by clicking on <https://xkeyswbapp.xojocloud.net/>

2. Click on the green Connected X-keys button in the upper left corner and select the desired device from the list then click Connect. This will read in the macros currently stored on the device. Wait for the Status message below the Help in the upper right corner to read Connected.

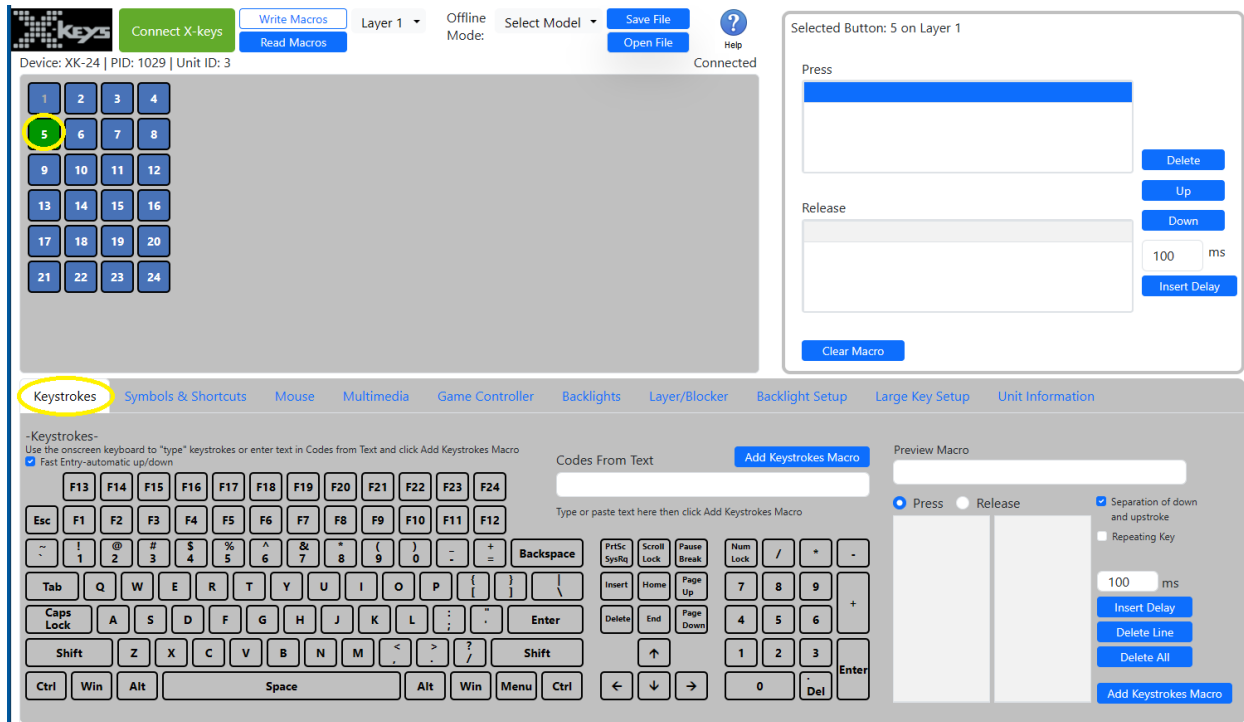




3. The layout of the buttons will be displayed with each button labeled with a numeric id. A gray label indicates there is a macro programmed on this button and a white indicates there is no macro programmed on this button. If the background is blue then Layer 1 macros are selected, if the background is red then Layer 2 macros are selected.

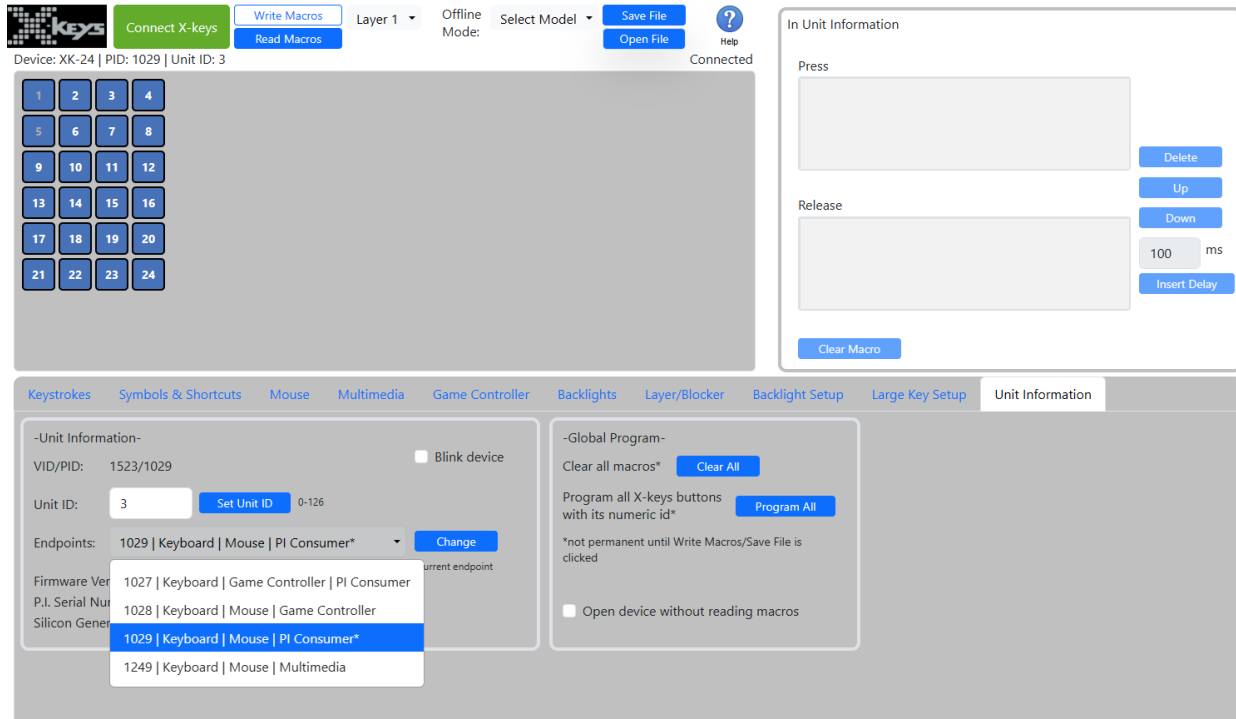


4. To add a new macro, click on the desired button. The selected button is colored green and indicated in the Select Button region to the right. By default the first blank row is selected on the Press box, if desire macro on the Release, select the row on the Release box. A press macro is fired when the button is pressed while a release macro is fired when the button is released. Click on the tab for desired type of macro; options are Keyboard, Symbols & Shortcuts, Mouse, Multimedia, Game Controller, Backlights, or Layer/Blocker. The Backlight Setup, Large Key Setup, and Unit Information are not for programming macros and are discussed below.

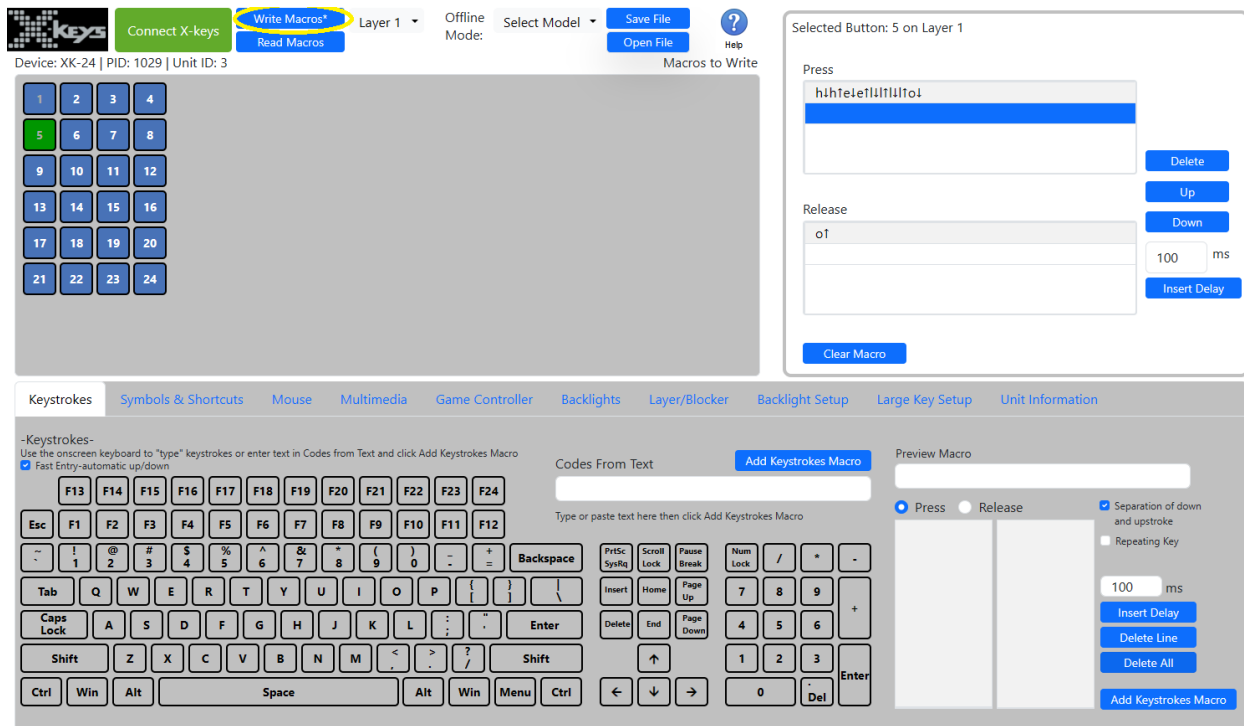


5. For a keystroke macro click on the Keystrokes tab. There are 2 ways to enter the text. If the text is visible then simply type it in the Codes From Text entry field and click the Add Keystrokes Macro above this entry box. This will add the entered text to the selected button's macros. By default, keystroke macros have Separation of down and upstroke enabled, this will put the last upstroke of a key on the release of the X-key button which is the default behavior for a standard keyboard. Keystrokes may also be entered via the onscreen keyboard by clicking the key. If Fast Entry is checked, both down and upstroke of clicked key is added. Modifier keys require user to click it a 2nd time to release the key. Once clicked it will turn green indicating it is pressed, click the key again to release it. **Every down of a key MUST have a corresponding up or a stuck key will result.** When finished entering the keystrokes click Add Keystrokes Macro to apply this macro to the currently selected X-keys button. The macro will be displayed above in the Selected Button region.

change endpoints click the Unit Information tab. Here you can see all of the available endpoints for the connected device, which endpoint the device is currently in, and change the endpoint. It does not matter which endpoint the device is in when programming macros, it only matters when playing them back. If a type of macro was programmed that the device's endpoint does not support, that macro is simply ignored and will appear to the user to be working incorrectly.



7. When there are unwritten macros, the Write Macros button will be solid blue and display Write Macros*. When finished entering macros, click on Write Macros button. Do not disturb the device during this process. This will write the macros into the device's firmware. At this point the device can be used on any computer as is without software, just like a standard keyboard, mouse, or game controller. **Macros are not saved to the device and will be lost if Write Macros is not clicked.**



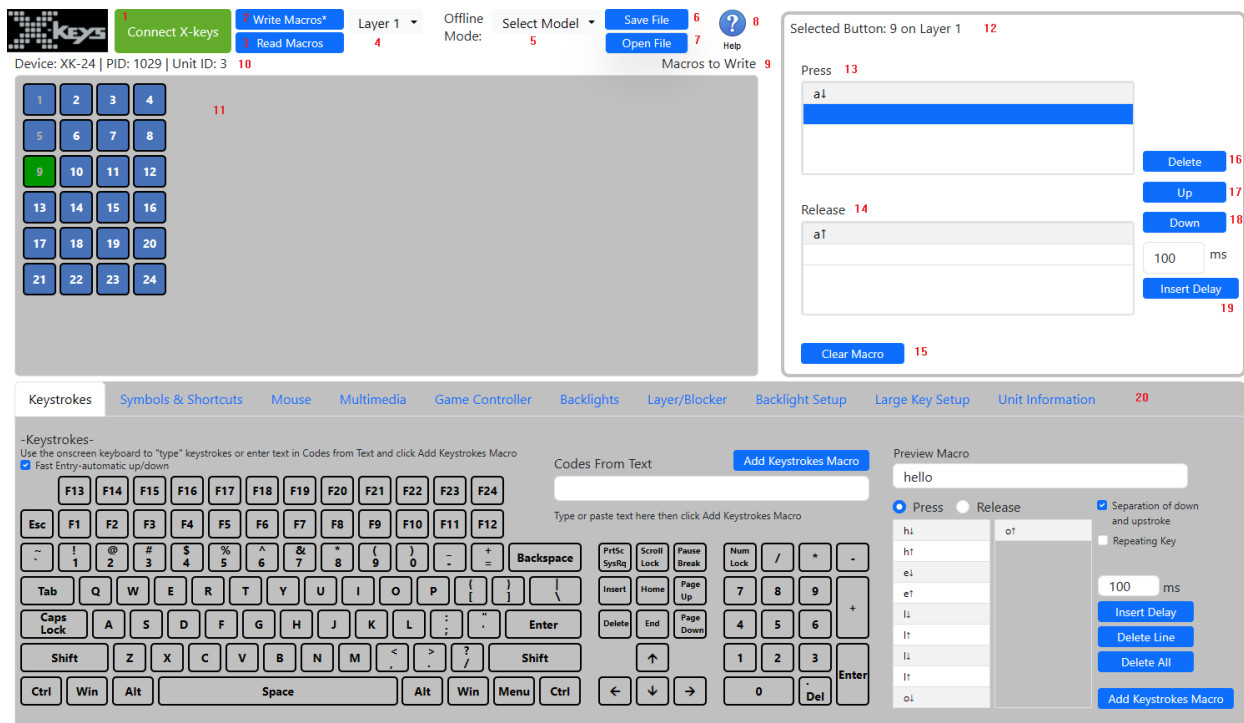
Introduction

The X-keys Setup Webapp is a utility for programming macros directly into an X-keys device. It is designed to program X-keys devices efficiently and easily while at the same time exposing to the user the full potential of X-keys functionality. Once programmed, no software or drivers are required and the device can be used on any operating system that understands HID (Human Interface Device) protocol.

The X-keys Setup Webapp can be used with a connected device or in offline mode. Offline mode is useful to explore the features before buying an X-keys device. In either case, we refer to the device being programmed as the “connected device”. Buttons on the connected device are programmed by selecting them and then adding macros via the different tabs below which are arranged by macro type. There are 3 tabs which are unique and not used to program macros but rather control other device features; Backlight Setup, Large Key Setup, and Unit Information. As macros are added to a button, they are display in the Selected Button region to the right of the button layout. In this way multiple macros of different types or the same type can be built up. When finished programming all of the buttons, click Write Macros* to save them to the X-keys. Click Save File to save the macros to a file. Click Open File to open a previously created file. For tech support please contact Tech@piengineering.com.

Layout Description

Please refer to this for the following descriptions.



1. Connect X-keys prompts user to select the device to connect. This is always the first step in programming macros.
2. Write Macros writes the macros to the device, usually the last step in programming macros but can be done any time during programming as well. If there are unwritten macros button is solid blue and displays Write Macros*.
3. Read Macros reads in the programming macros from the connected device's memory. This is automatically done when Connect X-keys is clicked but can be done any time during programming. Any macros not written to the device will be lost if Read Macros is clicked.
4. Layer selection dropdown is used to select the desired layer for programming. All X-keys products have 2 layers. In order to access macros on the 2nd layer, a button must be programmed with a layer toggle or layer shift macro.
5. Select Model dropdown is only used for offline mode. Pick the desired device from the dropdown.
6. Save File saves the macros and default backlighting to a file of the user's choosing. It is not mandatory to save a file but it can be useful, especially if programming several of the same device with identical programming. If working offline, saving a file is the only method of storing the macros
7. Open File prompts the user to open a previously saved file.
8. Help opens a new browser tab at the X-keys Setup Webapp Help page
<https://xkeys.com/software/softwarewebapp/webapphelp.html>
9. Status label used to indicate various states:
 - a. Connect or Select X-keys – waiting for user to click Connect X-keys or select model from the Select Model dropdown list.
 - b. Wait – the app is reading the currently stored macros and parameters of the connected device, user is to refrain from inaction with the app.

- c. Connected – indicates a device has been connected but no macros have been modified.
 - d. Offline – indicated user selected a device from the Select Model list and is working offline.
 - e. Macros to Write – indicates there are unwritten macros.
 - f. Macros to Save – indicates there are changes to the macros from the file, offline only.
10. Connected device quick information. For more details on the connected device, see the Unit Information tab.
 11. Device graphic region. This region displays the buttons available for programming on the connected device. If layer 1 is selected then the buttons have a blue background, if layer 2 is selected they have a red background. Each button is labeled with its button #. If the button # label is white then no macro is programmed on that button. If the label is gray then there is a macro programmed on this button either layer 1 or layer 2 or both. To select a button to program, click it, it will turn green and its macro, if any, will be displayed in the Selected Button region to the right. Only if in the Large Key Setup tab may more than one button be selected at once.
 12. Selected Button region displays the macros on the Press and the Release of the selected button. Macros in the Press box (13) will fire when the button is pressed down and macros on the Release box (14) will fire when the button is released. In order to add new macros select a row in either box. If the selected row is not the last row of the box the new macro will be inserted above the selected row. Some macros are required to be on Press for example, user will be notified if a situation is forbidden.
 13. Press box displays the currently selected button's macros to be played back on the press of that button.
 14. Release box displays the currently selected button's macros to be played back on the release of that button.
 15. Clear macro will clear out all macros on both press and release for the currently selected button and layer. Note: changes to macros are never saved to the connected device unless Write Macros is clicked.
 16. Delete deletes the selected macro row. Be careful when using Delete with keystroke macros, if the upstroke of a key is deleted without also deleting the corresponding downstroke, a stuck key will result. For macros which consist of 2 rows such as mouse buttons and game buttons, a manual delete of each is required to completely clear the macro.
 17. Up moves the selected macro up a row. This is used only if programming multiple types of macros on a single button. Be cautious when manually moving rows, for example moving the Mouse Up ahead of its corresponding Mouse Down will result in a stuck mouse button.
 18. Down moves the selected macro down a row. This is used only if programming multiple types of macros on a single button. Be cautious when manually moving rows, for example moving the Mouse Up ahead of its corresponding Mouse Down will result in a stuck mouse button.
 19. Insert Delay inserts a delay of the entered value into the macro at the selected row. Delays are useful and often required for some applications. The valid delay values are 10 to 2550ms. If delays longer than 2.55 seconds are needed, it is possible to enter consecutive time delays. Note: there is also an Insert Delay in the Keystrokes programming interface for inserting between individual keystrokes. These delays are integrated into the keystroke macro whereas this Insert Delay is considered its own macro.

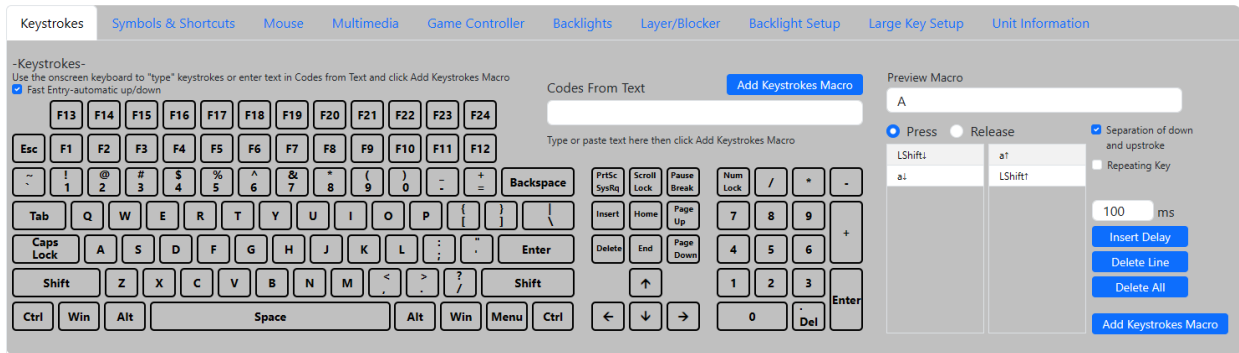
20. Programming tabs are used to select the type of macro to program on the selected button. The 3 last tabs; Backlight Setup, Large Key Setup, and Unit Information are not for macro programming. Backlight Setup allows user to set the default backlighting when the device is booted up. Large Key Setup is for users of large key caps (wide, tall, and quad). If using these keys, it is recommended for best performance to set them up using Large Key Setup. Unit Information lists all information about the unit, allows user to blink the connected device, set the Unit ID, and also to change the endpoints. Changing endpoints may be required depending on the type of macros desired. After changing endpoints, the connected device is disconnected and Connect X-keys must be clicked again. Note: changing endpoints does NOT change the macros in the device, there are only one set of macros for a device.

Programming a Keystrokes Macro

Before programming keystrokes, it is important to understand a few points. Every key (a, shift, F1, etc) must have a down and upstroke. Programming a down stroke without a corresponding upstroke will result in what is called a “stuck” key. Down strokes are indicated by the key name followed by ↓, for example a↓ is the a key being pressed. Upstrokes are indicated by the key name followed by ↑, for example a ↑ is the a key being released. All X-keys buttons also have a press and a release. To avoid confusion these are called Press and Release, not down and upstroke. When programming keystrokes on a button, the user must decide how they want the keystrokes to behave. Standard keyboards put the last typed key’s upstroke on the release of the keyboard key. This is called “Separation of down and upstroke”. If desiring the X-keys to play back macros exactly like a standard keyboard, then Separation of down and upstroke should be checked. If more complicated keystroke macros are desired, the Separation of down and upstroke can be unchecked and the user can manually choose where to put the keystrokes by selecting either Press or Release. There is also the choice to make the X-key button repeat. If Repeating Key is checked then all the keystrokes on the Press will repeat while the X-key button is held down. Repeating Keys are not allowed if Separation of down and upstroke is checked.

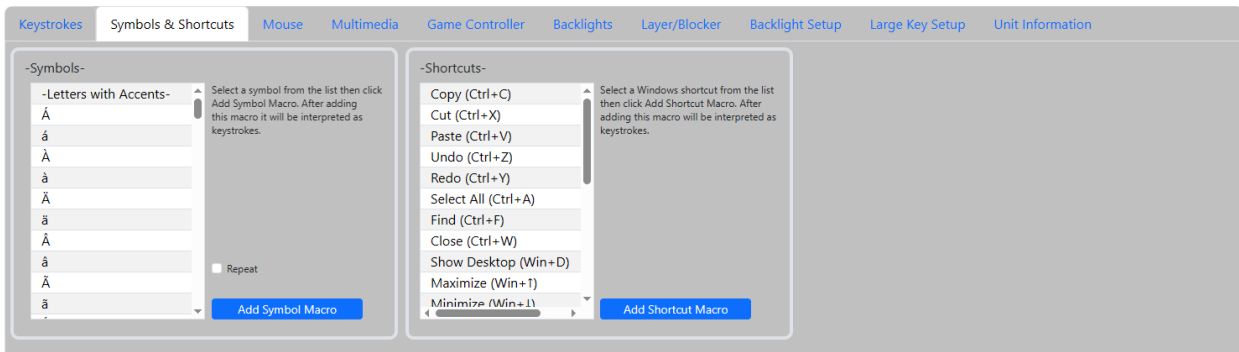
Programming keystrokes onto an X-keys button can be done in one of two methods. Both start with selecting the desired button from the above graphic by clicking it, the selected button will turn dark green. If the button is blank, by default the Press will be selected in the Selected Button region. Click on the Keystrokes tab. The quickest method for visible keystrokes only is to type the desired text into the Codes From Text entry box then click on the Add Keystrokes Macro button to add the macro. The second method requires clicking on the onscreen keyboard to “type” the desired keystrokes. As keystrokes are “typed” they are displayed in the lower Press and Release boxes. This method allows for more complicated and customized macros. Delays can be inserted into the keystrokes macro, the maximum delay is 2550 ms. When finished click the Add Keystrokes Macro. This will fill in the upper Press and Release boxes in the Selected Button region.

In order for Keystrokes macros to function on playback, the device must have a Keyboard endpoint. Please reference <Understanding Endpoints> for more details.



Programming a Symbols & Shortcuts Macro

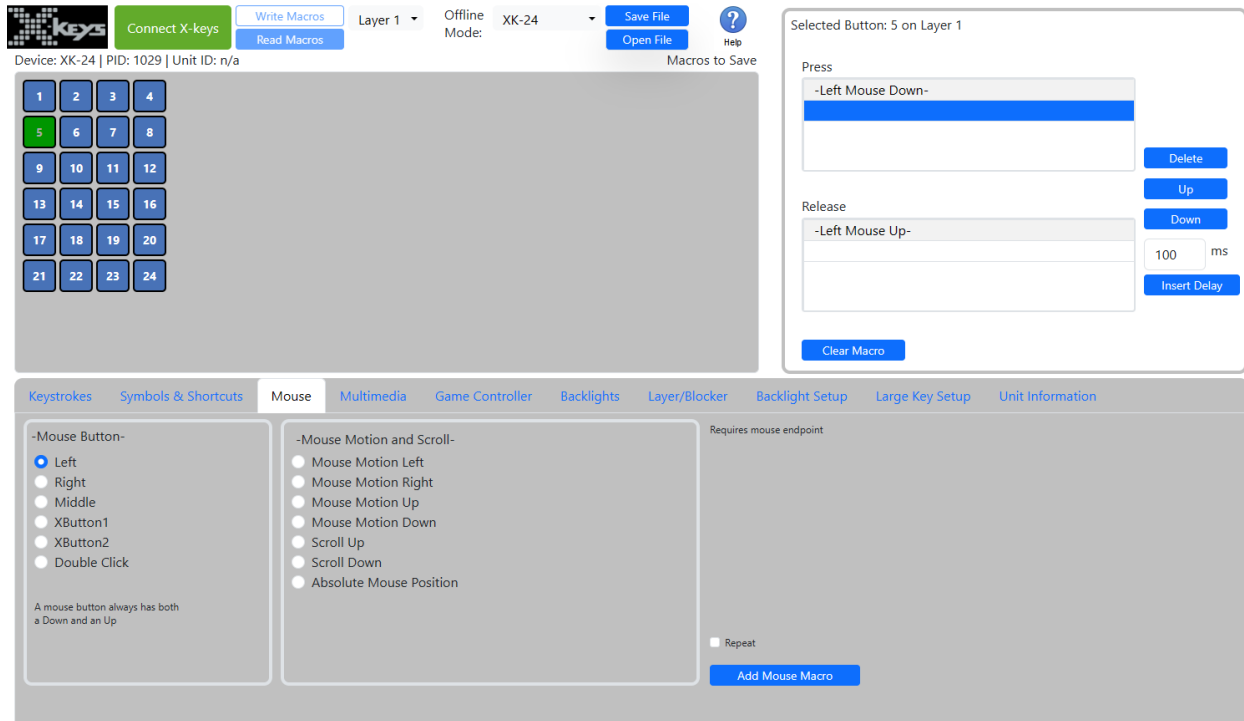
Symbols & Shortcuts are special keystrokes macros provided for easy programming. After being programmed they are interpreted as keystrokes. To program a symbol or shortcut select the desired button from the above graphic by clicking it, the selected button will turn dark green. For Symbols, select the available row in either the Press or Release box in the Selected Button region so that it is highlighted blue. Select the desired Symbol or Shortcut and click Add Symbol Macro or Add Shortcut Macro. Symbols are programmed all on the Press or all on the Release of the Button. Symbols are “alt codes”. Shortcuts have separation of the down and upstroke, for example the shortcut for copy (Ctrl+C) will result in LCtrl ↓ z ↓ on the press of the button and the corresponding ups, z ↑ LCtrl ↑, on the release of the button. In order for Keystrokes macros to function on playback, the device must have a Keyboard endpoint. Please reference <Understanding Endpoints> for more details.



Programming a Mouse Macro

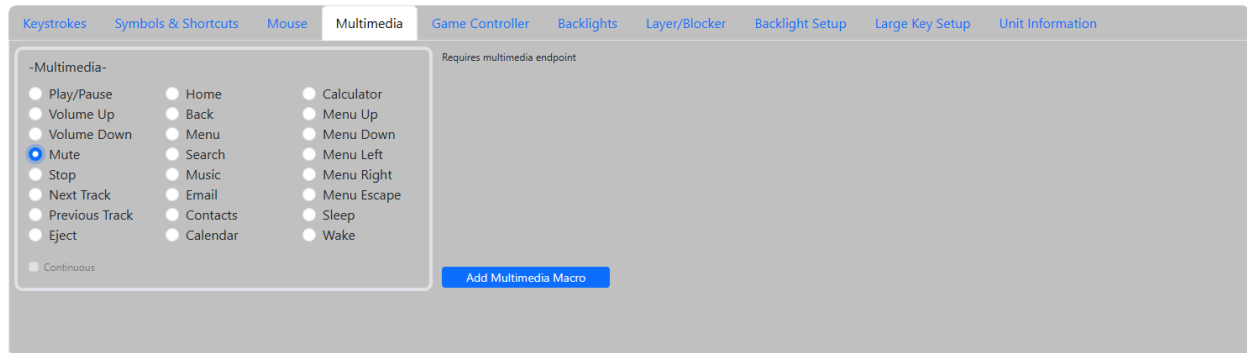
To program a mouse macro select the desired button from the above graphic by clicking it, the selected button will turn dark green and the next available row will be selected (highlighted in blue) in the Press box in the Selected Button region. Click the Mouse tab. Select the desired macros from the available options, enter values, if required, then click Add Mouse Macro. If the Repeat is checked then the command is repeated continuously for as long as the button is held down. For mouse buttons, if the Repeat is not checked the mouse button down is placed on the press of the X-keys button and the mouse button up on the release of the X-keys button. If desiring both down and up on the Press, select the - Mouse Up- macro in the Release box and click Up such that it is now in the Press box just below the -

Mouse Down- portion of the macro. For mouse buttons if the Repeat is checked then -Mouse Down- and -Mouse Up- are placed on the press of the X-keys button. If manually deleting a mouse button macro, make sure to delete both portions of it. In order for Mouse macros to function on playback, the device must have a Mouse endpoint. Please reference <Understanding Endpoints> for more details.



Programming a Multimedia Macro

To program a multimedia macro select the desired button from the above graphic by clicking it, the selected button will turn dark green and the next available row will be selected (highlighted in blue) in the Press box in the Selected Button region. Click the Multimedia tab. Select the desired macros from the available options then click Add Multimedia Macro. Some multimedia commands, such as Volume Up and Volume Down, have the option to be programmed as Continuous. If the Continuous is checked then the command is repeated continuously for as long as the X-keys button is held down. This Continuous option is not the same as the Repeat option seen for other macro types. A multimedia macro is made up of the 2-byte Usage ID for the command followed by a terminate. For non-Continuous multimedia commands, the terminate is placed immediately after the Usage ID on either the press or release of the X-keys button and appears as one submacro in the Press/Release boxes. For Continuous multimedia commands, the Usage ID is placed on the press of the X-keys button and the terminate on the release and appears as two submacros, one on press and one on release. In the case of Volume Up, selecting Continuous would have the effect of increasing the volume steadily while the X-keys button is pressed and stopping the increase on the release. If manually deleting a Continuous multimedia macro, make sure to delete both portions of it. In order for Multimedia macros to function on playback, the device must have a Multimedia endpoint. Please reference <Understanding Endpoints> for more details.



Programming a Game Controller Macro

To program a game controller macro, select the desired button from the above graphic by clicking it, the selected button will turn dark green and the next available row will be selected (highlighted in blue) in the Press box in the Selected Button region. Click the Game Controller tab. Select the desired macros from one of the 4 available groups; Game Buttons, Point of View Hat, Relative Positions, or Absolute Positions, check or uncheck the Repeat, and click Add Game Controller Macro. For game buttons if Repeat is not checked, the game button is turned on the button's press and turned off on the button's release and this is indicated in the Press and Release boxes in the Selected Button region after the Add Game Controller Macro is clicked. If the Repeat is checked then the game button is turned on and then turned off all on the press of the button and this is repeated for as long as the button is held down. The behavior is the same for Point of View Hat. For Relative Positions and Absolute Positions, first select the entity to control. Appropriate entry boxes will be displayed for entering the positions desired. Checking the Repeat will result in repeating the macro until the button is released. In order for Game Controller macros to function on playback, the device must have a Game Controller endpoint. Please reference <Understanding Endpoints> for more details.



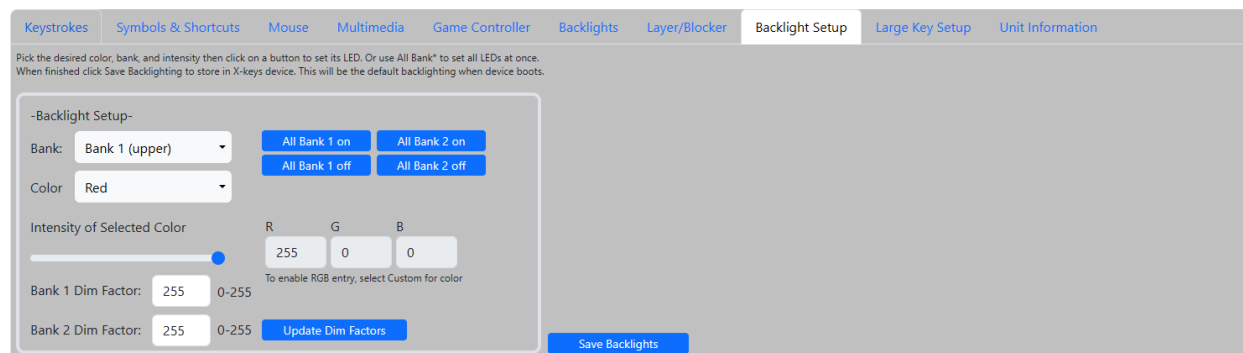
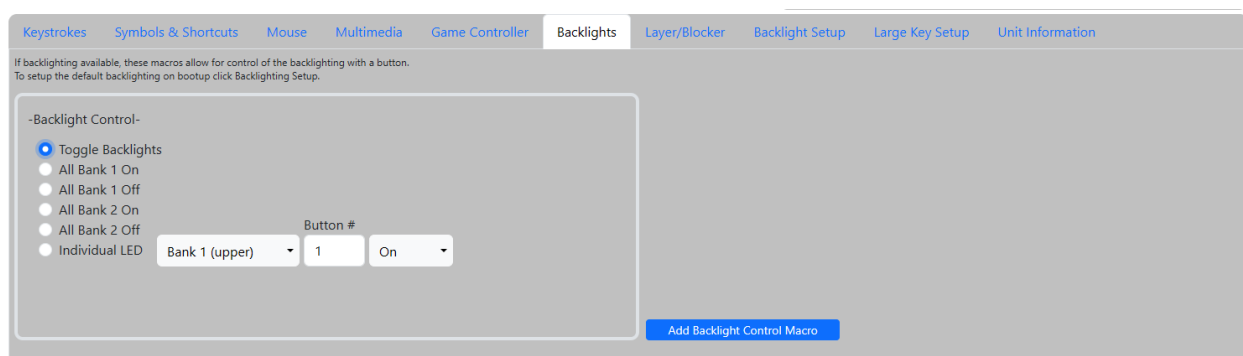
Programming a Backlight Macro

If a device has backlight LEDs then Backlight macros can control of the backlight state of a given LED via a button press or release. Select the desired button from the above graphic by clicking it, the selected button will turn dark green and the next available row will be selected (highlighted in blue) in the Press box in the Selected Button region. Options are shown in the below and vary depending on if the device

supports RGB LEDs or not. Toggle Backlights is a global macro that turns off all of the backlights on all banks off when the button is pressed and then back on when the button is pressed again. All Bank 1 On will turn every LED on Bank 1, All Bank 1 Off will turn every LED off on Bank 1 and likewise for the All Bank 2 On and All Bank 2 Off.

For controlling an individual LED, the interface looks different depending the backlight type. Devices with blue/red backlighting chose the Bank, the Button #, and the LED state. Possible states are On, Off, or Flash. For devices with RGB backlighting chose the Bank, Button #, values of R, G, and B, and flash or no flash.

The macros under Backlights tab are not the same thing as the default backlighting of the device. To alter the default backlighting which is how the backlights are set on boot up of the device, use the Backlight Setup tab.

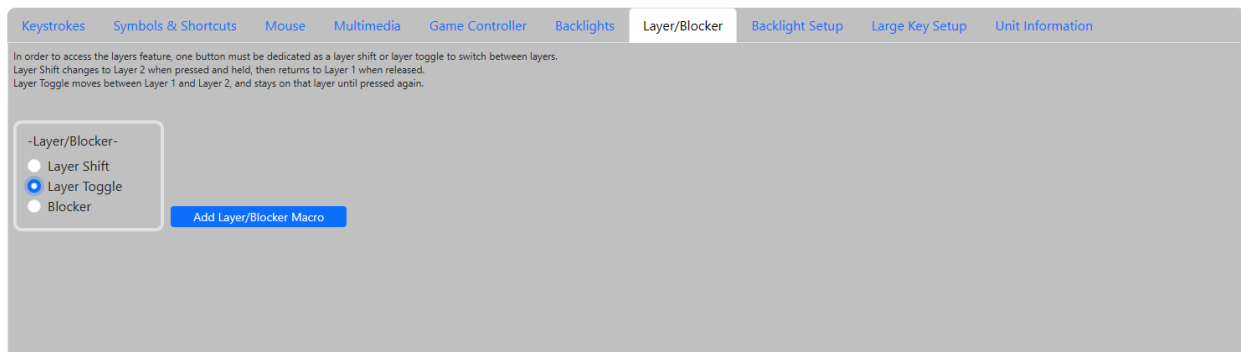


Programming a Layer/Blocker Macro

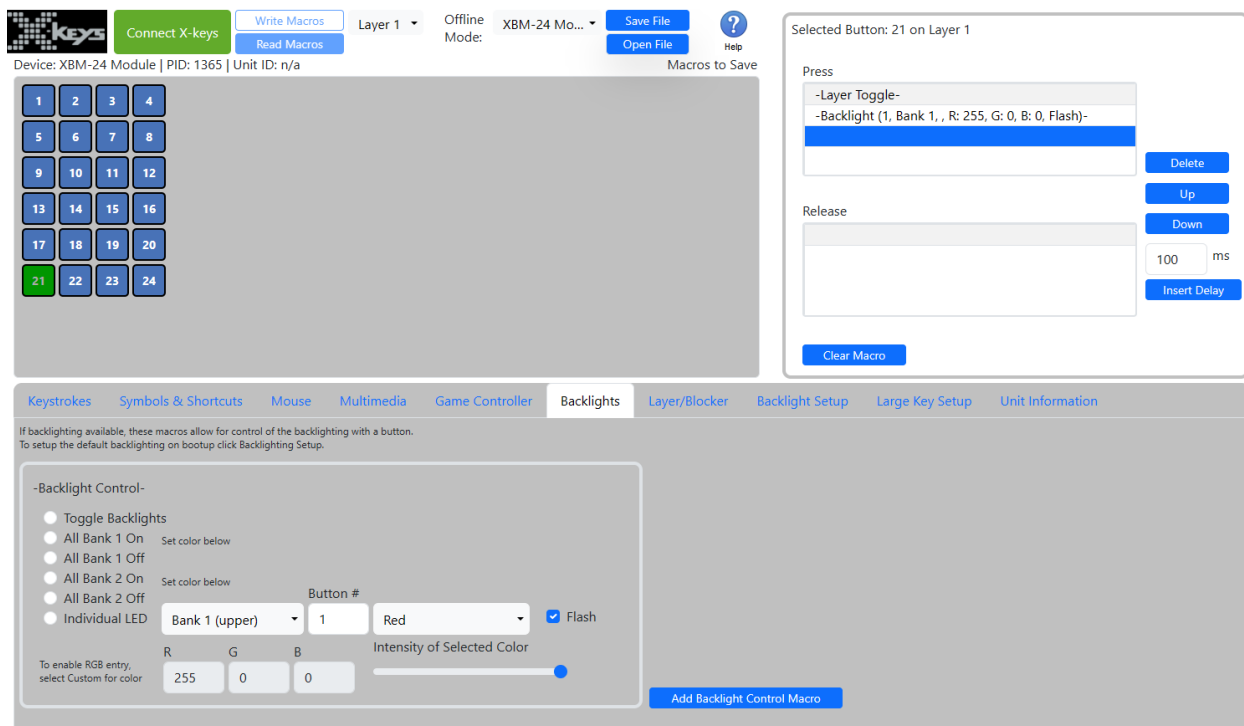
X-keys devices support two layers; Layer 1 and Layer 2. In order to use layers one button must be dedicated to controlling which layer the device is on. A Layer Shift macro changes to Layer 2 when pressed and held and returns to Layer 1 when released. A Layer Toggle macro moves between Layer 1 and Layer 2 staying on that layer until pressed again.

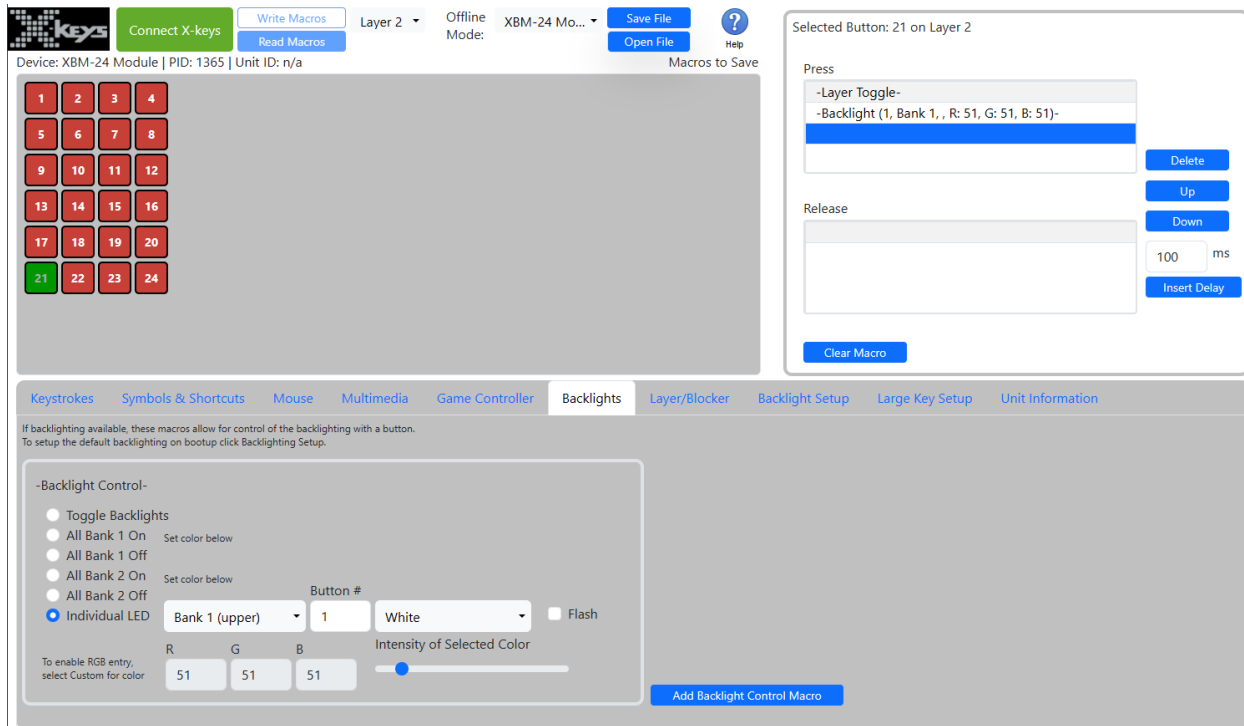
To program a layer macro, make sure to be on Layer 1. Select the desired button from the above graphic by clicking it, the selected button will turn dark green and the next available row will be selected (highlighted in blue) in the Press box in the Selected Button region. Click the Layer/Blocker tab and select

the desired macro, either Layer Toggle or Layer Shift, then click Add Layer/Blocker Macro. The macro will be added to the Press box for both layers 1 and 2.



For devices with green/red indicator LEDs, the green LED is lit when on Layer 1 and the red LED is lit when on Layer 2. For devices without these indicators, the user must determine the type of layer indication they desire if any. This would be in the form of a backlight macro. For example, after adding the layer macro as described above and with the next available row highlighted in the Press box, click the Backlights tab, click on the Individual LED radio button and select a desired bank, button, and color to be the layer indicator then click Add Backlight Control. Change to Layer 2, and repeat the process but enter the color for the same desired bank and button which will indicate Layer 1. This example is shown in the figures below. When Button 21 is pressed it will change to Layer 2 and flash the upper left bank 1 LED red. When it is pressed again, it will change to Layer 1 and set the LED to a dim white without flashing.





Blockers are not technically necessary but can provide a helpful visual when programming a device. No other macros are permitted on a blocker. If other macros are detected, the user will be given the opportunity to cancel or continue. If user continues, all macros on both layers will be cleared and replaced with the blocker. To program a blocker, select a button, click the Layer/Blocker tab, select Blocker and click Add Layer/Blocker Macro. Once programmed as a blocker, the button displays black in the device graphic.

Programming Multiple Macro Types

An X-keys button macro can be made up of several “submacros”. In the example shown below there are 3 submacros; -Toggle Backlights-, a↓a↑, and -Left Mouse Button Down-. When the X-keys button is pressed the backlights are toggled, the ‘a’ keystroke is typed, and the left mouse button goes down. On release of the X-keys button the ‘b’ keystroke is typed and the left mouse button goes up. Note if any submacro on a button is made to Repeat, then the entire X-keys button’s Press submacros will repeat until the X-keys button is released.

Selected Button: 5 on Layer 1

Press

-Toggle Backlights-
a↓a↑
-Left Mouse Down-

Release

b↓b↑
-Left Mouse Up-

100 ms

Clear Macro

Delete

Up

Down

Insert Delay

Backlight Setup

Devices with Blue/Red LED Backlighting

Keystrokes Symbols & Shortcuts Mouse Multimedia Game Controller Backlights Layer/Blocker Backlight Setup Large Key Setup Unit Information

Pick the desired bank and state then click on a button to set its LED. Or use All Bank* to set all LEDs at once.
When finished click Save Backlighting to store in X-keys device. This will be the default backlighting when device boots.

-Backlight Setup-

Bank: Bank 1 (upper) All Bank 1 on All Bank 2 on
All Bank 1 off All Bank 2 off

State: On

Bank 1 Dim Factor: 128 0-255
Bank 2 Dim Factor: 128 0-255 Update Dim Factors

Save Backlights

Click on the Backlight Setup tab to configure the default backlighting of the device if applicable. The default backlighting is the state of the backlights on boot up of the device (when it is plugged in). If the connected device has blue/red LEDs select the Bank; upper LED or lower LED and the state; on or off then click on the desired button in the above graphic to set the LED. To change the global Dim Factor for each bank, enter the desired values and click Update Dim Factors. The max Dim Factor value is 255. This

is the max brightness. A Dim Factor of 0 is possible but will result in all of the LEDs appearing to be off even when turned on, resulting in confusion. If all backlights are to be turned off, leave the Dim Factor at a non-0 level and instead use the All Bank 1 off and All Bank 2 off buttons to turn them all off. When finished setting all of the LEDs to the desired state, click Save Backlights. The backlighting is now saved in firmware. If only changing the default backlighting this is all that needs done.

Devices with RGB LED Backlighting

The screenshot shows the 'Backlight Setup' tab in the X-keys software. At the top, there is a navigation bar with tabs: Keystrokes, Symbols & Shortcuts, Mouse, Multimedia, Game Controller, Backlights, Layer/Blocker, Backlight Setup (selected), Large Key Setup, and Unit Information. Below the navigation bar, a small instruction text reads: 'Pick the desired color, bank, and intensity then click on a button to set its LED. Or use All Bank* to set all LEDs at once. When finished click Save Backlighting to store in X-keys device. This will be the default backlighting when device boots.' The main content area is titled '-Backlight Setup-' and contains several controls: a 'Bank:' dropdown menu set to 'Bank 2 (lower)', a 'Color:' dropdown menu set to 'Purple', and an 'Intensity of Selected Color' slider. Below these are input fields for 'Bank 1 Dim Factor' and 'Bank 2 Dim Factor', both set to '255' with a range of '0-255'. To the right of the 'Bank 2 Dim Factor' field is an 'Update Dim Factors' button. Above the 'Bank 1 Dim Factor' field are two buttons: 'All Bank 1 on' and 'All Bank 1 off'. Above the 'Bank 2 Dim Factor' field are two buttons: 'All Bank 2 on' and 'All Bank 2 off'. At the bottom right of the panel is a 'Save Backlights' button.

For devices with RGB LEDs select the desired color from the menu and adjust the Intensity slider for the brightness then click on the desired button in the above graphic to set the LED. The color and intensity can be set for each individual LED or use the All Bank 1 on and All Bank 2 on to set all LEDs at once. To change the global Dim Factor for each bank, enter the desired values and click Update Dim Factors. The max Dim Factor value is 255. This is the max brightness. A Dim Factor of 0 is possible but will result in all of the LEDs appearing to be off even when turned on, resulting in confusion. If all backlights are to be turned off, leave the Dim Factor at a non-0 level and instead use the All Bank 1 off and All Bank 2 off buttons to turn them all off. When finished setting all of the LEDs to the desired state, click Save Backlights. The backlighting is now saved in firmware.

Large Key Setup

Large keys are not just swapping out keycaps on X-keys devices, we treat them specially in firmware to avoid any issues that may arise during use. For example, a press of a quad keycap could result in 1 of the 4 buttons it covers being actually pressed or perhaps 2 may trigger. We make sure the macro is fired properly in all situations, no multiple fires or misfires. To assure this behavior it is important to program the keys under a large keycap as large keys. This is done in the Large Key Setup. To enter the Large Key Setup click on the Large Key Setup tab. In the device graphic while holding the Ctrl key down, click on the individual X-keys buttons to make up the large key. For wide and tall keys select the adjoining button. For quad keys after selecting the first key, select an adjoining top or side button next, not the kiddy corner button. Once a valid set of buttons are selected the Make large keycap radio button will become active, select it to make the large key. To remove a large key, click on it and select the Remove large keycap radio button. Only 1 button in the large key group can have a macro. If macros are found on other buttons in

the large key, a prompt will appear.

keys

Connect X-keys

Write Macros*
Read Macros

Layer 1 ▾

Offline Mode: ▾

Select Model ▾

Save File
Open File

Help

Device: XBM-18 Module | PID: 1378 | Unit ID: 1

Macros to Write

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

In Large Key Setup

Press

Delete

Release

Up

Down

100 ms

Insert Delay

Clear Macro

Keystrokes

Symbols & Shortcuts

Mouse

Multimedia

Game Controller

Backlights

Layer/Blocker

Backlight Setup

Large Key Setup

Unit Information

Select individual buttons using Shift or Control and "Make large keycap" to make large keycap. Select large keycap and "Remove large keycap" to remove it.

-Large Keycap Setup-

Make large keycap

Remove large keycap

keys

Connect X-keys

Write Macros*
Read Macros

Layer 1 ▾

Offline Mode: ▾

Select Model ▾

Save File
Open File

Help

Device: XBM-18 Module | PID: 1378 | Unit ID: 1

Macros to Write

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

In Large Key Setup

Press

Delete

Release

Up

Down

100 ms

Insert Delay

Clear Macro

Keystrokes

Symbols & Shortcuts

Mouse

Multimedia

Game Controller

Backlights

Layer/Blocker

Backlight Setup

Large Key Setup

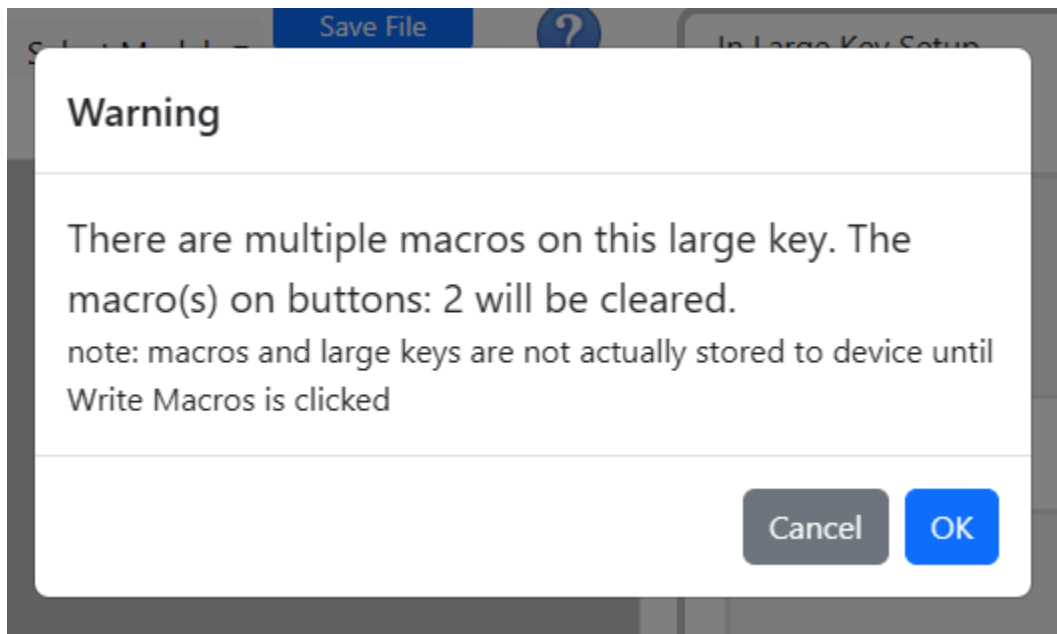
Unit Information

Select individual buttons using Shift or Control and "Make large keycap" to make large keycap. Select large keycap and "Remove large keycap" to remove it.

-Large Keycap Setup-

Make large keycap

Remove large keycap

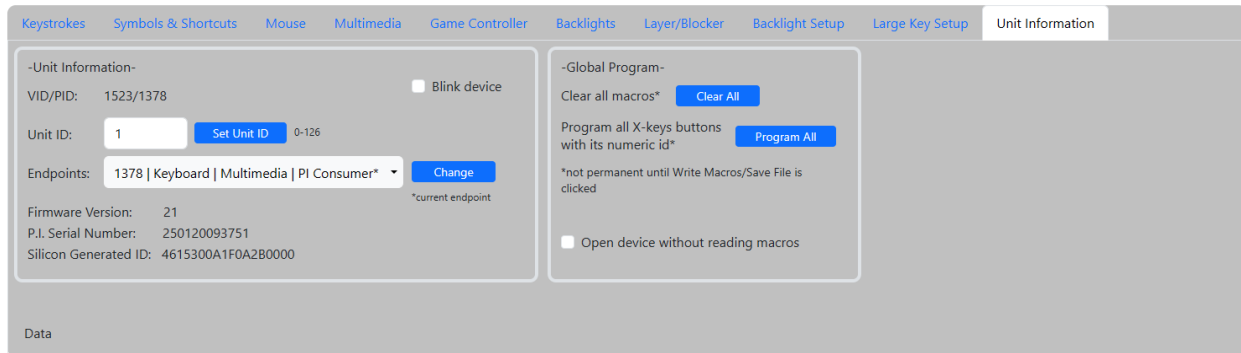


Unit Information

Click on the Unit Information tab to see detailed information about the connected device. Check the Blink device checkbox to blink the green indicator LED of the connected device or for devices without a green indicator LED, to blink the first LED red of the connected device. This is helpful if several devices are plugged into the same machine and also to verify communication with the connected device. The unit id can be set to values between 0 and 126 in the X-keys Setup Webapp. The unit id is useful if more than one of the same model of X-keys device are connected to the same machine. The available endpoints for the connected device are listed in the dropdown list with the currently selected endpoint indicated with a *. The endpoint gives information about what types of macros can be supported. For example, if one desires keystroke and mouse macros then the device must be in an endpoint that has a Keyboard and Mouse. To change to a different endpoint, select it from the list and click Change.

IMPORTANT: changing endpoints will require reconnection of the X-keys and any macros that were programmed but not written will be lost. Before changing endpoints, either click the Write Macros to save them to the device or use the Save File to save the macros to a file that can be opened using Open File after reconnection. It does not matter which endpoint the device is in when programming macros, it only matters when playing them back. If the device hasn't the proper endpoint for a macro, that macro is simply ignored and will appear to the user to be working incorrectly.

Also on the Unit Information tab are several global programming features such as Clear All which clears all macros, Program All which programs the button number on each button for diagnostics purposes. On rare occasion the macros burned to the device may be corrupt. If this occurs check the Open device without reading macros checkbox immediately after launching the app and before clicking Connect X-keys. This will connect to the X-keys device without reading the corrupted macros and allow the user to then click Clear All to overwrite the corrupted macros.



Understanding Endpoints

Think of an endpoint as being able to speak a language. In order to execute keystrokes a device must speak "keyboard" for example. X-keys devices are able to speak many languages but are restricted in how many they can speak simultaneously. The engineers of X-keys have thus provided many different combinations of endpoints. Types of endpoints available are Keyboard, Mouse, Game Controller, Multimedia, and PI Consumer. Each combination has its own Product Identification number (PID) making it appear to the computer as a completely different device. PI Consumer is P.I. Engineering's own consumer endpoint which is required to read device information and any previously programmed macros. X-keys Setup Webapp must be able to read in this information so if the X-keys device is not in PID with a PI Consumer endpoint it must be changed. A prompt will notify user if this is the situation. The combinations available for the device can be viewed and/or changed in the Unit Information tab. The macros written to the device are the same regardless of which PID the device is in, there is only one set of macros.

Exiting KVM Mode

KVM mode contains only a keyboard endpoint, or in the case of the XBE-12 Trackball, a keyboard and a mouse endpoint. Because of this, there is no PI Consumer endpoint which is required to read and write macros. To exit KVM mode follow the instructions for the specific X-keys model below.

XBE-24, XBE-18, XBE-96, XBE-14 T-bar, XBE-12 Jog Shuttle, XBE-12 Handwheel, XBE-12 Trackball: To exit KVM mode please unplug the device. Replug it and immediately after tap the Scroll Lock key approximately 10-15 times.

XK-24 KVM, XK-80/XK-60 KVM, XKE-64 Jog T-bar: To exit KVM mode unplug the device. Locate the program switch on the top of the device. Hold the program switch down while simultaneously replugging the device.

XKE-128 KVM: To exit KVM mode please unplug the device. Replug it and immediately after tap the Scroll Lock key approximately 10-15 times.

XK-12/XK-3 Switch Interface KVM: To exit KVM mode please unplug the device. Replug it and immediately after tap the Scroll Lock key approximately 10-15 times.

XK-16 KVM: To exit KVM mode please unplug the device. Locate the program switch on the left side of the device. Place the program switch in the up position toward the USB cord and then replug the device. Note the position of this switch is irrelevant once the device is booted, it looks at the switch position to determine which PID to boot to only on startup.

XKE-40: To exit KVM mode please unplug the device. Locate the small hole on the right end of the device. Using a paper clip or similar item depress the switch while simultaneously replugging the device.

Troubleshooting

- Progress wheel on app never stops spinning with Wait displayed. This could indicate an error reading in the macros. To open an X-keys without reading the macros, start or refresh the app so you are back at the No Device Connected state. Click on Unit Information and under Global Program check the Open device without reading macros box. Click the Connect X-keys and select device. Click Write Macros to clear out all macros and start anew.
- Macro does not play back after Write Macro is clicked. This is most likely due to the device being in the wrong endpoint from what is required for the macro. For example, if keystrokes were programmed in the macro, then the device must have a keyboard endpoint in order for the keystrokes to work. Go to Unit Information tab to see the available endpoints and change them. Changing endpoints will not affect the written macros.
- Macro doesn't appear in the Selected Button region. Make sure after selecting macro using the radio buttons or entering macro to then click the Add ... Macro button.
- The name of the device shown when Connect X-keys is not the same as displayed in the app. This is the case for many X-keys products and is not a problem. The WebHID api does not allow changes to that text. Apologies if this causes confusion.
- If experiencing issues, the app can be restarted by closing the tab in the browser or refreshing the tab in the browser.

Technical Support

For assistance, please contact tech support by e-mail at tech@piengineering.com or phone (517) 655-5523.

Notes

- Do not run simultaneously MacroWorks 3.1, X-keys Basic Setup, X-keys Basic Setup for Mac, or any other software that is connected to the same device which X-keys Setup Webapp is currently connected to as the commands sent by these programs can interfere with the X-keys Setup Webapp and cause unintended consequences.
- All macros programmed by X-keys Basic Setup (PC or Mac) versions can be read into X-keys Setup Webapp however not all macros programmed using X-keys Setup Webapp will be interpreted properly in X-keys Basic Setup (PC or Mac) versions due to the extra functionality of the webapp and its ability to program multiple types of macros or "submacros" on a single button. The file formats are the same.

- Maximum allowed number of “submacros” or rows in the Selected Button region’s Press or Release box is 100.