



Notch Integration

This guide will show you how to:

- Configure your PHOTON server to enable native Notch playback;
- Import Notch Blocks in PHOTON;
- Integrate Notch Blocks as Stack FX in PHOTON;
- Modify exposed Notch Block parameters in PHOTON.

Description

Notch is a generative content creation environment. Within this environment, content creators use graphical programming to create original visual effects by connecting various nodes into a logical structure.

Notch Blocks are saved instances of these logical structures that can be exported from their original environment and loaded in other software platforms such as PHOTON. For additional information on Notch, please visit: www.notch.one

PHOTON allows users to import Notch Blocks and run them natively through its interface. Parameters that were exposed in Notch while creating the Block will be accessible in PHOTON for modifications. Keep in mind that the media server running PHOTON will dedicate a portion of its GPU to the execution of the Notch Block's commands. Overall performances will be affected.

Note: Notch does not impose limitations on its users when it comes to the complexity or size of their Blocks. Therefore, it is fully possible to exceed the available graphic memory allocation when designing a Block and experience crashes or performance issues. Since a Notch Block integrated in PHOTON will share the available graphic memory, you might want to run performance tests before a show.

1. Prerequisites

You will at least need the following items to integrate a Notch Block in PHOTON:

- A media server running PHOTON;
- A Notch dongle;
- At least one exported Notch Block.



In order to pipe generative through PHOTON and display it on Screens, you will need a PHOTON media server equipped with its usual dongle. Displays should be connected to the media server.

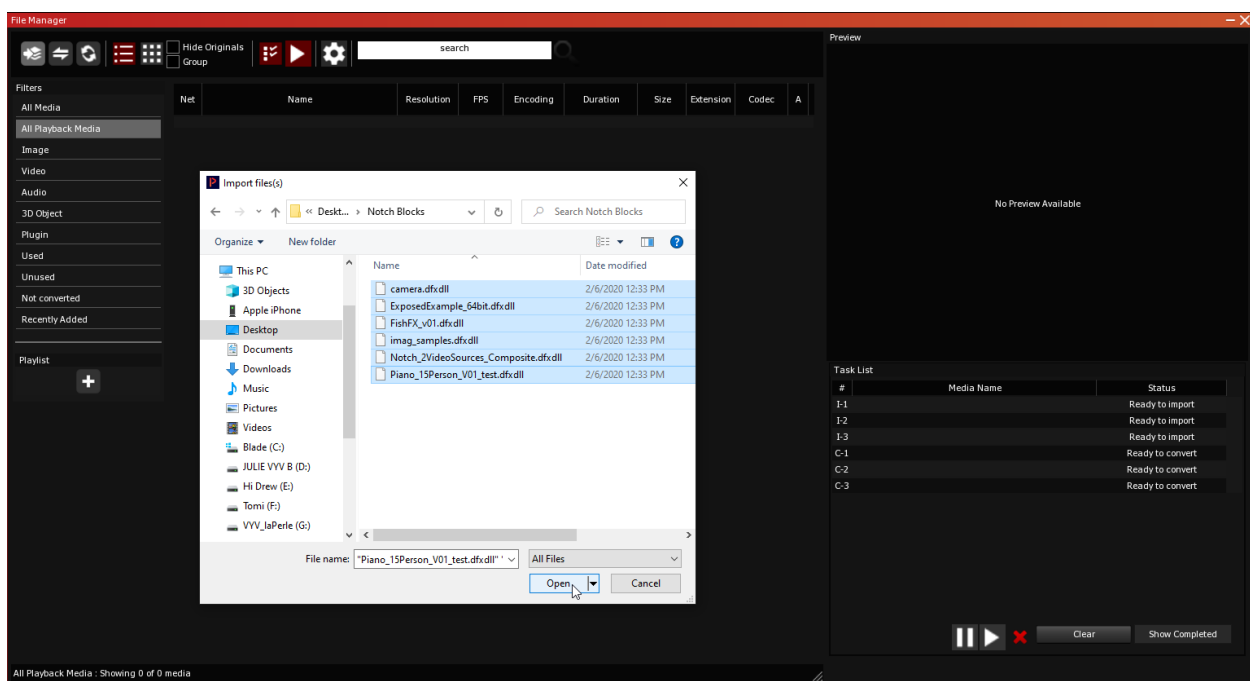
The server will also need another dongle that allows Notch to run. Notch uses Codemeter licensing. You will need to execute an installer issued by Codemeter to use the dongle. Additional details and installers can be found at : www.wibu.com/products/codemeter.html

A Notch Block has to be exported from the Notch Builder authoring software. Once exported, a Notch Block is packed in a .DFXDLL file. This file has to be copied on a drive accessible to the server running PHOTON.

2. Notch Block Import

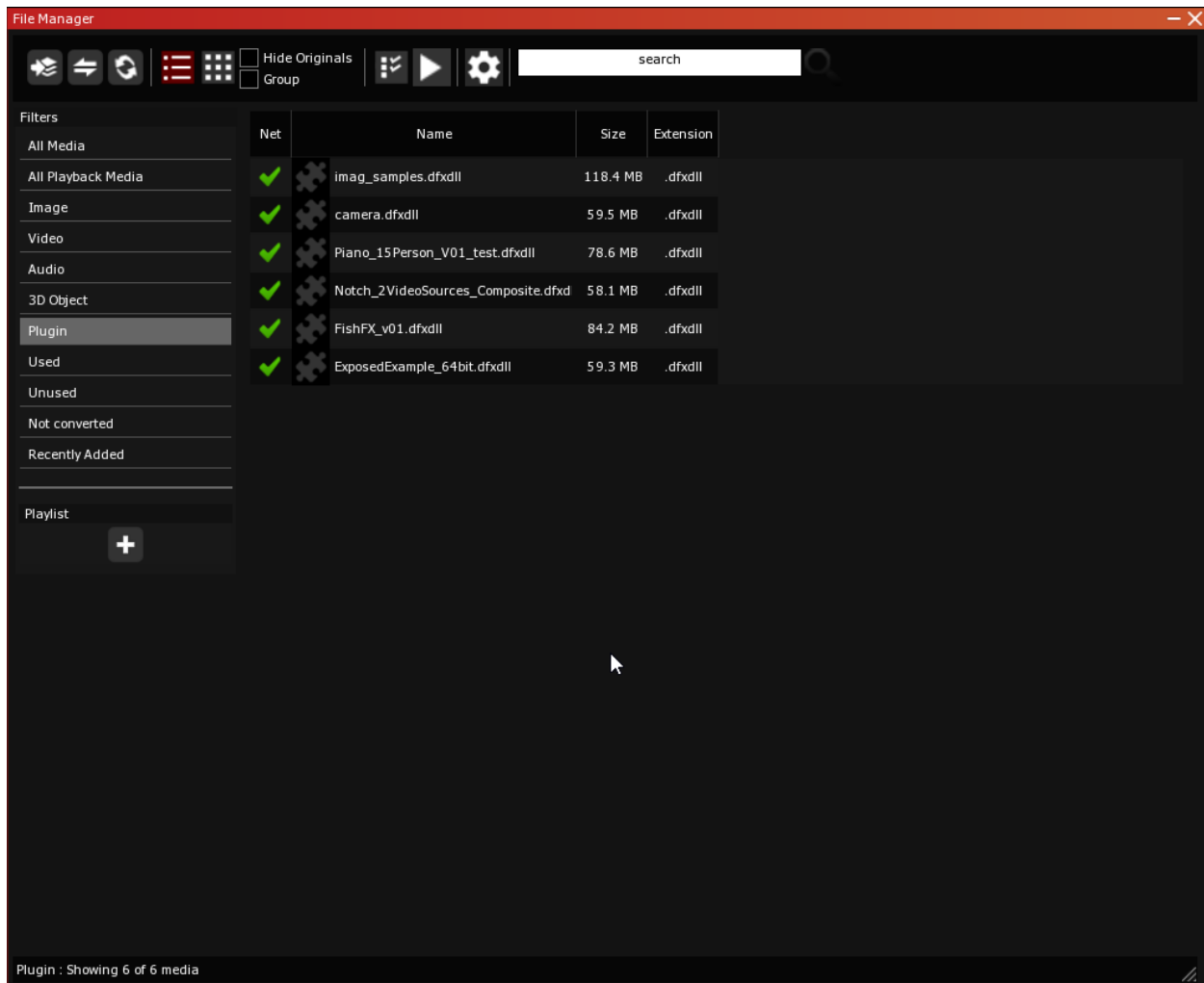
You will now have to import the Notch Block in PHOTON. In order to do so follow these steps:

1. Select {Show > File Manager} or press [Alt+F] to open the File Manager module.
2. Click on the Import button  to open the “Import file(s)” window.
3. Navigate in the OS using the window’s controls to locate the Notch Block files (.DFXDLL) you want to import.
4. Click on the name of the file you want to import. You can also [Shift+Click] on multiple names to perform a multiple selection.
5. Click the [Open] button of the “Import file(s)” window to import the Notch Block(s).



The Notch Blocks will now be available in PHOTON. To make sure that they were correctly imported, follow these steps:

1. Click on the [Plugin] button in the File Manager Filters list to eliminate any other entry besides Plugins in the Media Files list.
2. Review the list to see if it contains the Notch Blocks that were previously imported.



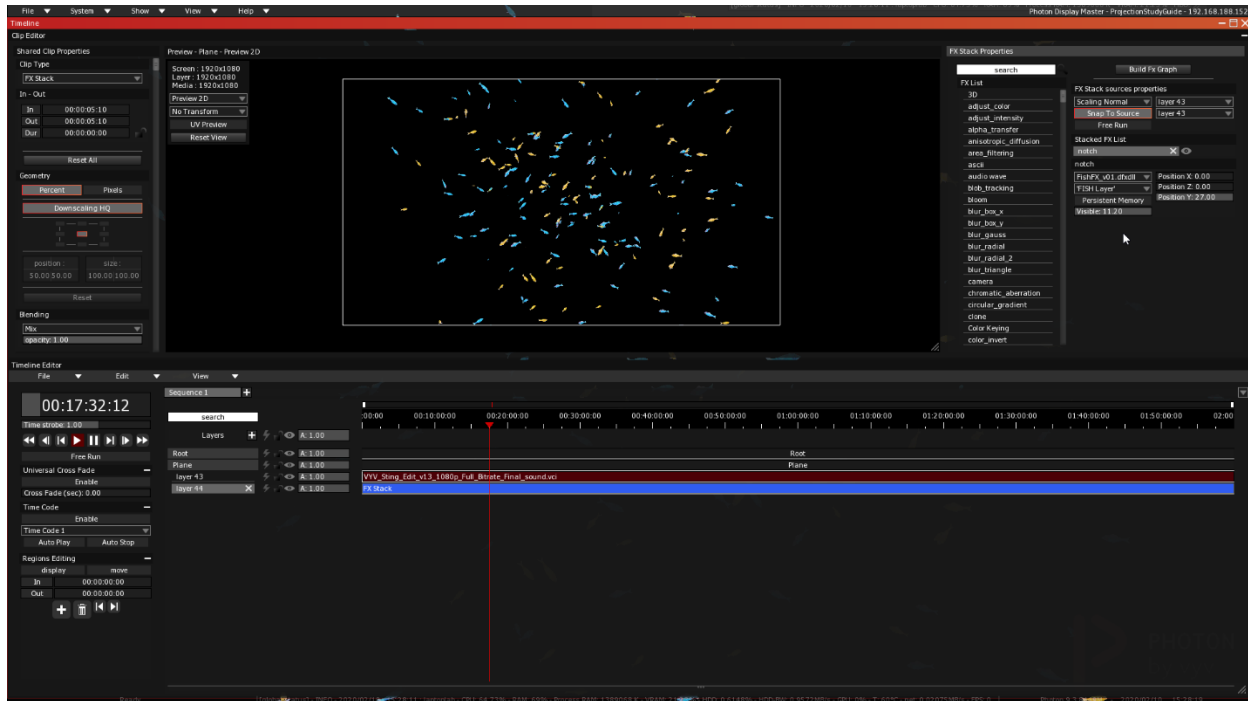
3. Notch Block Integration as a Stack FX

Notch Blocks are currently integrated in PHOTON through Stack FX Clips. Stack FX Clips are Timeline containers that hold various types of visual effects. Follow these steps in order to integrate Notch Blocks as Stack FX:

1. Select {Show > Timeline} or press [Alt+T] to open the Timeline module. You will now have to create a new Layer linked to the Screen where the Notch Block will be integrated as an effect.



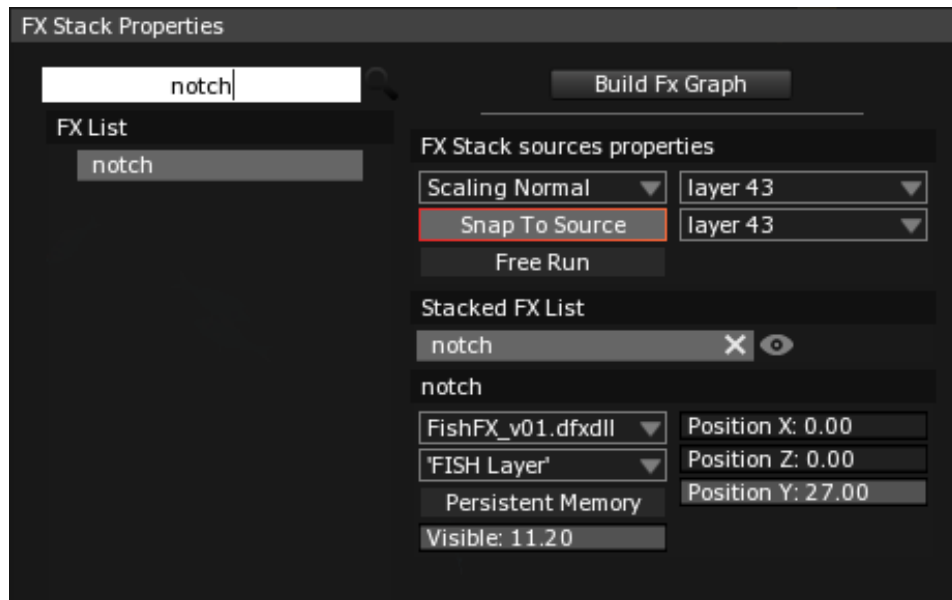
2. Select the Screen by clicking on its entry in the Layers list.
3. Click on the [+] button located in the Master Layer panel to add a new Layer.
4. Select the new Layer by clicking on its entry.
5. Press [Ctrl+E] or right-click in the new Layer's track in the Timeline to open a contextual menu, then select {Add FX Stack}.



6. Click on the new Stack FX Clip to select it.
7. Locate the FX Stack Properties panel positioned in the top right corner of the Timeline window.
8. Click the Notch entry in the FX List located in the FX Stack Properties panel. You have now linked the Stack FX Clip to Notch.
9. A Notch sub-section located beneath the Stacked FX list window section has appeared. The Notch sub-section contains a dropdown menu that will allow you to select which Notch Block to load in the Stack FX Clip.

Note: Notch Blocks will eventually be supported in PHOTON through the FX Graph module.





4. Notch Block Parameters Modification

A series of Parameters corresponding to the Exposed Attributes that were created in Notch Builder should now populate the FX Stack window section. You will be able to manipulate them in order to modify the visual effect's behavior in real time.

Note: If you wish to interact with Notch Blocks parameters through PHOTON, you absolutely have to declare which attributes are exposed in the Notch Builder. This cannot be done once the block has been loaded in PHOTON.

4.1. Types of Parameter Modification

Exposed Attributes are visually expressed in PHOTON as sliders (used to change a value in a linear fashion) and dropdown menus (used to perform a selection between a set of finite options). You can either manipulate them directly with the mouse, animate them using keyframes and the Timeline or link them to other devices such as external controllers or processes such as FX Graphs.

Direct Mouse Manipulation

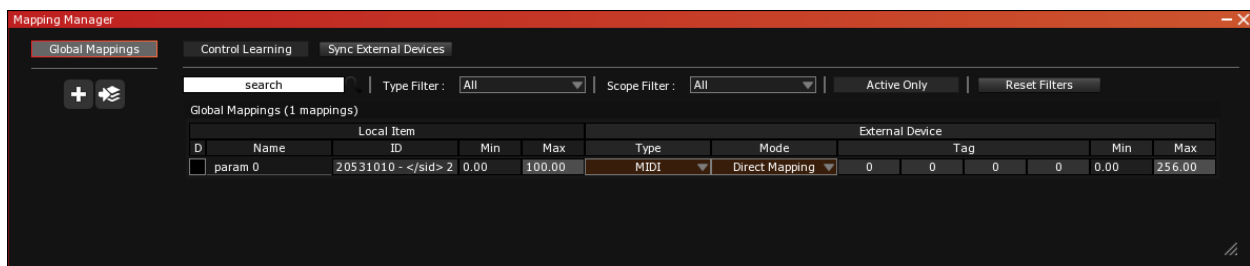
- [Click+Drag] on sliders to modify their current value. OR
- [Double-click] on sliders to open a field where you can enter a new numerical value.
- [Click+Drag] on a contextual menu to perform a selection.

Keyframe Animation

1. [Right-Click] on a slider or dropdown menu to open a contextual menu.
2. Select {Animate}. The parameter will now be accessible in the Keyframe Editor module.
(Press [Alt+K] or select {Show > Keyframe Editor} to open the Keyframe Editor module.)

I/O Mapping

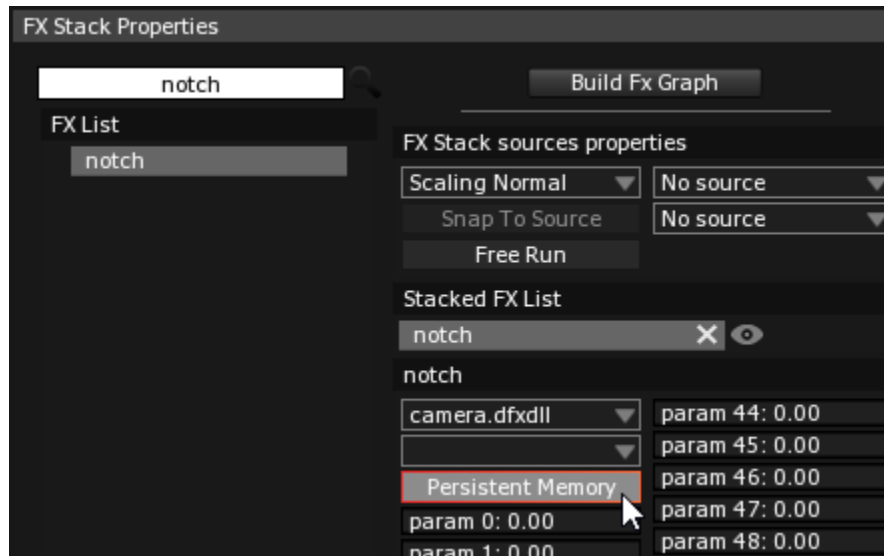
1. [Right-Click] on a slider or dropdown menu to open a contextual menu.
2. Select {I/O Mapping > Create in Global Mappings > *anyoftheoptions*}. The parameter will now be linked to the selected device/process/protocol corresponding to your last selection. The mapping you just created is now accessible through the Mapping Manager module.



4.2. Enable/disable Persistent Memory

A [Persistent Memory] toggle is located in the notch sub-section of the FX Stack Properties Panel. This toggle allows you to pre-allocate a persistent block of memory to the Notch Block. Some Notch Blocks can take some time to load if they were not previously stored in RAM/VRAM. If you need to jump rapidly to a Notch Block and avoid stutter, you should consider enabling the Persistent Memory option.

- Click once on the [Persistent Memory] toggle to enable Persistent Memory allocation for the currently loaded Notch Block. (Click a second time to disable Persistent Memory allocation.)



Note: A complex Notch Block composed of many memory demanding nodes might take up to a few minutes to load. PHOTON might freeze during such a long loading sequence.

Note: We have noticed that Windows Defender considerably prolongs Notch Blocks load time. It is preferable to deactivate Windows Defender if the computer running Notch is not connected to the Internet.