QuNeo XYFX

Quickstart Guide

Version 1.0
For QuNeo Version 1.2.3
August 2013

INTRODUCTION

QuNeo XYFX utilizes two Max for Live devices to control a suite of sixteen effects with QuNeo's factory Preset Number 1. XYFX takes advantage of the X and Y axis control change outputs from QuNeo's pads to manipulate two discrete parameters of each effect. The effects signals run in series, and can be used individually or simultaneously.

To use QuNeo XYFX as a device in Ableton Live, you must have either Ableton Live 8 Suite or Ableton Live 9 Suite installed on your computer. Additionally, you must install Cycling 74's Max 5 (Suite 8) or Max 6.1.2 (Suite 9). Visit https://www.ableton.com/en/live/ and http://cycling74.com/products/max/ for more information about this software. You can also use it as a standalone application.

INSTALLATION

1. To install QuNeo XYFX as an Ableton Live device, start by unzipping "QuNeo_XYFX.zip".
2. Place the "XYFX Example Project" folder in a folder of your choosing.
3. Locate the "Put Contents in Max MIDI Effect Folder" folder and place the contents in Ableton Live's "Max Midi Effect" folder. This folder is located here:
    a. **MAC / Live 9** - [User]/Music/Ableton/User Library/Presets/Midi Effects/Max Midi Effect/
    b. **MAC / Live 8** - [User]/Library/Application Support/Ableton/Library/Presets/MIDI Effects/Max MIDI Effect
    c. **WIN7 -** C:\Users\[user]\Documents\Ableton\Library\Presets\MIDI Effects\Max MIDI Effect\
    d. **WINXP** - C:\Documents and Settings\KMI\My Documents\Ableton\Library\Presets\MIDI Effects\Max MIDI Effects\
4. Locate the "Put Contents in Patches Folder" folder and place the contents in Max's "patches" folder. This folder is located here:
    a. **MAC / Live 9-Max 6** – [User]/Applications/Max 6.1/patches
    b. **MAC / Live 8-Max 5** – [User]/Applications/Max 5/patches
    c. **WIN7 & WINXP** – C:\Program Files\Cycling 74\Max [current version]\patches

To use XYFX in Ableton Live:

1. Connect the QuNeo to your computer and launch: Ableton Live 8 Suite or Live 9 Suite.
2. On your QuNeo select factory Preset 1 (see QuNeo Factory Preset Guide for more information about selecting presets).
3. In Live's menu bar, go to "Live" then "Preferences..." (**Mac**) or "Options" then "Preferences..." (**Windows**).
4. From the list on the left side of the preferences window, select "MIDI / Sync".
5. In the lower portion of the MIDI / Sync window select the following:
   a. MIDI Ports: QuNeo Input (QUNEO) Track On and Remote On
   b. MIDI Ports: QuNeo Output (QUNEO) Track On and Remote On
6. Close the Preferences window.
7. Open the Ableton Live Project "XYFX Example Project" (located in the folder chosen during installation process).
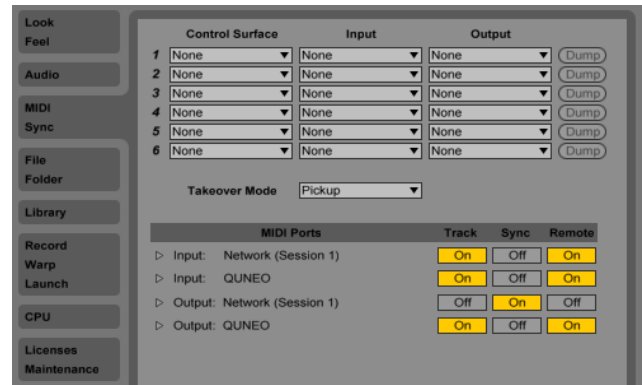
How to use XYFX in Ableton Live:

Devices:
The primary functionality of QuNeo XYFX lies within the "QuNeoXYFX" max audio effect. There is also a max midi effect, "XYFX Midi Send" which handles sending and receiving midi information within Live. These two devices need to be placed in separate Live tracks with specific I/O settings:
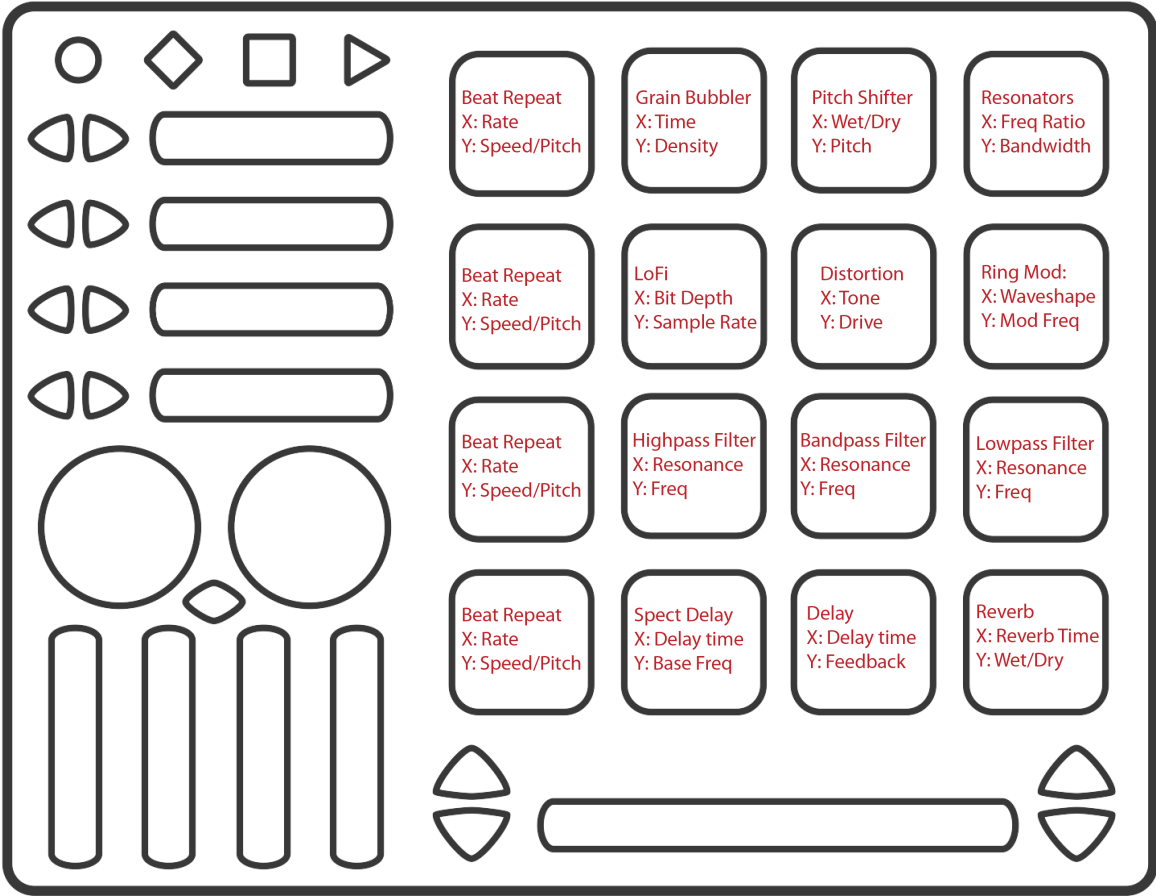
QuNeoXYFX: Must be placed in an audio track or after a sound producing software instrument within a midi track in Live. If you wish to process incoming external audio, the Audio From field should of an audio track should be set to the desired source with Monitor switched to In. In order to process audio clips or software instruments, use the default track settings.

XYFX Midi Send: Must be placed in a separate MIDI track within Live. The MIDI from field should be set to "QUNEO" and the channel field should be set to "Ch. 1". The MIDI To field should be set to no output.

The **QuNeo XYFX** device consists of an effects chain with two audio inputs (stereo L+R) and two audio outputs (stereo L+R). Each effect is bypassed by default, and can be engaged by pressing the corresponding key. The signal flows from the top left effect (pad 13) to bottom right (pad 4).

Pad Effects Layout:

Beat Repeat X: Rate Y: Speed/Pitch	Grain Bubbler X: Time Y: Density	Pitch Shifter X: Wet/Dry Y: Pitch	Resonators X: Freq Ratio Y: Bandwidth
Beat Repeat X: Rate Y: Speed/Pitch	LoFi X: Bit Depth Y: Sample Rate	Distortion X: Tone Y: Drive	Ring Mod: X: Waveshape Y: Mod Freq
Beat Repeat X: Rate Y: Speed/Pitch	Highpass Filter X: Resonance Y: Freq	Bandpass Filter X: Resonance Y: Freq	Lowpass Filter X: Resonance Y: Freq
Beat Repeat X: Rate Y: Speed/Pitch	Spect Delay X: Delay time Y: Base Freq	Delay X: Delay time Y: Feedback	Reverb X: Reverb Time Y: Wet/Dry

Effects Description:

Beat Repeat takes a sample of a given length (dependent on rate parameter determined by the X axis pad output) and loops this sample at a given playback speed (determined by the Y axis pad output). For this effect, playback speed and pitch are directly correlated (i.e. the slower the speed, the lower the pitch). This effect occurs four times to allow sampling within the signal chain.

Grain Bubbler is a granular time offset effect. The X axis pad output controls the amount of time offset, while the Y axis controls the grain density.

Pitch Shifter is a real-time pitch shifter that enables an incoming audio stream to be shifted up or down in frequency. The X axis pad output controls the wet/dry mix, and the Y axis pad output control the amount of shift in frequency.

Resonator is made up of a bank of resonant band pass filters, the center frequencies of which are determined by a ratio to a base frequency. The X axis pad output controls this ratio, while the Y axis controls the bandwidth of each filter.

LoFi is a bit crusher and down-sampler. The X axis pad output controls the Bit Depth, and the Y axis controls the sample rate.

Distortion is an overdrive effect with a tone control (high cut filter). The X axis pad output controls the frequency of the tone, while the Y axis controls the amount of drive.

Ring Mod is a ring modulation effect that uses a variable wave oscillator as the modulation signal. The X axis pad output controls the waveshape of the modulating oscillator, and the Y axis pad output controls the frequency of that oscillator.

Highpass Filter is a resonant filter that removes low frequencies from the signal and reinforces the cutoff frequency. The X axis pad output controls the resonance, while the Y axis pad output controls the cutoff frequency.

Bandpass Filter is a resonant filter that isolates a given bandwidth of a signal and reinforces the cutoff frequency. The X axis pad output controls the resonance, while the Y axis pad output controls the cutoff frequency.

Lowpass Filter is a resonant filter that removes the high frequencies from the signal and reinforces to the cutoff frequency. The X axis pad output controls the resonance, while the Y axis pad output controls the cutoff frequency.

Spectral Delay divides the input signal into many frequency bands (the frequencies of these bands is based on a ration to a base frequency) and adds discrete delays to each band. The X axis pad output controls the delay time while the Y axis pad output controls the base frequency.

Delay is a host tempo-synced delay. The delay time is controlled by the X axis pad output, and the feedback amount is controlled by the Y axis

Reverb adds reverb signal. The X axis pad output controls the reverb time, while the Y axis pad output controls the wet/dry mix

Standalone Application:

QuNeo XYFX can run independently of Max for Live as a standalone application. You will find the standalone applications for Mac OS X, Windows XP and Windows 7 in the "XYFX Standalone" folder. To install the standalone application:

MAC - place the "XYFX_Standalone.app" in the Applications folder

WIN 7 – place the "XYFX_Standalone_Win7" folder in the Program Files folder

WIN XP – place the "XYFX_Standalone_WinXP" folder in Program Files folder

Once installed, launch the application and select the desired audio destination by clicking the button labled "Audio I/O settings window".