ALFALOOP

ALFALOOP 0.1.3
It's built on Puredata Vanilla 0.42.6 on a Linux-system (AV Linux 6.0.1) with jack and RME Multiface 2.
Installation/Runing ALFALOOP There is no need to install ALFALOOP, since it is a PureData-patch. But you have to have PureData installed on your system (www.puredata.info). If you're on Linux, make sure to use alsa via jack.
For all platforms: First, open PureData, then (from inside PureData) open AL-FALOOP.pd. Leave ALFALOOP.pd always within the folder you've downloaded. Don't mess with the folder-structure. There are plenty of files involved and AL-FALOOP.pd has to know their location. It should look somewhat like the printscreen-picture you find in the ALFALOOP_0.1.3 directory on my website (www.marcobaumgartnerpuredataALFALOOPALFALOOP_0.1.3). If running AL-FALOOP always make sure your in PureData's "play-mode"! Your cursor should look like a cursor. If it looks like a hand with a pointing finger, hit Ctrl+e. If you accidentally are in edit- mode (the hand-cursor), that means, that you are able to make changes to the patch. You'll end up dragging things around instead of changing the parameters... If running ALFALOOP, there is no need to use any of the real PureData-Menus (File, Find, Windows etc), except "Media" to set up your sound-card. Again, if you're on Linux open PureData with some commands like: puredata -jack -alsamidi -mididev 1 (this opens PureData with jack, alsamidi and one single midi-device).
How to use ALFALOOP While running ALFALOOP, click on the info-signs (i) to get further information on how ALFALOOP is working...
Latency Latency (latency-correction) is critical! There is zero tolerance. Use a good soundcard with midi and plug your midi-controller directly to your soundcard via Midi- cable. This gets the best results. You can test your latency by "latency-test" while running ALFALOOP. Mute your speakers and don't wear headphones! There's a harsh beep going on... Do it several times to check if your system is steady. If not, change the latency of your soundcard until it is steady. If you cannot wire your output to the input with a cable directly, you have to type in the latency manually (in milliseconds). Do not believe what the soundcards are telling you. Try it, adjust, try again, until your happy with the result. For Windows-users: Please check the special-section "PureData on Windows" below. It's a very good reading about setup, latency and running PureData under Windows written by Tom Stäubli. Thanks, Tom! Generally speaking: There is no need to go super fast, latency gets corrected if set up properly.
Settings You change settings/parameters by click and drag up and down. You can also just click on field, enter a number and hit enter, but there is no graphical respond to that.All settings/parameters get automatically saved. So when you open ALFALOOP the next time, you'll find everything as the last time you used it. Again, don't try to use the global PureData-Menu to "save" your session. Audio is saved by the "recording"-button within ALFALOOP.
Midi-Controllers You have to use midi-controlling in order to have record/overdub/feedback/ducking working (These are the four major controllers). Using the keyboard-keys ("keys") is far less versatile... Midi: Use on/off-switches (ctl) for "rec" and "over" and pedals/faders/knobs for "feedback" and "ducking". A voltage-to-midi converting-box is good thing, so you can basically use any kind of switches/pedals/faders. I use a "MIDITEMP Footswitch to Midi"-box which is working very well.

How to change the patch You can, of course, change ALFALOOP to fit your needs. While running ALFALOOP: Right- click/open, click on the subpatch named "stuff" (or right-click/open). There you find all the other subpatches. These subpatches are not very intuitively, nor are they well documented. This will change in a future release. Inside the subpatches, you can easily kill ALFALOOP, simply by looking with your mouse... In that case: Re-download ALFALOOP and make a savety-copy first before going back to explore. The two main-patches ALFALOOP.pd and alfaloop.pd are (more or less) edit-protected. To change this: Enter the subpatch "pd stuff", click twice on the toggle-box connected to the subpatch "avoid_editmode", so the toggle-box is unchecked again: Now you can change the two main-patches too.

PureData on Windows The following section is for Windows-users. It refers to Windows XP. It's still a good choice for a steady music-production-environment. No matter if you run it on a today's computer or an old Intel Pentium3...
If you have a serious DAW system, it is likely you work in a multichannel, low-latency ASIO environment. To fit PD into this setting, a few advices: Setup: Match the PD-delay settings with your ASIO sound driver:
Step 1
- get to know your sound driver settings e.g. 128 buffer size, 3 ms latency, 44.1 kHz sample rate.
Step 2
- start PD launch the Windows Task-Manager ([ctrl+alt+del] or right click into the empty space of the Windows Task-Bar at the bottom of your desktop) select the [processes] tab look for the wish85.exe process and right click klick [set priority] check [realtime] close the Task-Manager
Step 3
- go to [Media] menu check [ASIO (via portaudio)] klick [Audio Settings...]adjust the values in the top row to match your sound driver settings
- Sample rate (sometimes referred to as frequency) in Hz (x1000 kHz): eg. 44100 Delay (usually called latency): eg. 3 msec Block size (sometimes referred to as buffer size): eg. 128
- check input device 1 and select your desired ASIO soundcard's input channels (Analog, ADAT, ...). Usually, the default Channel setting of 2 is ok. same procedure for the output device. by clicking [multiple devices] you may extend your channel rack the same way as described above be sure to click [Save All Settings] as PD might stall the first time, you [Apply] the changes leave the dialog by clicking [OK] in the [Media] menu, click [Test Audio and MIDI] if you activate the test tone, you shouldn't hear any glitches in the sound (if you do, the safest way is to restart the whole system and start PD again by repeating Step 2. In the [Media] menu, check if PD kept your your [Audio Settings], then go to the test tone and try again.) you're ready to perform live Use PD:
- I'm sorry to say you have to repeat Step 2 EVERY time you start PD (see the notes below). Run PD parallel with other ASIO enabled Audio Software:
- This should work like a charm, I do live Audio processing in Ableton Live and put the sound into PD (by hardware cable-patching, but Jack for windows should be able to handle the job on the software side). As PD is a modest kind of an application, it leaves the right of way for audio channels to other software. Means: be sure to assign only the channels you need there (adjust Settings/Presets). This keeps the others accessible for PD. Otherwise, these channels are ignored without any warnings or complaints. The nice thing is: this seems to be hot-swappable. If you free the channels, they are instantly present in PD (if assigned) without any restarting. Be

sure you have your applications set to work in the background (usually default), so you won't encounter any disruptions in audio when changing between them. Notes: Restarting PD: A stability of the delay seems only to be given the first time you start PD in a session. If PD stalls or you close and restart it (always repeat step 2), you may encounter glitches in your sound. To fix this, logging out of your Windows user account and back in again should do the trick without the need to restart the computer. Elegantly starting PD:

Tried to write a batch file for Step 2, but as wish85.exe is called in the startup procedure by pd.exe i do get no access to it's priority settings in advance. A settings option in PD to load wish85.exe in realtime would mean a real improvement for Windows live-musicians. (Linux users are able to start pd.exe with the [-rt] realtime flag to get this exact behavior). If anyone knows how to always start wish85.exe in realtime mode, please share... My Setup:Core i7 Laptop; Windows XP (SP3, DAW optimized); Sound: RME DSPe Hammerfall ASIO; PD Vanilla 0.45.3; Ableton Live 8; Reason 5 Tom Stäubli

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Have fun, I hope, ALFALOOP is running well on your system!

Marco Baumgartner, 30/11/2015
Please report feedback, suggestions, bugs etc to:
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