



Ableton Live

❖ Introduction course ❖



NINON DEVIS

<https://ninon-io.github.io/>

Table of Content

01

BASICS

Introduction to Ableton
Music composition overview
Interface

02

SESSION VIEW

Audio Clip
Clip Properties
Warping & Quantization

03

COMPOSITION

Arrangement view
Audio Effects
Mixdown & Exporting

01

BASICS

Introduction and Elementary Notions

WHAT IS ABLETON LIVE ?

- ❖ Digital Audio Workstation (DAW) for macOS and Windows
- ❖ Tool for composing, recording, arranging, mixing and mastering...
- ❖ Instrument for live performances.
- ❖ First version released in 2001.
- ❖ Most powerful tool for music making

STARTING

- ❖ Go to <https://www.ableton.com/en/trial/> for the trial version.
 - Includes all the features of Live 11 Suite free for 30 days.

For Linux-only users: <https://ardour.org/> or VM. or Bitwig
- ❖ Goal: making you feel comfortable with a basic utilisation of Live.
- ❖ Remember: nothing is hard but everything need some practice.
 - It is basically like any other music instrument.

MUSIC COMPOSITION OVERVIEW

Composition

- ❖ Recording
- ❖ Editing
- ❖ Sound Design
- ❖ Arrangement

Mixing

- ❖ Add depth & space
- ❖ Give body and place
- ❖ Add contrast
- ❖ Create balance between elements

Mastering

- ❖ Balance the sonic elements
- ❖ Make the track sounds equal on any sound system
- ❖ Keep an album consistent
- Often requires professional equipment and adequate studio with a particular sonic treatment

We will focus on these 2 parts

You can use your headphones or decent speakers.

If you need to listen to your track on proper speakers, let me know we have some for you

It is possible to achieve these three steps using Ableton only !

THE INTERFACE: SESSION VIEW

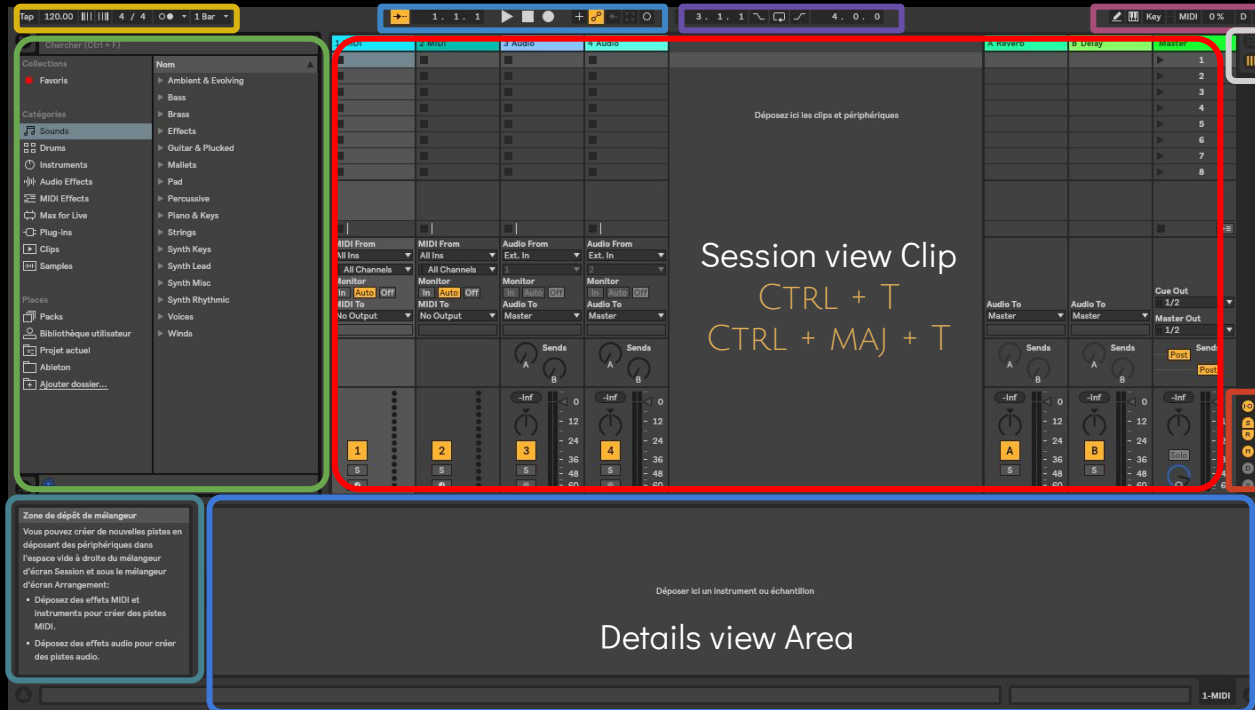
Tempo, Signature &
Global Quantize

Transport and Automation

Arrangement Loop Control

Draw mode, mapping
controls and CPU meter

Browser



View Selector
TAB

Session view Clip
CTRL + T
CTRL + MAJ + T

Show/Hide
Buttons

Info / Help
Keep it open
during your
learning

Details view Area

First Step: CTRL + S Remember that the first time you will save your project within you will find your .als and appendix files

02

SESSION VIEW

Sampling music

AUDIO CLIPS

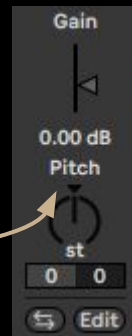
First Song

- ❖ What kind of music would you like to make ? Adjust the BPM.
- ❖ Organize your project with colored groups: drums, kicks, synth...
Save your set as default: File > Save current Set as Default
- ❖ Explore samples, select and put them in audio tracks.

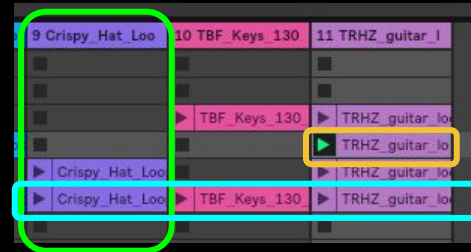
Major Tip: Always use good quality samples
If your samples sound good, so will your song !

- ❖ Organizing your clips so that you can launch your song by scenes
- ❖ Adjust the level of your tracks so that
 - There is **no saturation** (always -12 db)
 - You create **some depth** in your song
- ❖ Work on some clip properties:
 - Choose to loop or not and manage the length of it
 - Adjust the pitch and the gain

Tip : 100 cents = 1 semitone



A Track



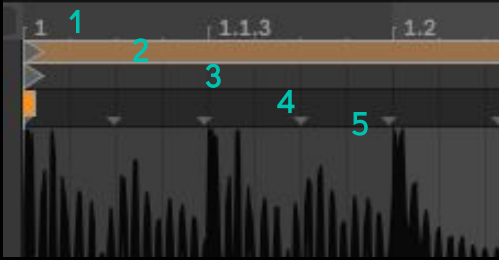
A Clip

A Scene

| | |
|--------------------|------------|
| Play / Stop | SPACE |
| New audio track | CTRL+T |
| New MIDI track | CTRL+MAJ+T |
| Rename | CTRL+R |
| Duplicate | CTRL+D |
| Group | CTRL+G |
| Ungroup | CTRL+MAJ+G |
| New scene | CTRL+I |
| Remove stop button | CTRL+E |

CLIP PROPERTIES

Sample Editor



1. Sample display timeline: zoom in/out
2. Loop brace: loop start/end
3. Clip Start/End: also triggers sound
4. Warp marker zone: manipulation of the clip's relationship to tempo
5. Transient zone: jump in waveform amplitude

Or highlight the area you want to loop and `CTRL+L`

- ❖ There are always two Warp markers at either ends of your audio clip: the start and the end.
 - Allow Live to stretch your sample !
- ❖ The vertical gray bars in between are the transients: you will see Pseudo Warp Markers (grey) if you point your mouse on it. Double click to make them yellow, you can now slide them !
- ❖ Change your grid value for snapping: `CTRL+1` / `CTRL+2`
- ❖ Disable the grid value: `CTRL+4`

WARP

allows you to time-stretch audio clips without affecting their pitch

Warping Every sync, tempo alignment and time stretching use warping!



- ❖ Warp your clip in order to match the chosen tempo
- ❖ Depending on the nature of the sample, choose the adequate time stretching
- ❖ Original tempo of your sample
- ❖ Double or halve the original tempo

Warp Modes Overview - Choosing the adequate time stretching

- ❖ Beats: rhythmic audio, **drum loops**
 - ❖ Tones: for audio with clear sense of **pitch**
 - ❖ Texture: complex and noisy sounds e.g. **multiple instruments** playing together
 - ❖ Re-pitch: acts as a **record player**, the pitch will be affected by a tempo adjustment (unkey mode)
 - ❖ Complex & Complex Pro: for working with a file or **an entire mix**
- Careful:** it uses 10 times the CPU load of other modes.

QUANTIZE

Automatically move your notes closer to an evenly-spaced grid value

CTRL+SHIFT+U



You can also highlight the portion of audio that you want to quantize !

Be careful not to denature your song too much with this and allow some swing from time to time !

CLIP ENVELOPES

Useful Shortcuts

| | |
|---------------------------------------|-----------------|
| Draw mode | B |
| Grid value | CTRL+1 / CTRL+2 |
| Triplet Grid | CTRL+3 |
| Snap Grid on/off | CTRL+4 |
| Curve automation | ALT+CLICK |
| Right Click to draw special functions | |

Automation versus Modulation

Automation envelopes define the value of a control at any given point in time while modulation envelopes can only influence this defined value.

Tip: You can copy paste your envelopes or part of your envelopes !

Continue your song by playing with clip properties, warping, quantization & clips envelopes


03

COMPOSITION

Arrangement View

GET YOUR ARRANGEMENT



- ❖ Stop all of your clips and double click on the square Stop button in the control bar at the top.
 - You just initialise your Arrangement position to 1.1.1.
- ❖ Shift click on the Arrangement Record button in the control bar (only clicking will engage the recording right away, whereas shift clicking will launch the record when you press Play or launch a clip)
- ❖ Launch your intro scene and then click through scenes to play your song. (Or use your keyboard)
- ❖ When it is done, click on Stop All Clip button and then press space to stop recording.
- ❖ Press tab and work with your new arrangement. Do not forget to click 
 - Add locators to organize your track.
 - Edit your clips by moving, extending, cropping, duplicating them. Add or delete time if you need.

Duplicate CTRL+D

Split Clip CTRL+E

Join Clip CTRL+J

Loop CTRL+L

Deactivate Clip 0

Insert Silence CTRL+I

Delete time CTRL+MAJ+DEL

Show Automation A

ARRANGEMENT VIEW

Overview and zoom in/out

Loop control

Locator (right click to add)

Track on/off, solo and volume

The screenshot displays the Ableton Live Arrangement View. The top bar shows the current session's tempo (133.1 BPM) and other parameters. The main area is a grid where tracks are arranged over time. Tracks include:

- 1 DR (Drums)
- 2 Snare
- 3 FX
- 4 LEAD
- 5 PAD
- 6 Serum_x64
- 7 VOC
- 8 homme_ar
- 9 homme_ar
- 10 homme_a
- 11 Pigments
- 12 Pigments
- 13 BASS
- A Reverb
- B Delay
- Master

The arrangement is divided into sections: Kick intro, Kick2, drop, bridge, and end. Various clips are placed on these tracks, including vocal lines and instrumental parts. The time ruler at the bottom shows the progression from 0:00 to 7:30.

Time ruler

AUDIO EFFECTS

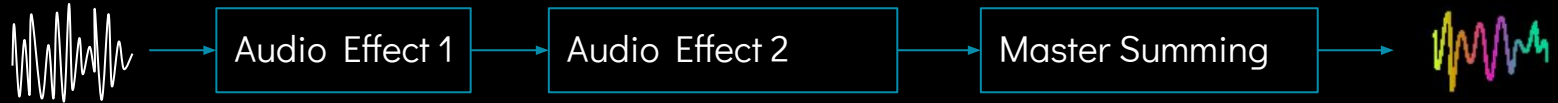
<https://www.ableton.com/en/manual/live-audio-effect-reference/>

Types

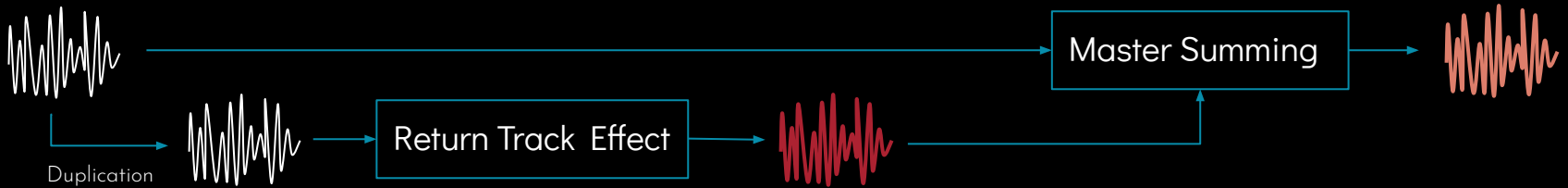
- ❖ Frequency-based effects eq, tone shapers, filters, frequency shifters, resonators, vocoders...
- ❖ Dynamic-range effects compressors, limiters, gates, expanders...
- ❖ Temporal/Spatial effects reverbs, delays, choruses, flangers, panners...
- ❖ Distortion effects amp/speakers simulators, tube saturators, overdrives, bit/sample rate reductions...
- ❖ Diagnostic tools level meters, spectrum analyzers, tone/noise generators...

2 ways for adding effects

Insert Effects Effects in series Alters the original sound



Send Effects Effects in parallel Does not affect original dry signal



Typical use for a Send is reverb or delay

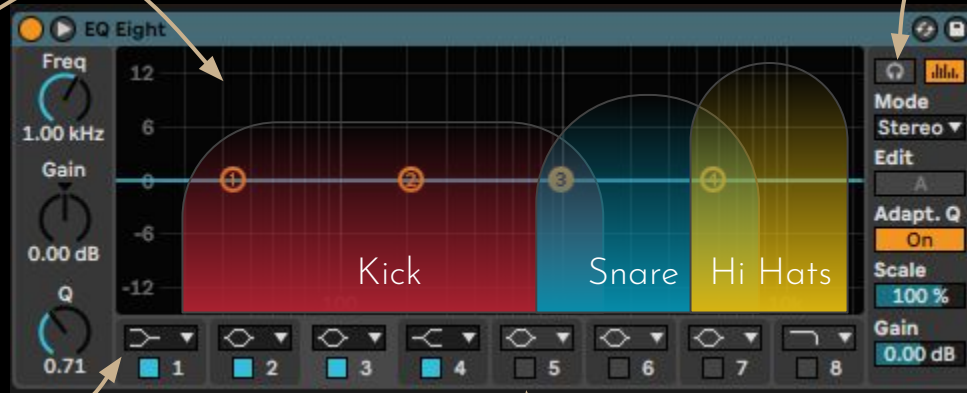
New send track CTRL+ALT+T

Boost or cut the gain of a particular range of frequencies

- ❖ Must be applied to almost all your tracks: what do you want to hear ? Try to remove parasites frequencies. Which place will you give for each element ? What will happen if two sounds are played *simultaneously* ?

Double click to
have a better view
and access to more
settings

Chose the shape of
your curve



Audition mode

Add more points if
needed

- ❖ Use the audition mode if you don't know what you are doing, you will hear the effect of your filter
- ❖ Using presets is definitely not the best option: **PLEASE USE YOUR EARS** (but having a look on the shape of presets is generally useful)
- ❖ Prefer the Eq8 rather than the Eq3, you probably want to do a better job than a DJ right ?

DYNAMIC COMPRESSION

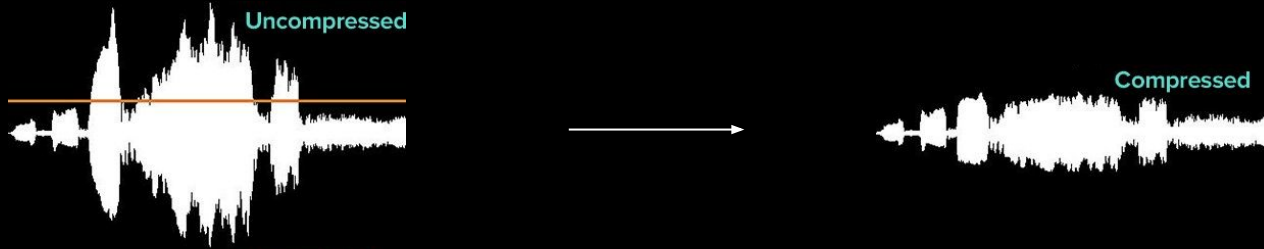
As Insert
Effects

Shape the dynamics

Dynamic range = difference between the loudest and the quietest sound in a recording.

Compression = reduction of the dynamic range.

→ Makes the volume more consistent to increase the global volume without going into clipping.



How does it work ?

- ❖ Set an amplitude threshold
Any signal that passes above will be turned down (gain reduction), reducing the dynamic range.
- ❖ Signals are turned down by a ratio of some number to 1
Example: a ratio of 3:1 means that for every 3dB the input signal goes over the threshold, the compressor will output 1dB. The larger the ratio setting, the greater the gain reduction for signal over the threshold.

Brain trick: louder is better

The current tendency in electronic music is to over-compress *at the expense of audio fidelity*: this is the “Loudness War”

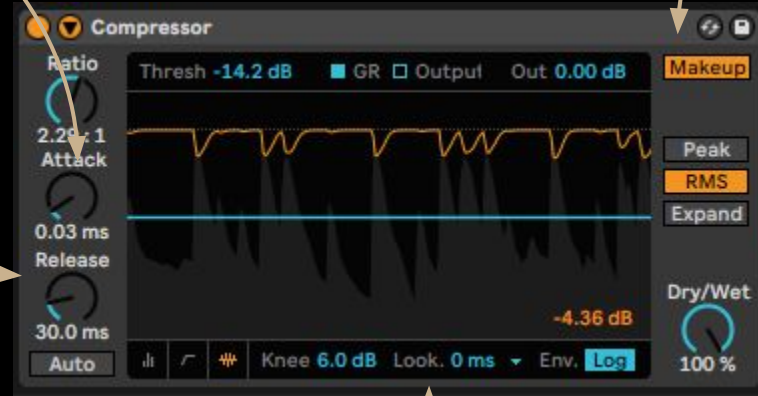
COMPRESSOR DETAILS

ATTACK

How long does it take for the gain reduction to be applied after a signal crosses the threshold. High settings will preserve a punchy attack.

RELEASE

How long the compressor will keep the gain reduction applied after the signal has dropped back below the threshold. High settings keep the signal output gain more consistent. Auto button will try to adjust automatically.



KNEE

High value will round out the threshold causing a more gradual onset of gain reduction as the signal gain approaches and crosses the threshold. This can make the gain reduction sound more natural and less aggressive.

LOOKAHEAD

Allows the compressor to analyze the signal at 0, 1 or 10ms ahead of what you are hearing. High values increase the gain reduction.

MAKEUP

If the loudest signal gain is reduced by 4dB, makeup will add 4dB automatically. *Don't use this*

TRANSIENT DETECTION

Peak and RMS modify how the compressor measures input gain. In Peak, threshold responds to short and sharp transient, RMS responds to a signal average loudness over time (close to our ears) Expand adds more dynamics as an "un-compressor"

AUTOMATIONS

Show Automation "A"

Reminder: It is possible to add automation in session view as well to work on a clip.

- ❖ Automation will make your track alive !

It is possible to automate almost **all parameters**

Right click on one of them > Show Automation

You can also look for the right one in the list

A red dot next to a parameter means an automation is active on it



- ❖ You can display several automation from the same track

Draw mode

B

Curve automation

ALT+CLICK

Right Click for special functions

Always chose File > Collect and Save before your export

(If you want to send the Ableton project to someone else)

Then File > Export Audio/Video

If you are in Arrangement view

- ❖ If no selection on a portion of a track, Ableton will consider the entire timeline from the start of the first clip to the end of the last. Otherwise, it will export only the selected part.
- ❖ Stop all the clips from the session view or you will have those on top of the export.
- ❖ Your solo or deactivated track settings will remain as such in the export.

- ❖ Master will export your master whereas all tracks will export your tracks individually (can be useful for mixing or remix). You can also choose only one track to export.
- ❖ Normalize: will turn the gain up as high as possible without clipping. The highest peak will be 0dB after normalization: you do not need that if you did a good job on compressor and mastering.
- ❖ Dither: low level amount of noise applied when exporting to a lower bit depth: can smooth the loss of resolution and recover additional dynamic range. **Never apply dither unless you won't ever change your track.**

