

# Ableton Live

Introduction course



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Made with  
love  
for ATIAM

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# 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...
- ❖ ... Unfortunately very expensive.

# STARTING

- ❖ Go to <https://www.ableton.com/en/trial/> for the trial version.
- ❖ This version includes all the features of Live 11 Suite free for 90 days.
- ❖ For Linux-only users: <https://ardour.org/> or VM. (Bitwig)
- ❖ The goal of this course is to make you feel comfortable with a basic utilisation of Live.
- ❖ You should be capable of managing the final project without any major difficulty.
- ❖ Remember: nothing is hard but everything need some practice.
  - It is basically like any other music instrument.

Hopefully you will have fun learning Ableton

Let's open it !

# THE INTERFACE: SESSION VIEW

Tempo, Signature &  
Global Quantize

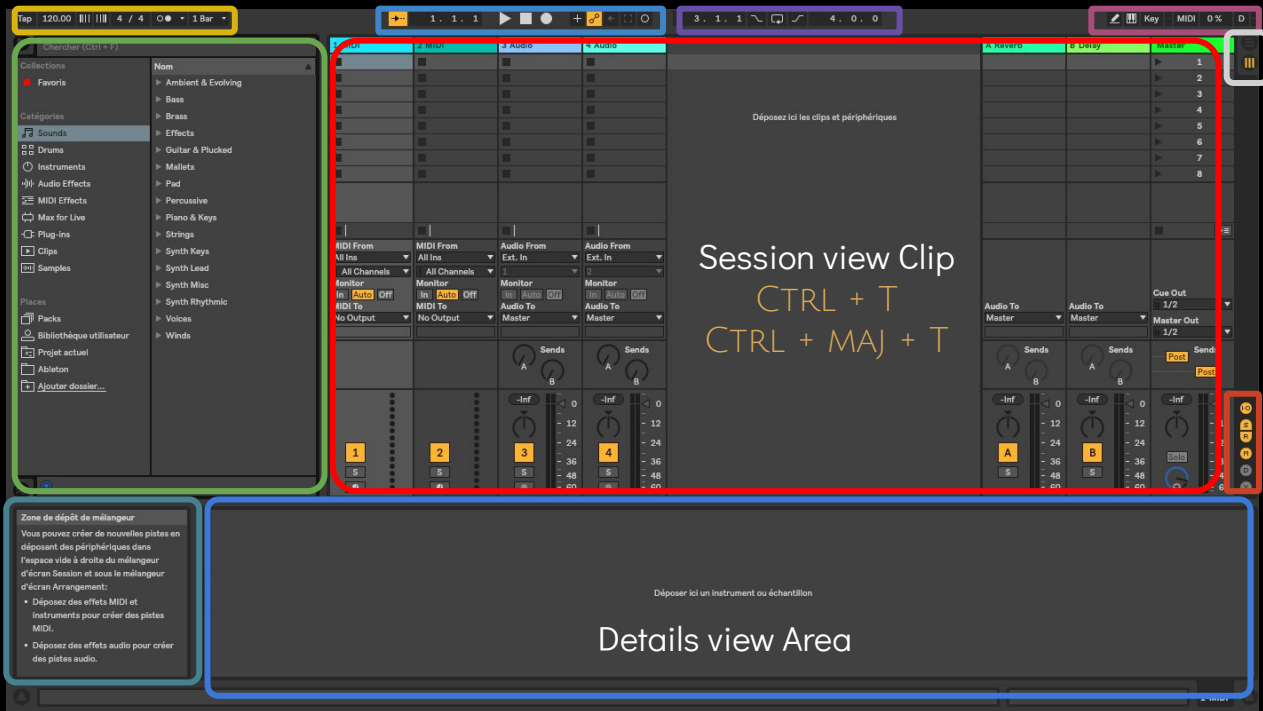
Transport and Automation

Arrangement Loop Control

Draw mode, mapping  
controls and CPU meter

Browser

Info / Help  
Keep it open  
during your  
learning



View Selector  
TAB

Show/Hide  
Buttons

First Step: CTRL + S



02

# AUDIO TRACKS

Sampling music

# AUDIO CLIPS

Make your own song draft by:

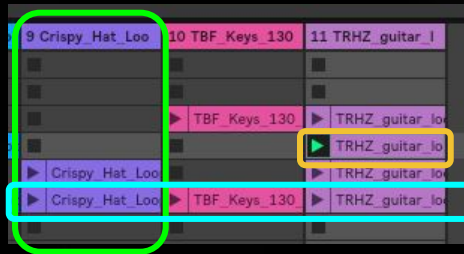
- ❖ Adjusting the BPM you want
- ❖ Exploring samples, selecting and putting them in audio tracks
- ❖ Renaming your tracks and organizing them by groups
- ❖ Organizing your clips so that you can launch your song by scenes
- ❖ Adjusting the level of your tracks so that
  - There is **no saturation**
  - You create some depth in your song
- ❖ Working on some clip properties:
  - Choose to loop and manage the length of it
  - Adjust the pitch and the gain

Tip: 100 cents = 1 semitone

25 min



Track



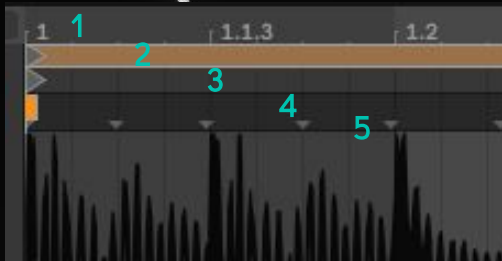
Clip  
Scenes

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 you 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 !
- ❖ If you wish to move a single note relatively to the note before and after, hold CTRL/CMD when double clicking on your transient.
- ❖ Change your grid value for snapping: **CTRL+1** / **CTRL+2**
- ❖ Disable the grid value: **CTRL+4**

# WARP

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, chose 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

### 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

15 min



03

# AUDIO EFFECTS

Add spices to your music

# AUDIO EFFECTS

## Types

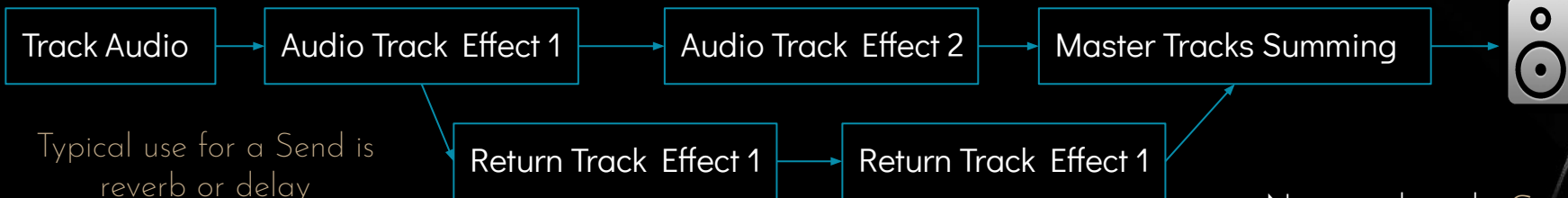
- ❖ Frequency-based effects    eq, tone shapers, filters, frequency shifters, resonators, vocoders...
- ❖ Dynamic-range effects    compressors, limiters, gates, expanders...
- ❖ Temporal/Spatial effects    reverbs, delays, choruses, flangers, panners...
- ❖ Distortion effects    amp/speakers simulators,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

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

## Effects in series *Insert Effects*



## Effects in parallel *Send Effects*



Typical use for a Send is  
reverb or delay

New send track CTRL+ALT+T

# EQ

Shapes the Tone

As Insert  
Effects

Boost or cut the gain of a particular range of frequencies

- ❖ Must be applied to almost all your tracks: think of what you are manipulating !
- ❖ Use the audition mode if you don't know what you are doing
- ❖ Using presets is definitely not the best option: **PLEASE USE YOUR EARS**
- ❖ Prefer the Eq8 rather than the Eq3, you probably want to do a better job than a DJ right ?

# DYNAMIC COMPRESSION

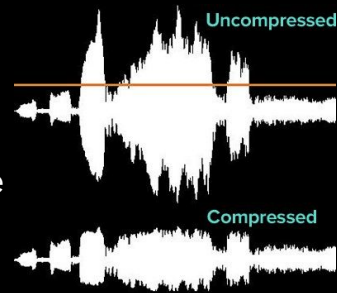
Shapes the Volume

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

- ❖ The compression reduces the dynamic range of a piece of audio, making the volume more consistent in order to increase the global volume without going into clipping.

How does a compressor work ?

- ❖ Set an amplitude threshold: any signal that passes above will be turned down (gain reduction), hence, 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.



# COMPRESSOR

## 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.

## DETAILS



## 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.

## 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”



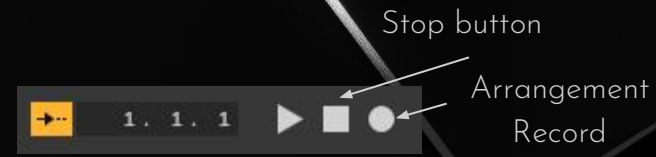
04

# ARRANGEMENT VIEW

Edit and craft your song



# MAKE 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.
  - Add locators to make your track more organized.
  - Edit your clips by moving, extending, cropping, duplicating them. Add or delete time if you need.
  - Add automations !

Duplicate	CTRL+D	Show Automation	A
Split Clip	CTRL+E	Deactivate Clip	0
Join Clip	CTRL+J	Insert Silence	CTRL+I
Loop	CTRL+L	Delete time	CTRL+MAJ+DEL

25min



05

# MIXDOWN & EXPORTING

Play your creation everywhere

# 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.**

The screenshot shows the 'Export Audio/Video' dialog box in Ableton Live. It is divided into several sections: 'Sélection' (Selection) with 'Piste convertie' (Master) and 'Début de la conversion' (1. 1. 1); 'Options de conversion' (Conversion Options) with 'Inclure retours et effets Master' (Off), 'Convertir en boucle' (Off), 'Convertir en mono' (Off), 'Normaliser' (Off), 'Créer fichier d'analyse' (On), and 'Fréquence d'échantillonnage' (44100); 'PCM' (PCM) with 'Encoder en PCM' (On), 'Type de fichier' (WAV), 'Résolution en bits' (16), and 'Options de dithering' (Triangular); 'MP3' (MP3) with 'Encoder en MP3 (CBR 320)' (Off); and 'Vidéo' (Video) with 'Créer vidéo' (Off), 'Encodeur vidéo' (MPEG-4), and 'Réglages d'encodeur' (Edit). At the bottom are 'Exporter' and 'Annuler' buttons.

Sélection	
Piste convertie	Master
Début de la conversion	1. 1. 1
Longueur de conversion	4. 0. 0

Options de conversion	
Inclure retours et effets Master	Off
Convertir en boucle	Off
Convertir en mono	Off
Normaliser	Off
Créer fichier d'analyse	On
Fréquence d'échantillonnage	44100
Le projet sera converti en 44100 Hz.	

PCM	
Encoder en PCM	On
Type de fichier:	WAV
Résolution en bits	16
Options de dithering	Triangular

MP3	
Encoder en MP3 (CBR 320)	Off

Vidéo	
Créer vidéo	Off
Encodeur vidéo	MPEG-4
Réglages d'encodeur	Edit

Exporter Annuler