Ableton Live

❖ Intermediate course ❖

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Made with
love
for ATIAM

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01
Sound Design

Concepts and sources

Sound Design Concepts

Sounds cool	Fits a concept
• Strictly subjective point of view	• Central theme or purpose to follow
• No limitation	• Specific emotional impact on the listener
• Push the boundaries of composition	• Narrow the creative process
• Most sonic innovations	• Source of inspiration

Both approaches possess their creative power and are valid !

As Ableton can be a little overwhelming because its infinite possibilities,
having a theme might be a guide in your composition process

Sound Generation & Synthesis

Live Instrument Devices

Sampler, Analog, Tension, Operator...

Instrument Racks
MIDI Effects
MIDI Effects Racks

They are not sound generators but allow to manipulate your instrument and are a major source of inspiration in sound design

Third-Party Synths

Near-infinite possibilities of every hardware emulators and exotic synthesizers or effects.

Max for Live (M4L)

Ultimate audio wormhole: environment for building your own synths, samplers, processors and anything else !

Reminder about MIDI

Symbolic language of event-based messages frequently used to represent music.

Composed of

❖ Note on, note off: start and end of the note

❖ MIDI note number: in [0, 127] encodes a note pitch
Ex: A4 = MIDI note 69

❖ Value for the key velocity: in [0, 127] intensity of the sound

❖ Channel specification: in [0, 15] play the instrument assigned to the channel number

❖ Timestamp: number of clock pulses before note on/off is executed

MIDI clips

❖ Midi clips are launched and behave in a similar way to the audio clips.

❖ 3 ways to make notes in Midi clips:
➢ Using your mouse
➢ Using your keyboard
➢ Using an external controller

❖ If you use your keyboard:
➢ Press M to turn it on
➢ Press W/X to up or down the octave
➢ Press C/V to up or down the velocity

02
MIDI

Musical Instrument Digital Interface

Impulse Instrument

❖ Create a midi track and insert a midi clip   CTRL+MAJ+T

❖ Don't forget to arm your track ! Otherwise Ableton does not know where to send your keyboard action

❖ Drag and drop an "impulse" instrument and add your own samples.

❖ You can then play with your keyboard or chose with your mouse.

❖ Change velocities to make some swing and craft your midi notes.

❖ Try several presets as well !

Populate your Impulse by drag and dropping 8 samples

Tweak the parameters, they are applied independently for each samples

Play different pitch of a sample

❖ From another midi track, insert a midi clip and drag and drop an "simpler" instrument

❖ Choose a sample and drag and drop it.

❖ Play with the parameters and compose something !

On the top middle of your screen you can find:

This is where you can start/stop and record the entire session into the arrangement view

Mix MIDI notes rather than replace them

Captures MIDI notes being played

Launch recording inside the armed tracks, also overdub

Don't forget to check help by passing your mouse on the elements and get more details

Midi Effects

Randomize the notes played, adding glitchiness or turning your clip into free jazz.

❖ Choices: determines how many random choices there are to choose from. (1 allows only the original, 10 allows for ten multiples of the Scale to be chosen)

❖ Scale: interval of the random note available. 1 means chromatic whereas 12 means octave of the note are the only available choices.

❖ Add, Sub or Bi determine if the random pitch is upward, downward or both.
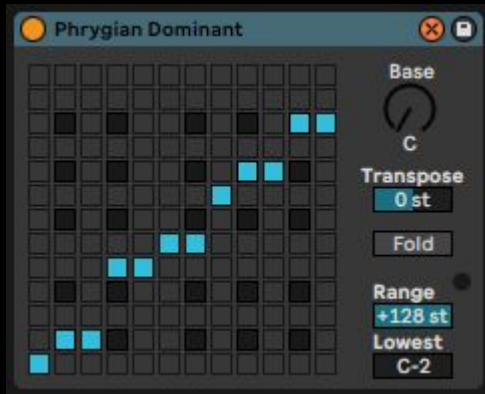
Alters incoming note pitch based on a scale mapping, choose yours in presets !
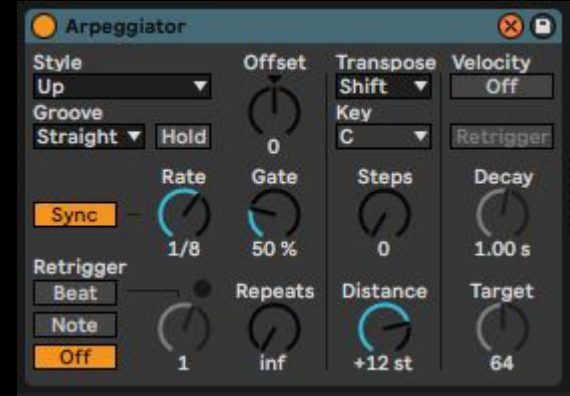
Scale

Midi Effects

Takes incoming MIDI notes or chords of notes and plays rhythmic and melodic variation of them in a pattern.

❖ Add movement !

❖ Create arpege form a chord: play with different styles -they determine patterns- and change the groove

"Down & Up" style

Chords

❖ Every shift command adds a note to the chord. +/- 36 semitone compare to the midi note.

Midi Effects

❖ Select an instrument that you like and put it into a Midi track. You can now choose between Analog, Collision, Electric, Operator, Simpler, Sampler, Tension & Wavetable.

❖ Play or draw some notes to create a melody.

❖ Add Midi effects before your instrument:

➢ Arpeggiator

➢ Chord

➢ Envelope

➢ Random

➢ Scale

❖ You can also add audio effects after your instrument !

https://www.ableton.com/en/manual/live-midi-effect-reference/

INSTRUMENT RACK

- ❖ 4 types of racks: Instrument, Audio Effect, Drum and MIDI effects Racks.
- ❖ Exceptional creative processing !
- ❖ Instrument Rack: multiple instruments and effects together to create a one-of-a-kind instrument.

It is possible to:

- ❖ Create a complex MIDI instrument with complex effects processing that can be saved as Preset for instant recall
- ❖ Layer and split keyboard sounds from different devices
- ❖ Map macro controls for real-time exotic transformation
- ❖ You can use third party but Ableton instruments uses less CPU

To do:

- ❖ Create an Instrument Rack and populate it
- ❖ Add effects on solo instrument or globally to your rack

03

Mixing Concepts

Give space to your sound

Use a Reference Track

- ❖ You can see if your track will sound good on different speakers.

- ❖ Pick up the track that sounds the best for YOU within the genre you are trying to reach.

- ❖ Put it into you DAW and drop the level of your reference track similarly to yours. Observe both spectrums.

- ❖ How wide and paned is your track compared to your reference ?

- ❖ What element dominates each frequency band of the spectrum ? Do not hesitate to filter the master and your reference track ! What are the missing elements ? Choose some samples consequently.

- ❖ What is the general approach to delay and reverb in my reference ?
  - ➢ Don't get demotivated if you don't get it completely right in the first few attempts.
  - ➢ Learning how to reference tracks while maintaining your own vision is a skill that you will develop over time.

Sample Selection

A great mixdown begins with great sound choices and arrangement decisions.

An amazing sample does not need ridiculously complex processing to make it sound good.
A relevant selection will make your life easier.

Organization

Be careful with your labels, use colors schemes, add locators...

You could use lighter colors as you go up in the frequency spectrum.

Minimal Sound Treatments

- ❖ EQ: shapes the tones
- ❖ Compression: shapes the dynamics
- ❖ Panning: adds space
- ❖ Reverb: adds depth

All of these must have a purpose, they will add depth, clarity and movement to your song !

Visual Mixing Guide

PLUG IN

———A new world for your composition

Piece of software that "plug" to Ableton

- ❖ Download and install your VST, be aware of where you put the VST files !
- ❖ Then, in Ableton, set your plug-in directory: Options > Preferences > Plug-ins.
  "Use VST Plug-in Custom Folder" must be switched on. Click on "Browse" and look for this
- ❖ Click on "rescan" and check if your plug-in has been added to your browser.
- ❖ Drag and drop it on your tracks and map its parameters so that they can be automated !

- ❖ Really amazing plugins who worth to check:
  - ➢ Omnisphere - Spectrasonics
  - ➢ Pigments - Arturia
  - ➢ Serum - Xfer Records // Massive - Native Instruments
  - ➢ Soundtoys
  - ➢ Valhalla DSP - https://valhalladsp.com/demos-downloads/
  - ➢ For mixing / Mastering: All iZotope products & Fab filter

THE IN/OUT SESSION

Make your own audio track

Audio From

❖ **Ext. In**: To record an external audio signal (instrument, microphone…) in your audio interface

❖ **Configure**: Shortcut to Live's audio preferences

❖ **Resampling**: Anything playing through your main outputs is routed to the input of your selected track for recording.

❖ **[Name of your tracks]**: Similar to resampling, particularly helpful for instruments that take up too much resources.

➢ You can then choose to resample Pre FX, Post Fx or Post Mixer.

Audio To

❖ **Ext. Out**: If you need to route your signal to a different audio interface output from the one assigned to your Master (hardware processor, surround speakers…).

❖ **Configure**: Shortcut to Live's audio preferences.

❖ **Resampling**: Send to another track.

Monitor Allows to choose between hearing the track's input or output. Auto is probably the best for you.

Tip: In arrangement, you can freeze your midi or audio track with plugin/effects, then select and drag and drop it into another audio track: you've just create an audio track including your effects !