HORA MUSIC

USER MANUAL

SEQUENCERS

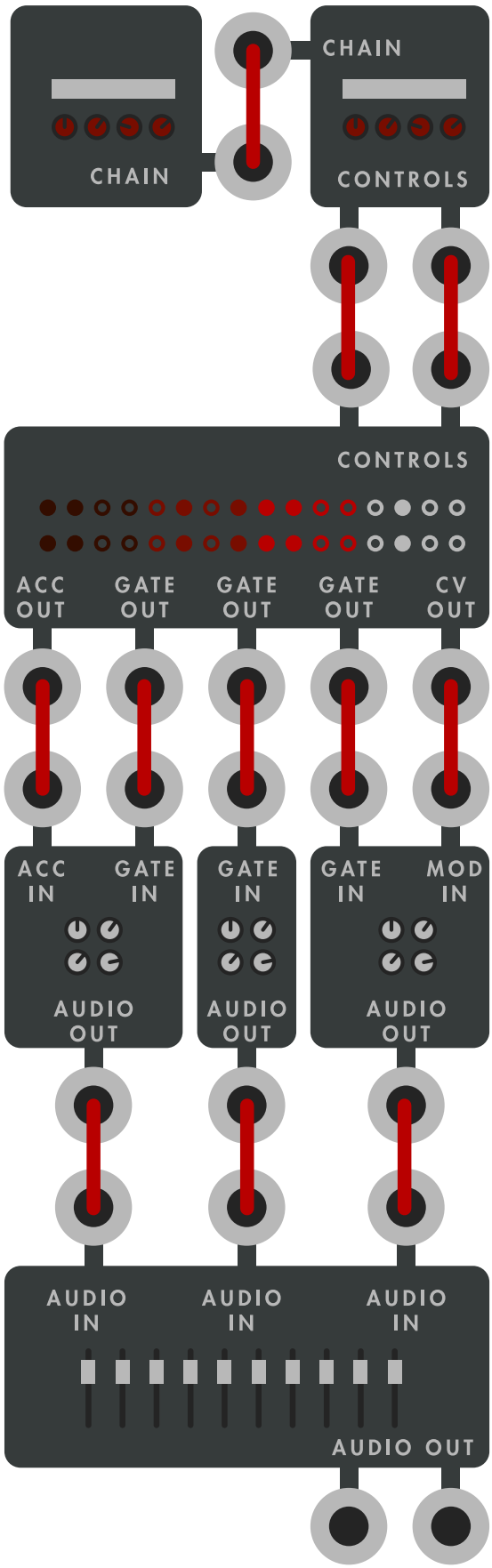
ANALOG DRUMS

PCM DRUMS

MIXERS

PLUGINS FOR VCV RACK 1.0

TABLE OF CONTENT



All the modules in this manual are made to work together for a complete rhythm section management on different scales:

DRUM ARRANGER

complete song structures

DRUM SEQUENCER

beat making

DRUM MODULES

analog drum collection
PCM drums collection

MIXER

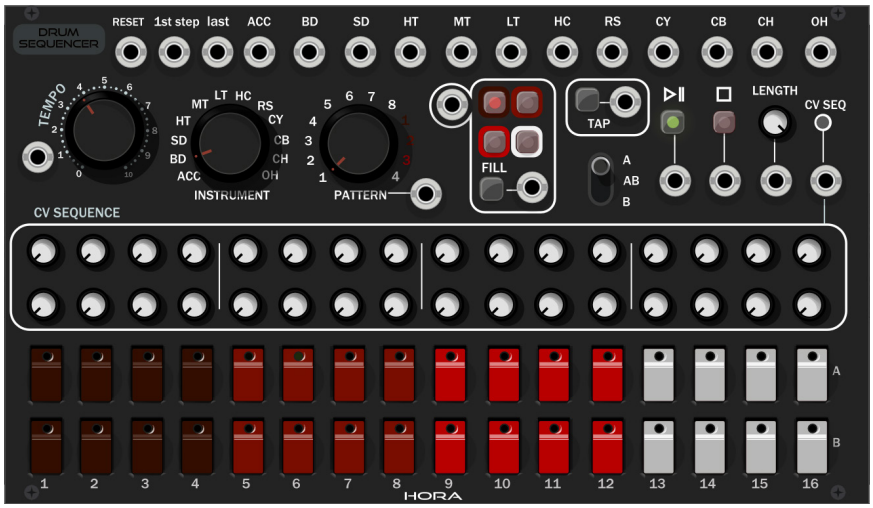
sound mixing

HORA MUSIC

USER MANUAL

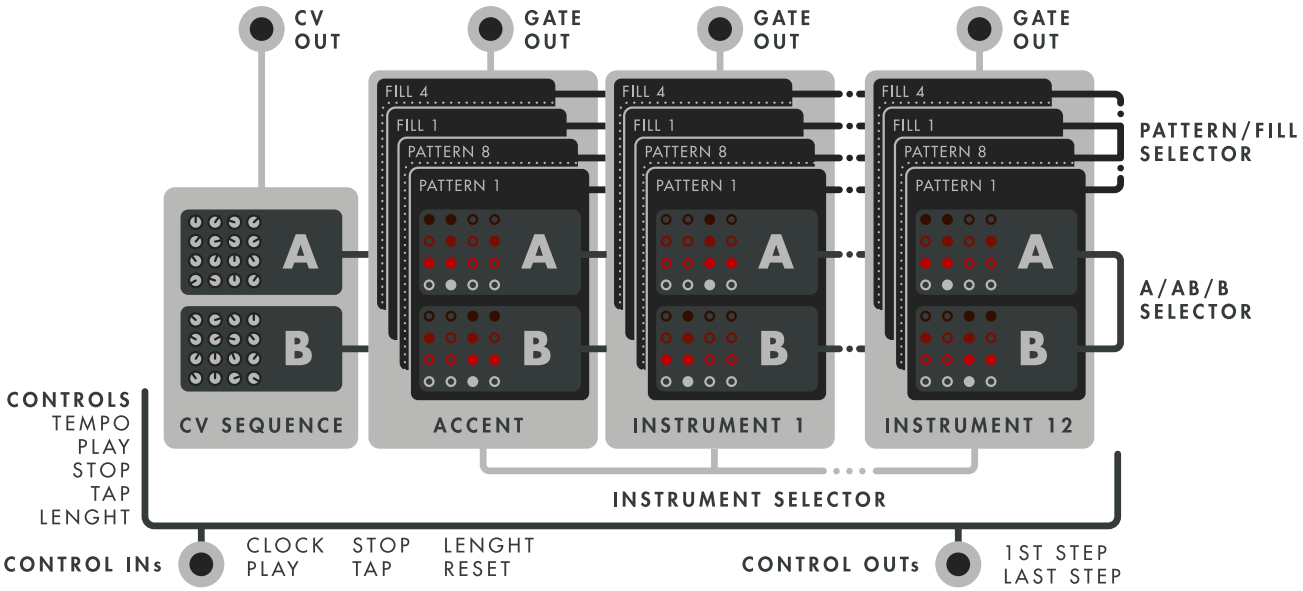
SEQUENCERS

DRUM SEQUENCER STRUCTURE



This plugin is designed to sequence the analog drums modules but can be used to trig any other drum module, envelopes, sampler module,…

The design of the drum sequencer is inspired by the TR808 and modular drum sequencers. It offers 12 patterns over 12 different tracks



The sequencer's tempo can be controlled in different ways:

- Using the TEMPO knob
- Using an external clock

The drum sequencer has different parallel tracks

- 1 CV track
- 11 "instruments" gate track
- 1 "accent" gate track that can be used like any instrument gate track.

Each instrument has 12 patterns that can be used differently:

- Rhythm (8) that can be loaded at the end of the previous pattern playing
- Fills (4) that can be loaded anytime during the pattern.

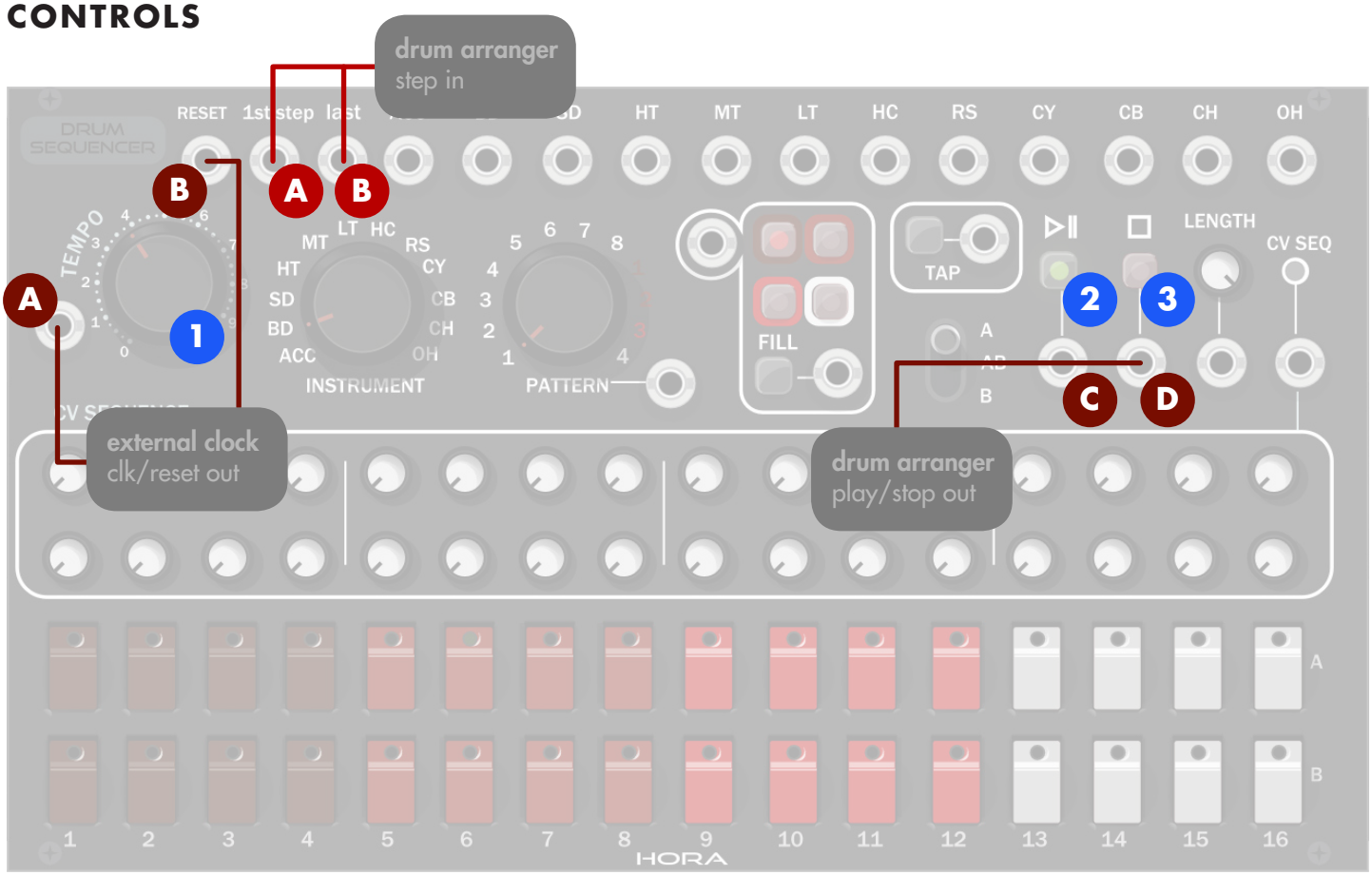
Each preset can play up to 32 steps by using 2-step sequences of 16 steps: A and B

- Playing A or B (2x16 steps)
- Playing A followed by B (1x 32 steps)

Each sequences can be recorded in 2 different ways

- Using the 32 buttons
- performing live using the TAP button or input

CONTROLS



INPUTS

A External clock
gate input to be used as tempo

B Reset
Instantly play the first step of the sequence.

C Play/pause
gate input to launch and stop the sequence without starting it back from the beginning.

D Stop
gate input to stop the sequence and starting it back from the beginning.

OUTPUTS

A 1st step
send a gate signal when playing the first step.

B Last step
send a gate signal when playing the last step of the sequence.

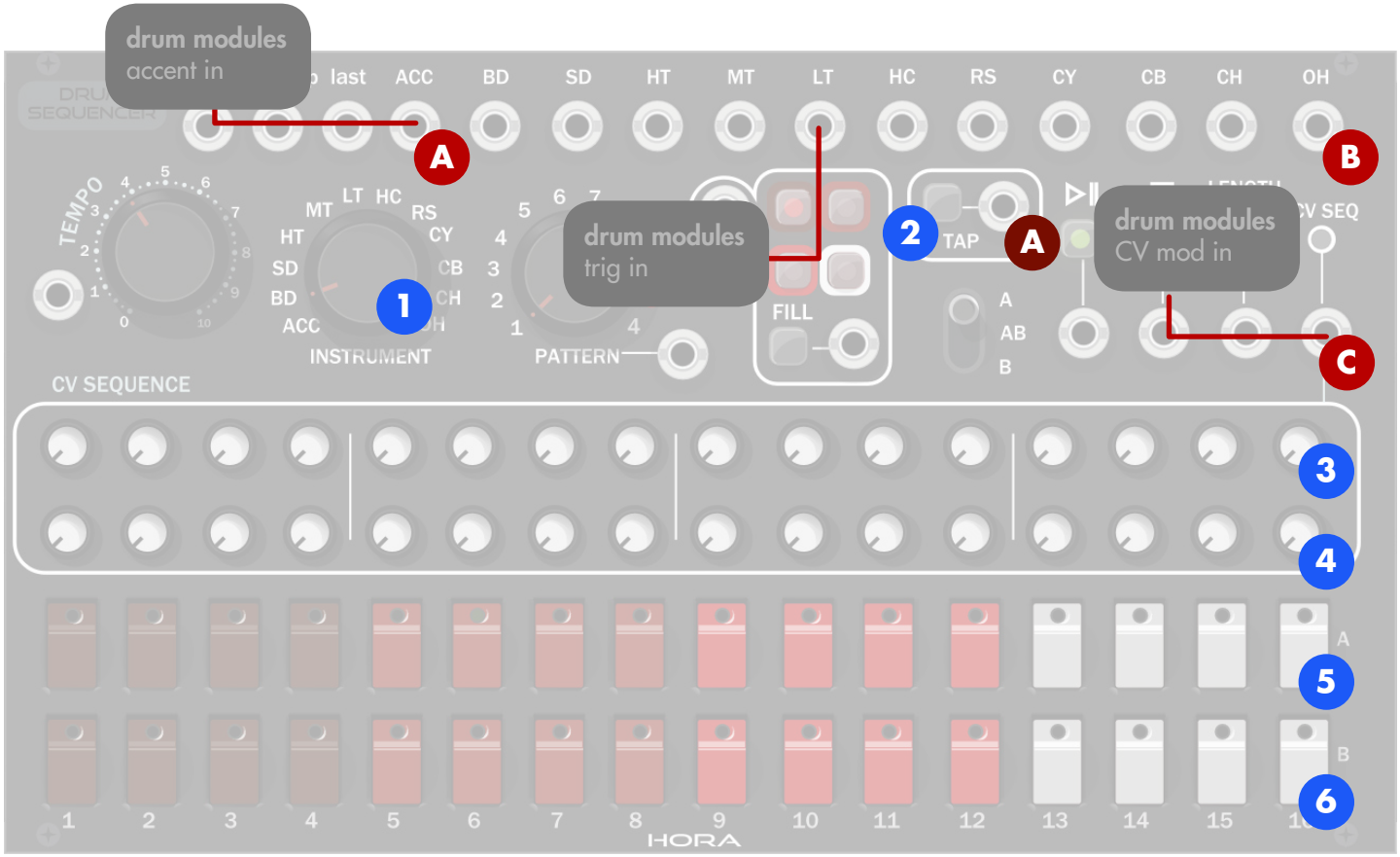
CONTROLS

1 Tempo
Set the tempo by turning the knob.

2 Play / pause
launch and stop the sequence without starting it back from the beginning.

3 Stop
stop the sequence and starting it back from the beginning.

INSTRUMENTS AND SEQUENCES



INPUT

A Tap input
external gate input to record a sequence in real time

OUTPUTS

A Accent
sends a gate signal when the sequencer play a programmed accent.

B Instruments
send a gate signal when the sequencer play the corresponding programmed instrument.

C CV Seq
CV output of the CV sequence.

CONTROLS

1 Instrument
Select the instrument that you want to access.

2 Tap input
tap to perform and record a sequence in real time.

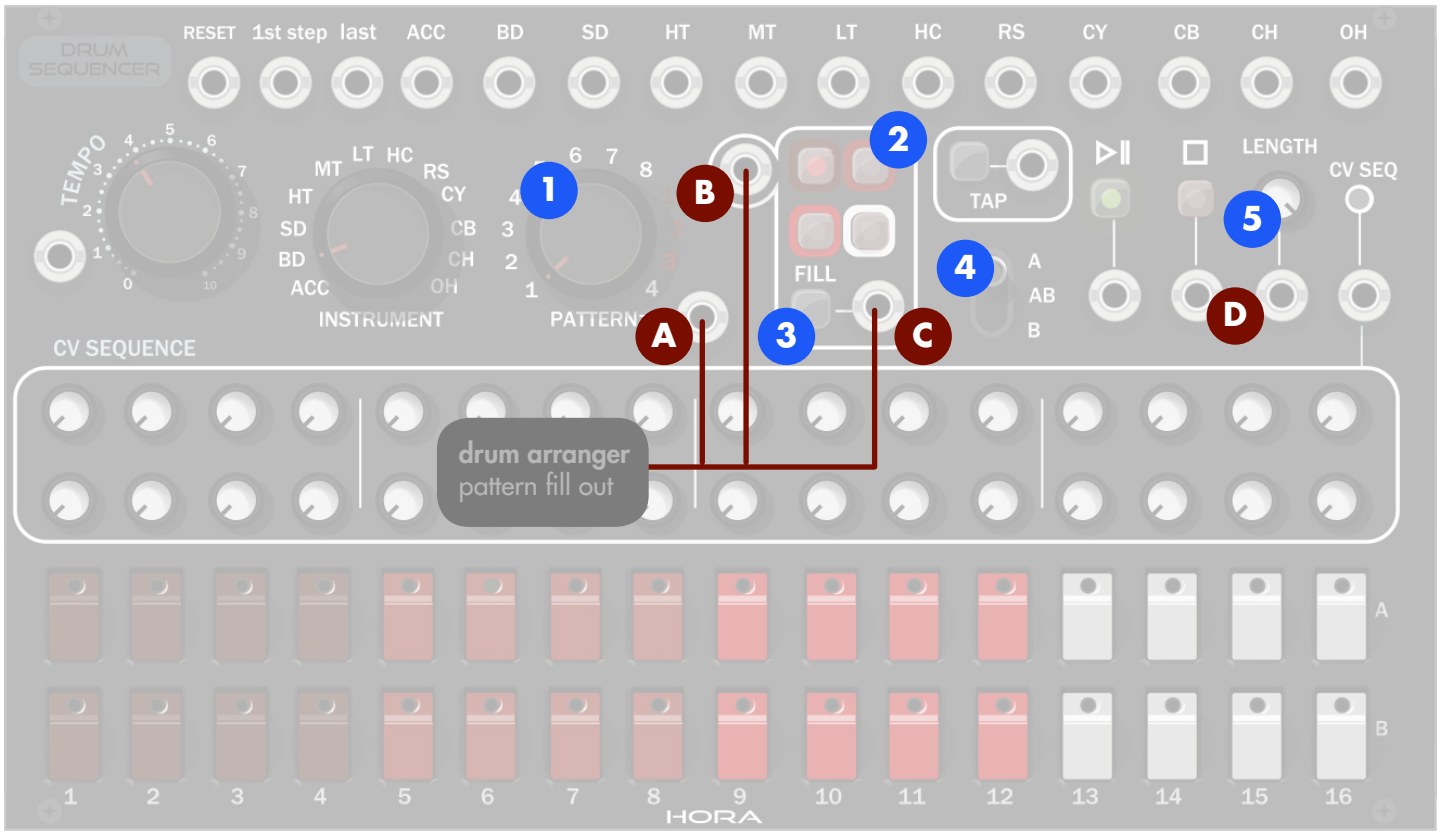
3 CV Sequence line 1
Sets the A section of the CV sequence

4 CV sequence line 2
Sets the B section for the CV sequence

5 Gate sequence line 1
Sets the A section for the selected instrument

6 Gate sequence line 2
Sets the B section for the selected instrument

PATTERN CONTROL



INPUTS

A Pattern
CV input to select the pattern that you want to program.

B Fill selection
CV input to choose wich fill will be triggered.

C Fill triggering
gate input to trigger a fill instantly.

D Length
CV input set the length of the sequence.

CONTROLS

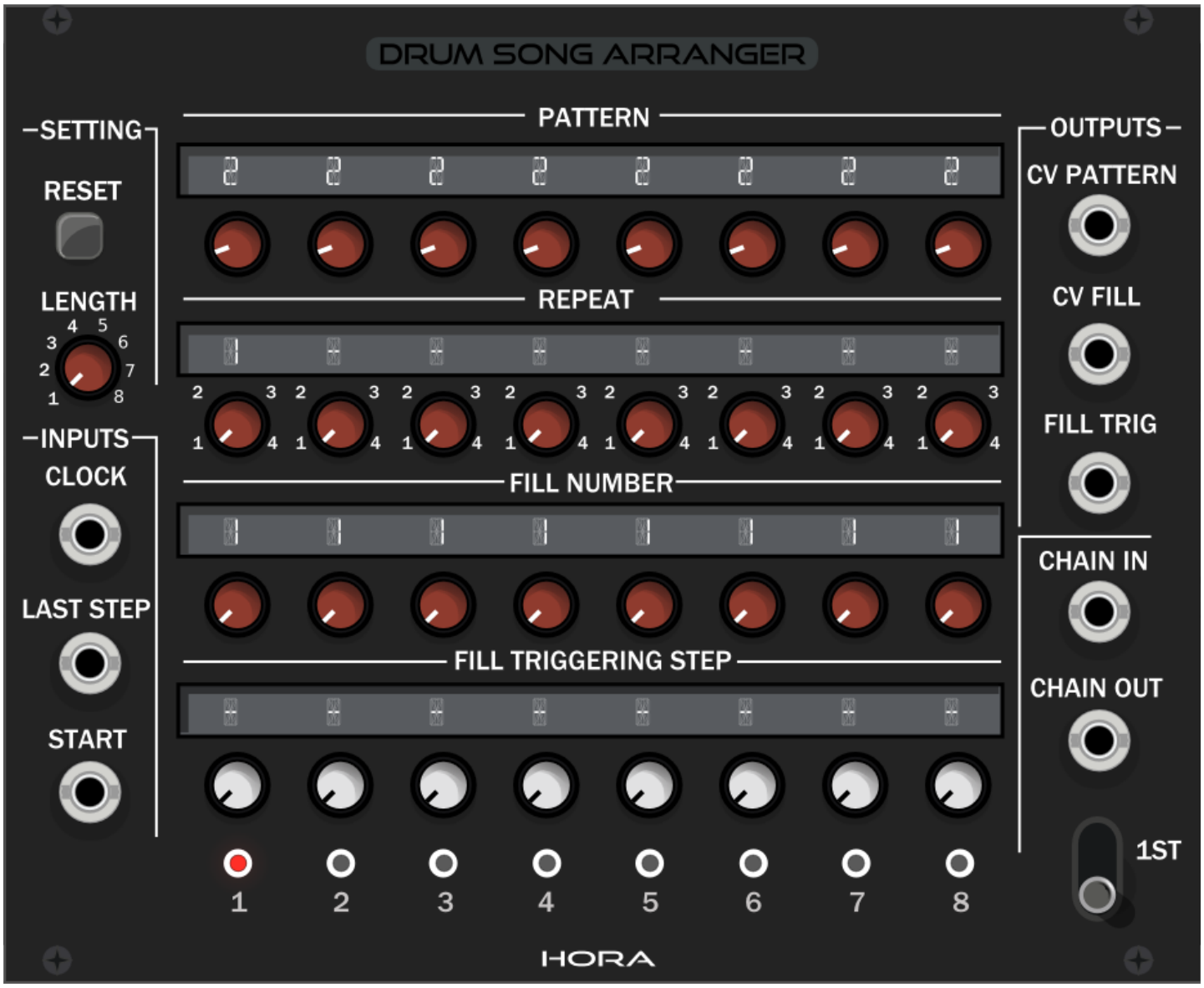
1 Pattern
Select that you want to program. The new rythm will be loaded after the previous one is done playing.

2 Fill selection
Use the four coloured button to choose which fill will be triggered.

3 Fill triggering
Use the fill button instantly load a fill. No need to wait for the end of the current sequence like with rhythms.

4 A/B mode
Select the playing mode (read A, read B or read both A & B)

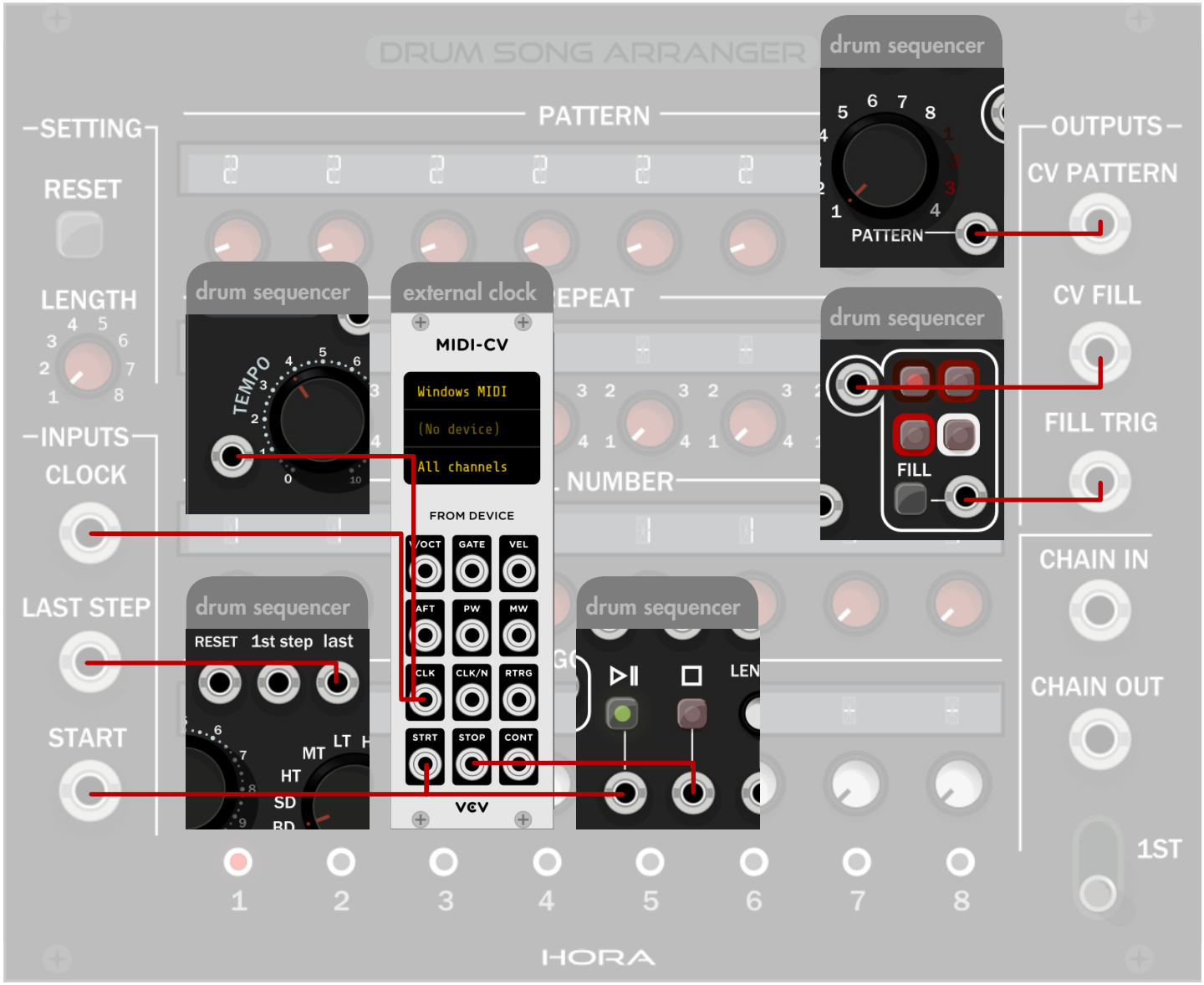
5 Length
Set the length of the sequence with knob from 1 to 16 steps.



The drum song arranger allows to sequence the recall of patterns in the Hora Drum sequencer to create a song structure with 8 different sections (pattern load) that chains up like a sequence.

Each section ca be repeated up to 4 times and trigger a specific fill at a specific step of the drum pattern.

CONNECTIONS TO OTHER DEVICES

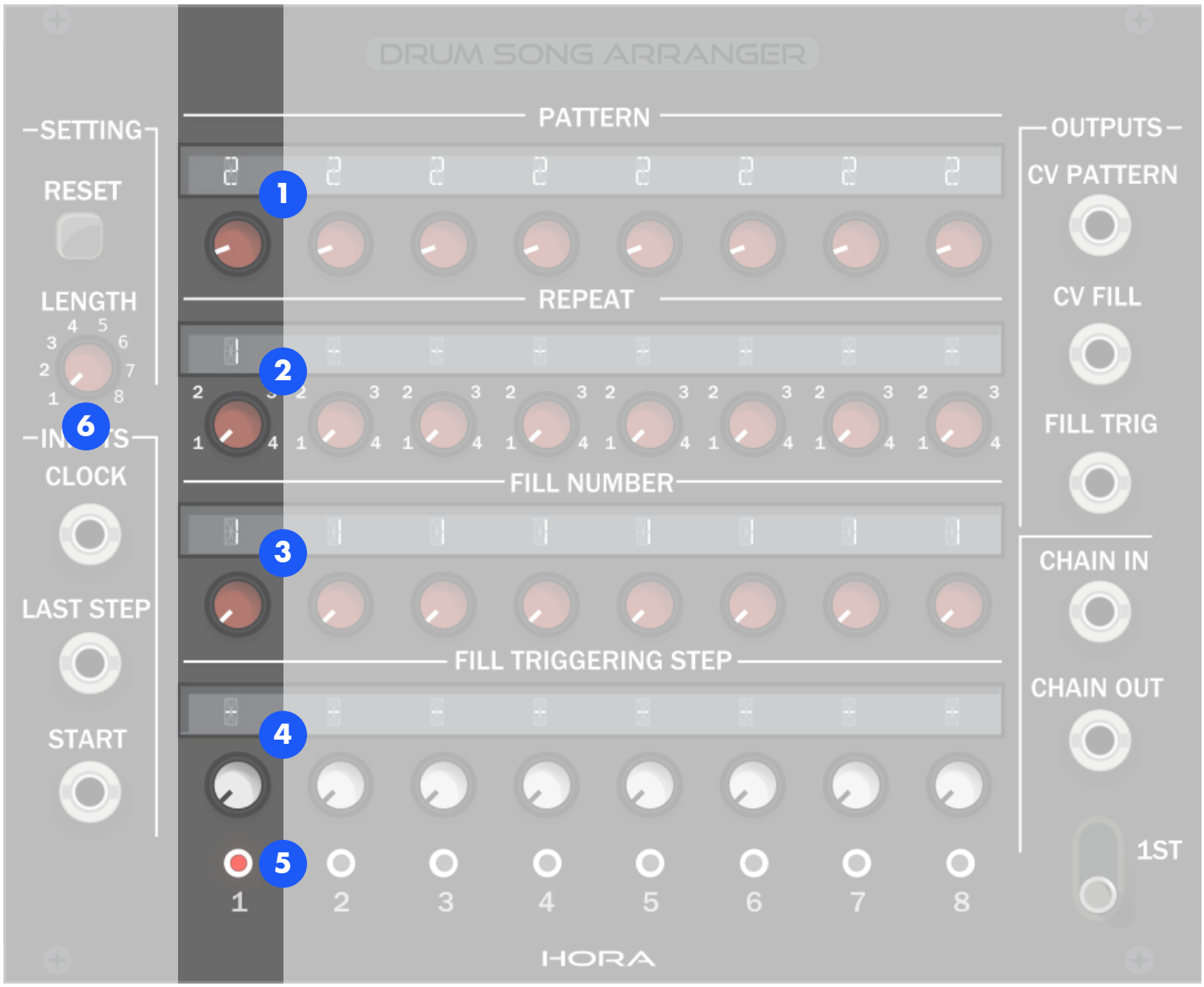


The drum song arranger is made to control the pattern selection, fill selection and fill triggering of the Drum Sequencer. Therefore, these outputs have to be correctly connected.

In order to be synchronised with the drum sequencer, we need to receive the last step ouput of this and the external clock it is synchronised on.

To create longer structure it is possible to chain as many drum song arrangers as needed.

PROGRAMMING A SECTION

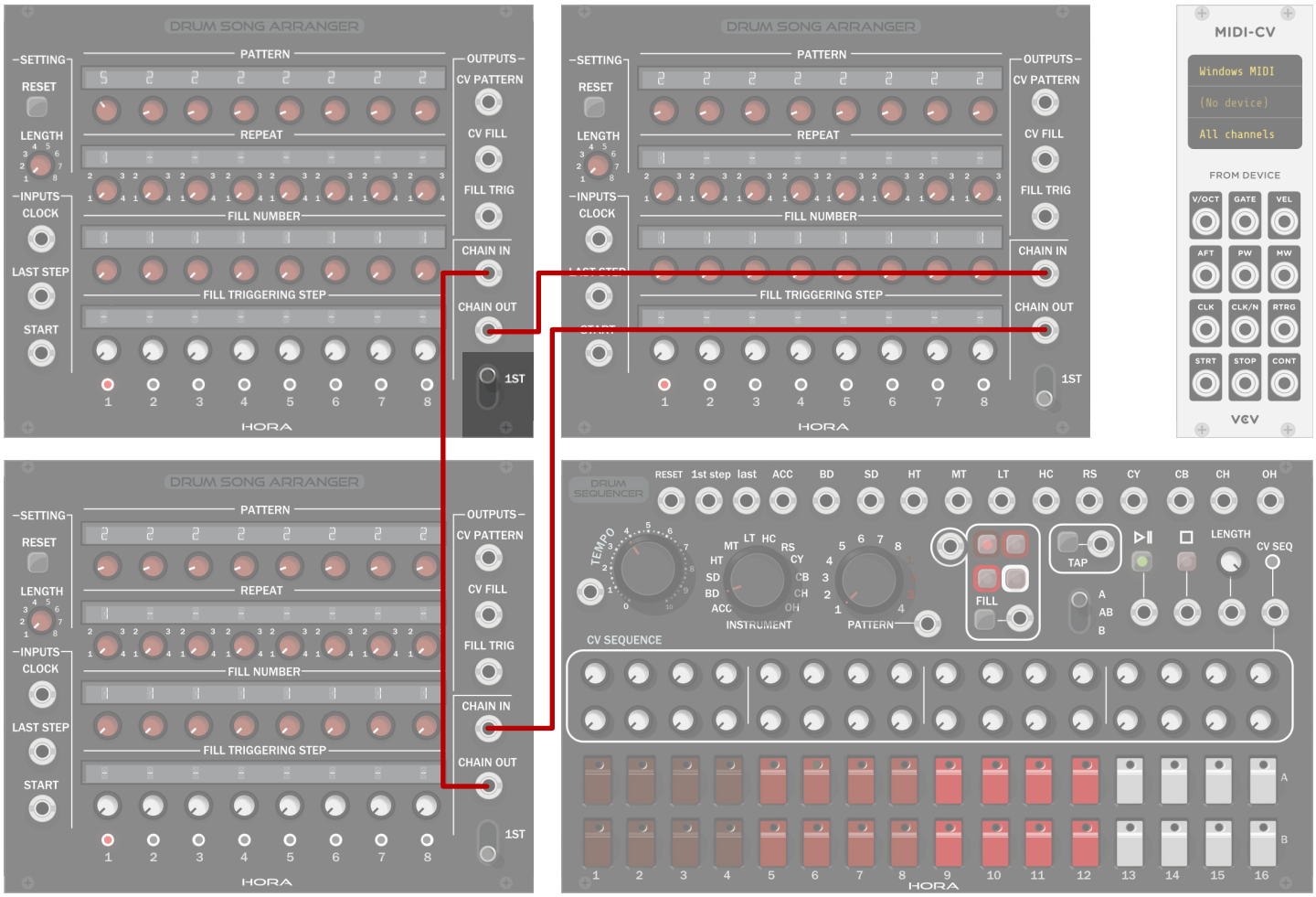


When a pattern arrives at its end, the drum sequencer sends a signal through the "last step" connexion.
The drum song arranger then repeats the section if specified. If not, it will switch to the next section.

CONTROLS

1. **Pattern**
   Choose between the 12 patterns of the drums seq.
2. **Repeat**
   choose the number of repeats for the selected pattern.
3. **Fill Number**
   Choose between the 4 fills of the drums seq.
4. **Fill Triggering step**
   The step in the sequence when the fill should happen
5. **Active section**
   Led showing which section is playing
6. **Length**
   chooses the total number of sections.

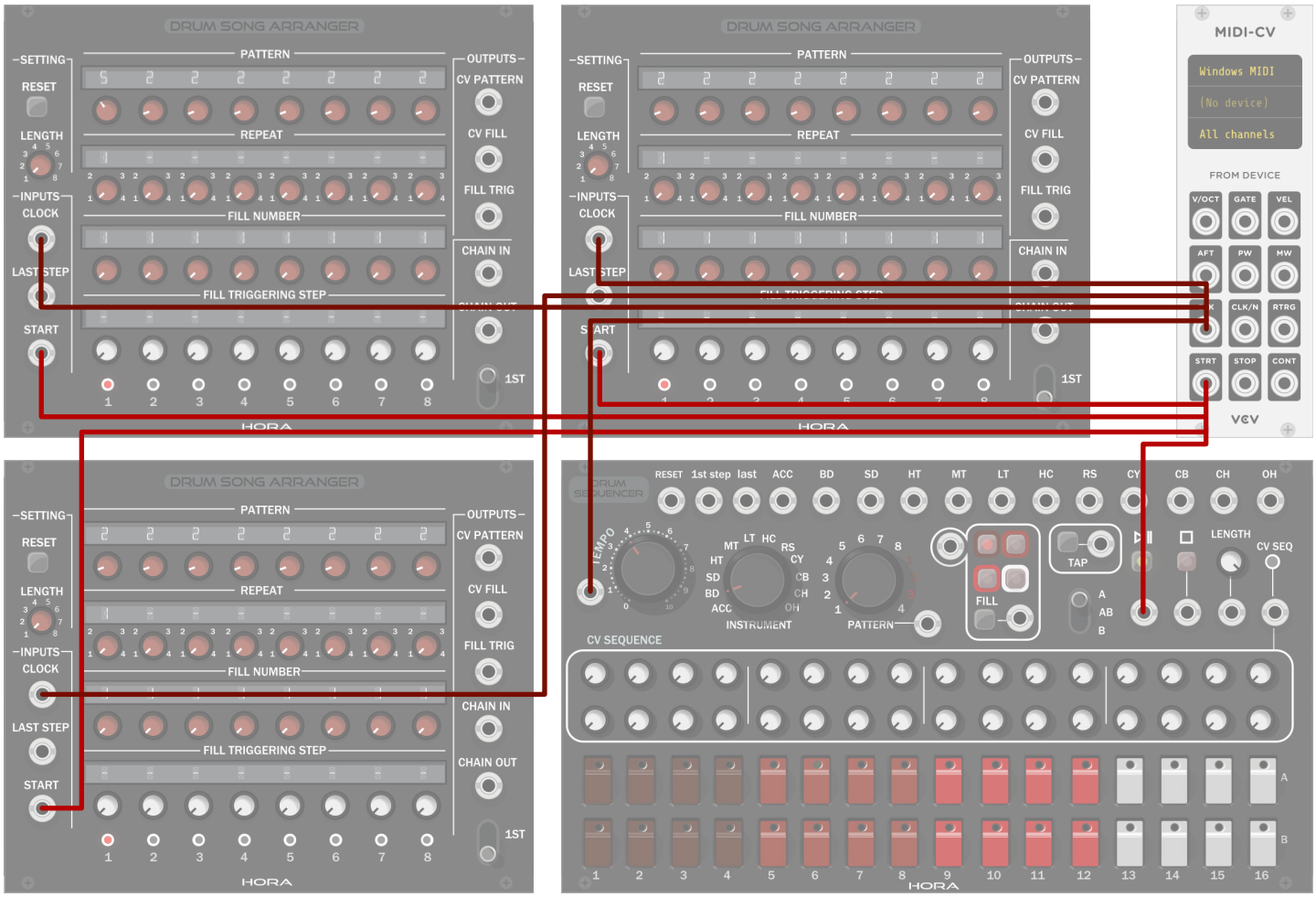
CHAINING ARRANGERS



STEP 1. TOGETHER

- Set the "1ST" switch on the arranger that you want to define as the first one.
- Patch the **chain out** output to the **chain in** input of the next arranger
- Close the loop by patching the last **chain out** output to the **chain in** input of the first arranger.

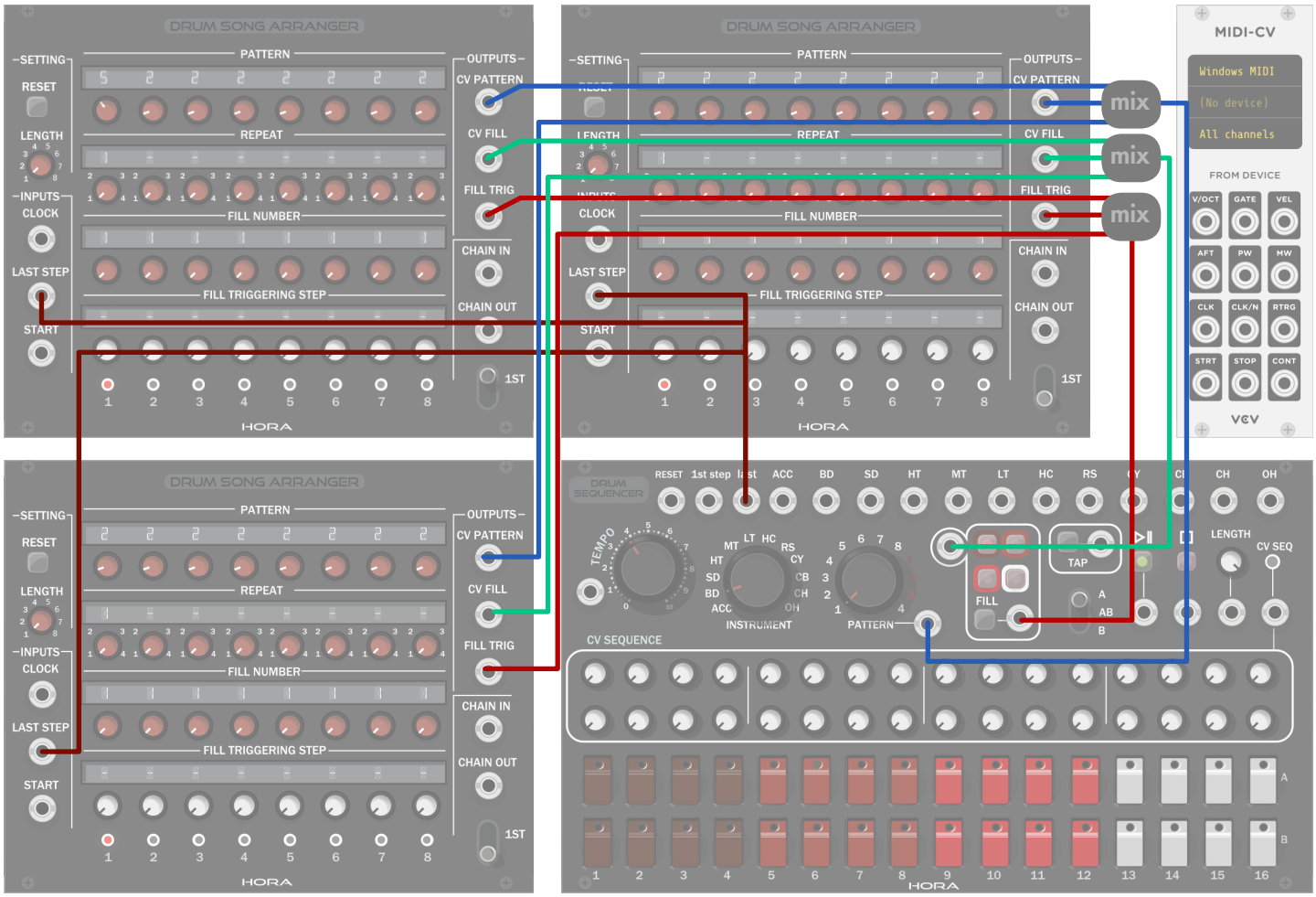
CHAINING ARRANGERS



STEP 2. TO EXTERNAL CLOCK

clock and start input of both arrangers and drum sequencer need to be patched to the same source

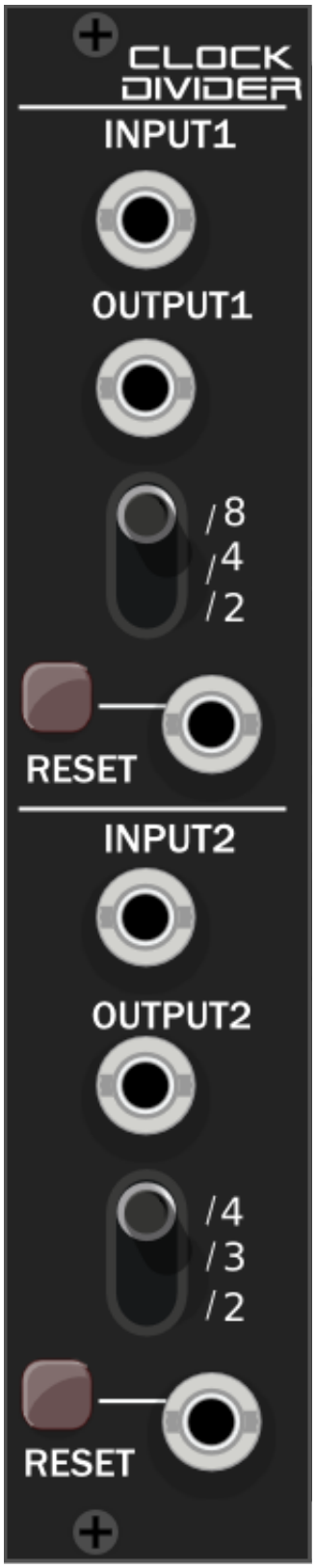
CHAINING ARRANGERS



STEP 3. TO THE DRUM SEQUENCER

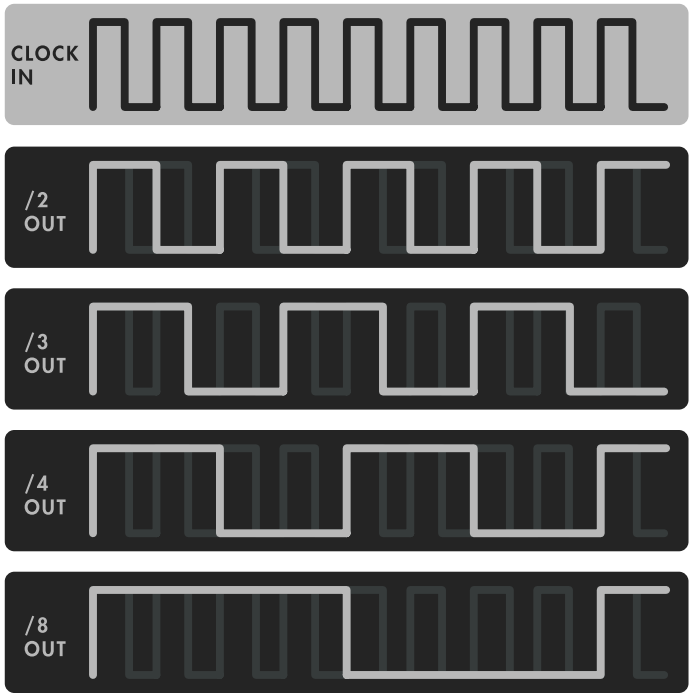
The outputs of each arranger will have to be mixed together to arrive to the drum sequencer.Use the module of your choice to reach this result (unity mix, CV mixer, ...). The signals will have to be added together at 100% of their values.

CLOCK DIVIDER



The Hora Clock divider is a utility module with two gate dividers. The division can be set in different ways using the 3 position switch. The count can be reset by the push button or the gate input.

The clock dividers can be used to create sequences or to send a slower clock to a sequencer, while keeping a musical rhythmic division.



HORA MUSIC

USER MANUAL

ANALOG DRUMS

VCV DSP EDITION

VULT DSP EDITION

The Hora ANALOG DRUMS collection is a set of analog modelled percussion voices. While the modules are inspired by the famous 808 vintage drum machine, they also offer an in-depth control of the sound, some additional features, and CV control over many parameters.

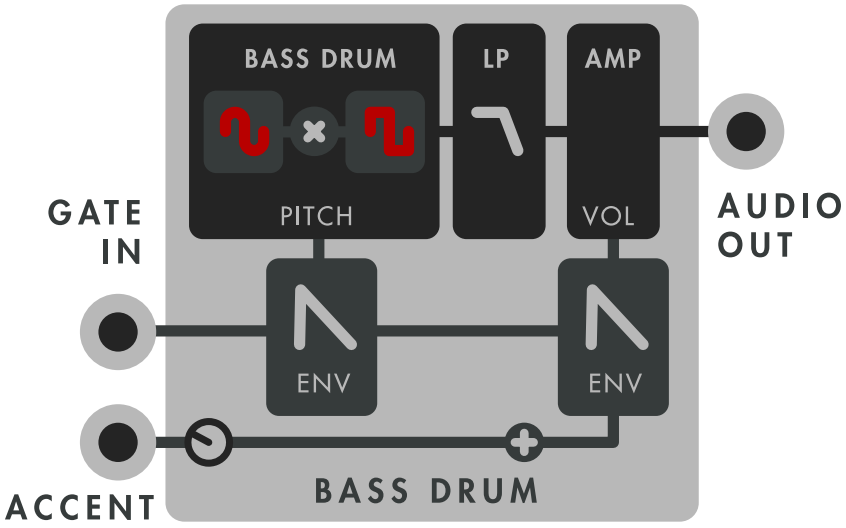
Creating a drum voice from the scratch takes many modules and complex synthesis processes. This collection offers an easy to create a complete analog drum kit.
These modules are based on knowledge concerning real hardware analog drums.

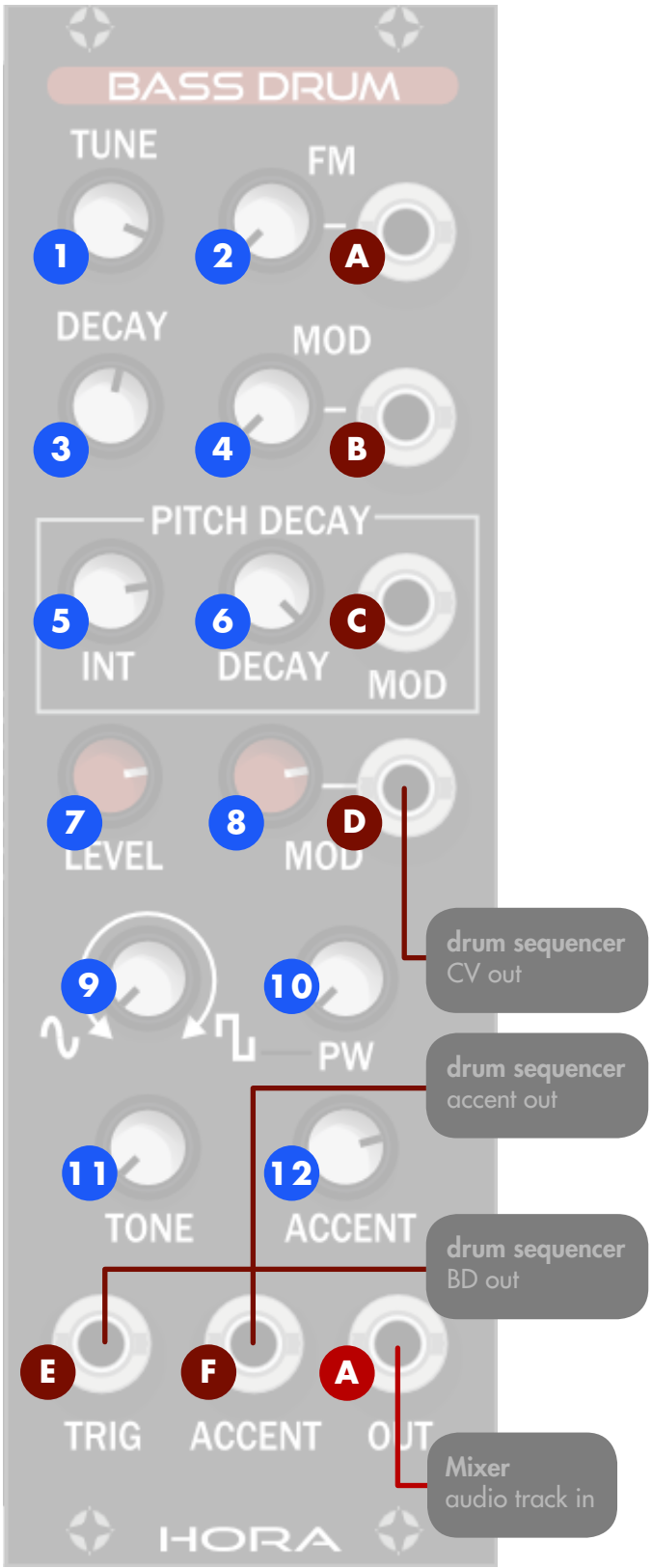
Special attention was given about details that make it sound authentic and give a dynamic sound without annoying/unmusical sound's ticks and clicks.
Each module exists in two versions: the red edition built with VCV dsp filter, and the dark edition built with Vult dsp filter. Each version has its own tonal character.

The included modules are:

- Bass drum
- Snare drum
- Toms and conga
- Hand clap and maracas
- Rimshot-clave-softbell
- Cymbal and cowbell
- Hi hat (closed and opened)


BASS DRUM
TUNE
FM
DECAY
MOD
PITCH DECAY
INT
DECAY
MOD
LEVEL
MOD
PW
TONE
ACCENT
TRIG
ACCENT
OUT
HORA


BASS DRUM
LP
AMP
PITCH
VOL
GATE IN
AUDIO OUT
ENV
ENV
ACCENT
BASS DRUM



CONTROLS

1. **Tune**
   Pitch/tune of the bass drum
2. **FM**
   CV input attenuator
3. **Decay time**
   Amp decay length
4. **Decay mod**
   Amp decay modulation attenuator
5. **Pitch decay intensity**
   Depth of the decay pitch modulation envelope
6. **Pitch decay**
   Pitch decay length
7. **Level**
   Level (volume) of the bass drum
8. **Level mod**
   Level modulation attenuator
9. **Waveform**
   Sine wave/pulse mix
10. **Pulse width**
    Width of the pulse wave
11. **Tone**
    Low pass filter
12. **Accent**
    Set the increase of amplitude for each accent received.

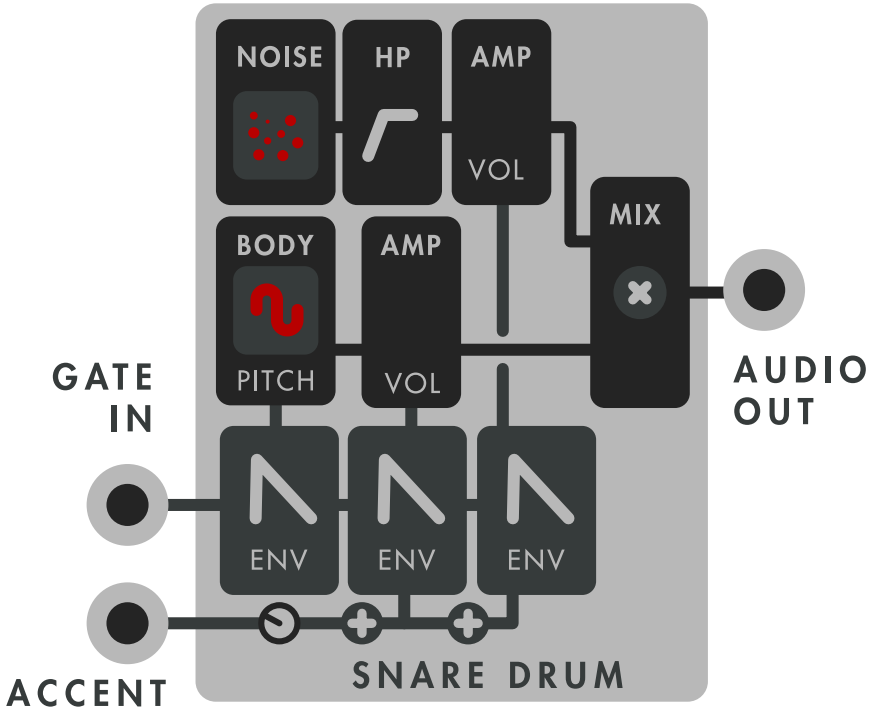
INPUTS

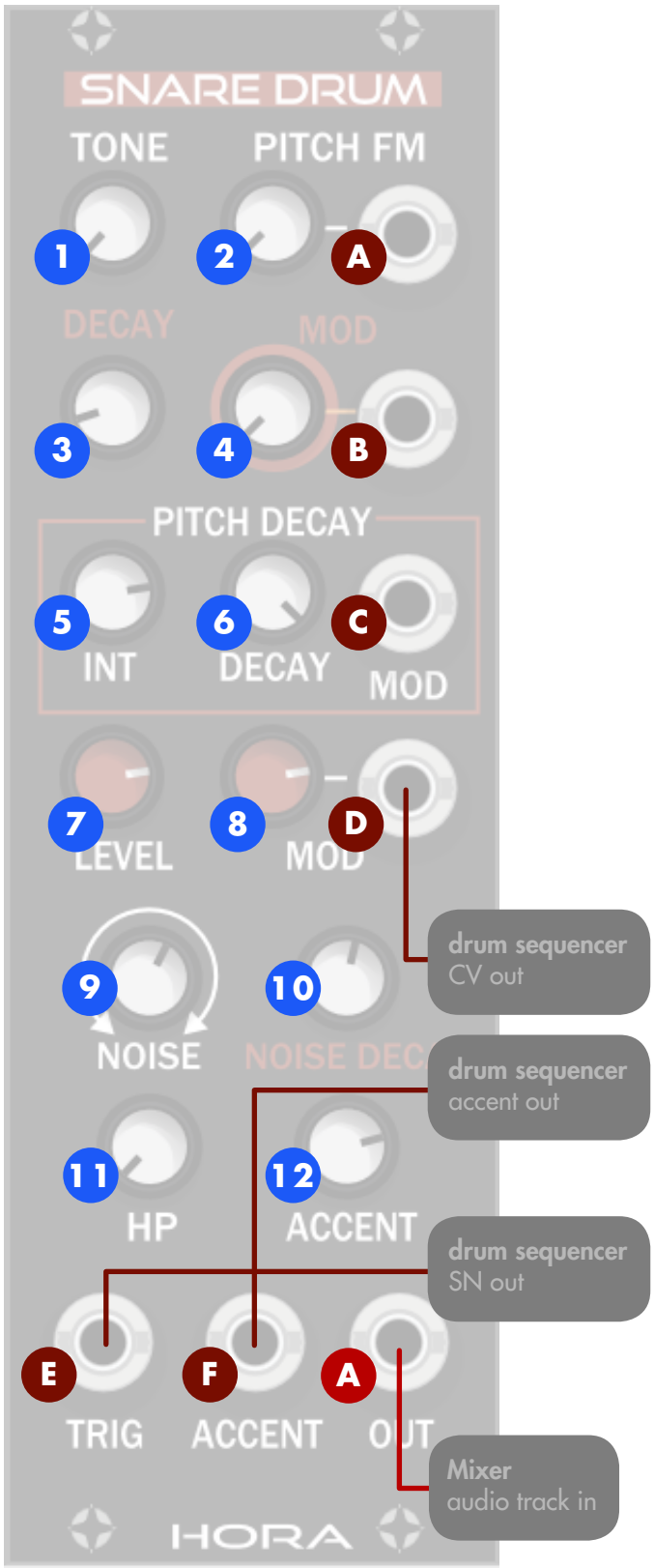
- **A** **FM**
  Pitch/tune modulation CV input
- **B** **Decay mod**
  Amp decay modulation CV input
- **C** **Pitch decay mod**
  Pitch decay length CV input
- **D** **Level mod**
  Level modulation CV input
- **E** **Trigger**
  Gate input to trig a drum hit
- **F** **Accent**
  Gate input to trig a louder drum hit

OUTPUTS

- **A** **Out**
  Bass drum sound audio output


SNARE DRUM
TONE
PITCH FM
DECAY
MOD
PITCH DECAY
INT
DECAY
MOD
LEVEL
MOD
NOISE
NOISE DECAY
HP
ACCENT
TRIG
ACCENT
OUT
HORA


NOISE
HP
AMP
VOL
MIX
BODY
PITCH
AMP
VOL
GATE IN
AUDIO OUT
ENV
ENV
ENV
ACCENT
SNARE DRUM



CONTROLS

1. **Tone**
   Pitch/tune of the snare drum
2. **FM**
   CV input attenuator
3. **Decay time**
   Amp decay length of the body. No effect on noise
4. **Decay mod**
   Amp decay modulation attenuator
5. **Pitch decay intensity**
   Depth of the decay pitch modulation envelope
6. **Pitch decay**
   Pitch decay length
7. **Level**
   Level (volume) of the snare drum
8. **Level mod**
   Level modulation attenuator
9. **Noise**
   Body/noise mix
10. **Noise decay**
    Width of the pulse wave
11. **HP**
    High pass filter
12. **Accent**
    Set the increase of amplitude for each accent received.

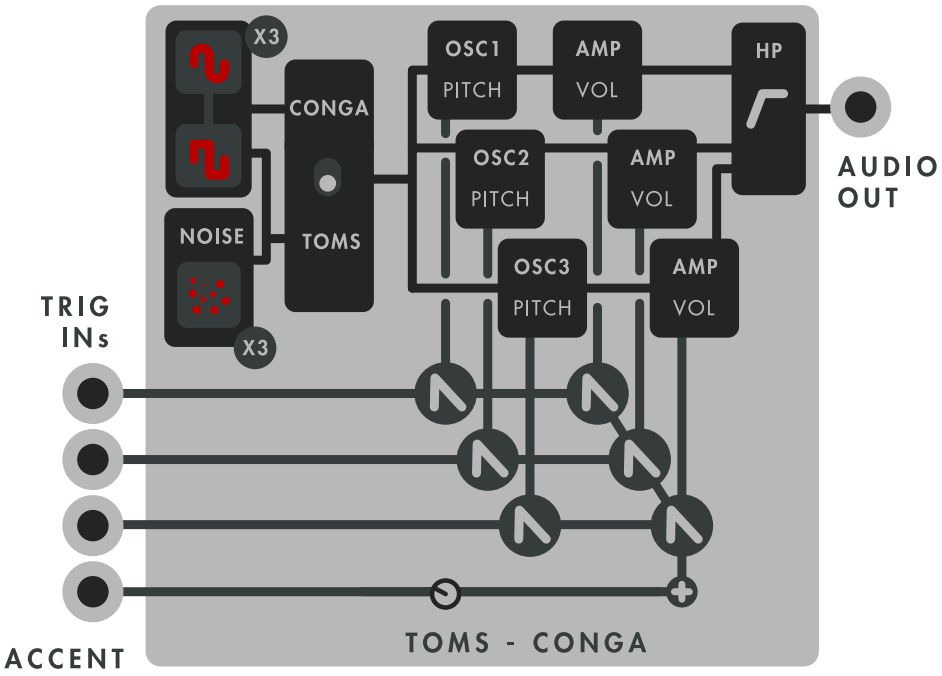
INPUTS

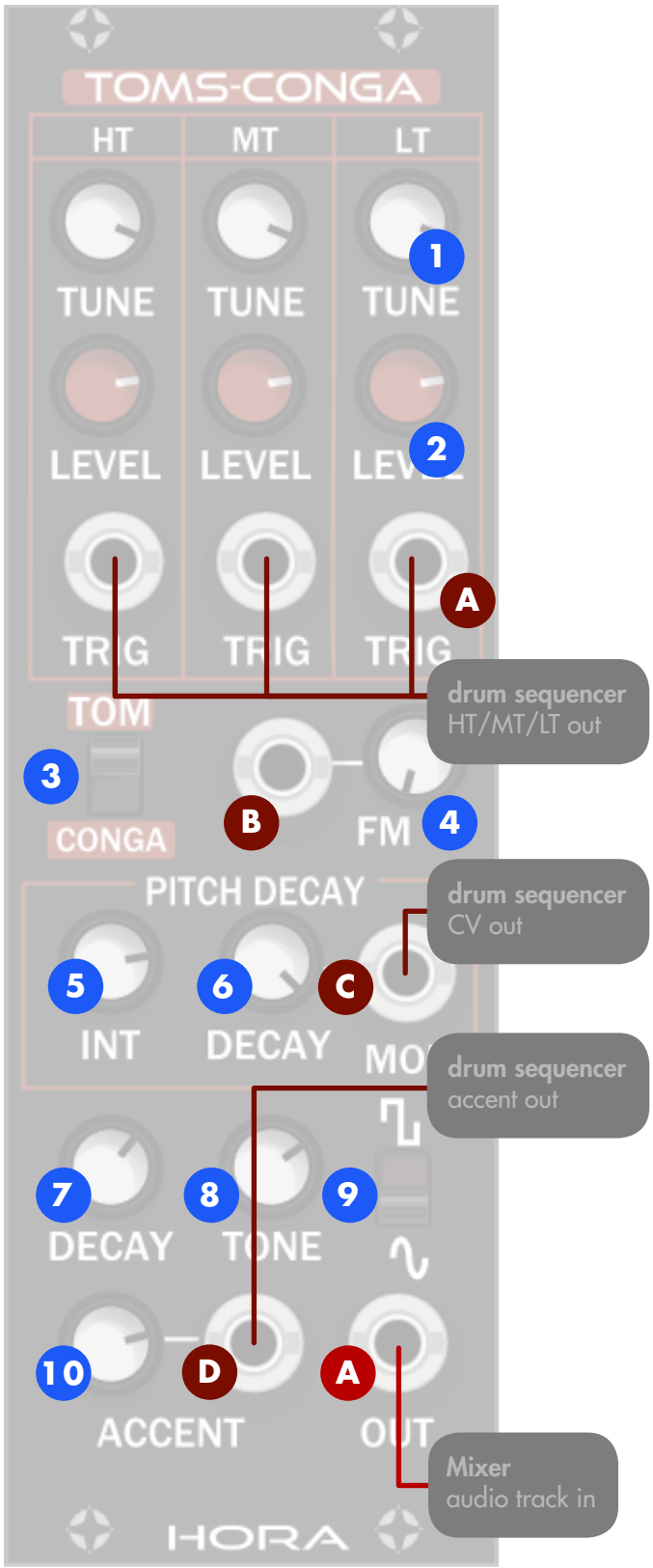
- **A** **FM**
  Pitch/tune modulation CV input
- **B** **Decay mod**
  Amp decay modulation CV input
- **C** **Pitch decay mod**
  Pitch decay length CV input
- **D** **Level mod**
  Level modulation CV input
- **E** **Trigger**
  Gate input to trig a drum hit
- **F** **Accent**
  Gate input to trig a louder drum hit

OUTPUTS

- **A** **Out**
  Snare sound audio output


TOMS-CONGA
HT
MT
LT
TUNE
TUNE
TUNE
LEVEL
LEVEL
LEVEL
TRIG
TRIG
TRIG
TOM
CONGA
FM
PITCH DECAY
INT
DECAY
MOD
DECAY
TONE
ACCENT
OUT
HORA


X3
CONGA
TOMS
NOISE
X3
OSC1
PITCH
AMP
VOL
HP
OSC2
PITCH
AMP
VOL
OSC3
PITCH
AMP
VOL
AUDIO
OUT
TRIG
INs
ACCENT
TOMS - CONGA



CONTROLS

1. **Tune**
   Pitch/tune for each tom/conga
2. **Level**
   Level (volume) of each tom/conga
3. **Tom / conga**
   Sound type selector
4. **FM**
   CV input attenuator
5. **Pitch decay intensity**
   Depth of the decay pitch modulation envelope
6. **Pitch decay**
   Pitch decay length
7. **Decay time**
   Amp decay length
8. **Tone**
   Low pass filter
9. **Square /sine**
   Sound source selector
10. **Accent**
    Set the increase of amplitude for each accent recieved

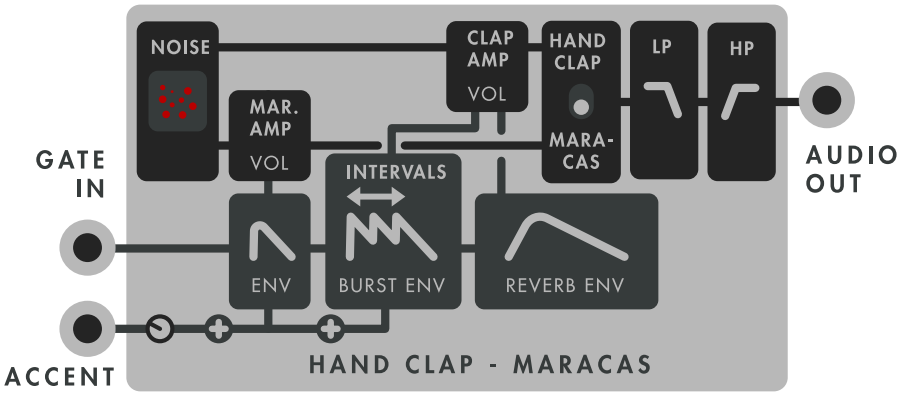
INPUTS

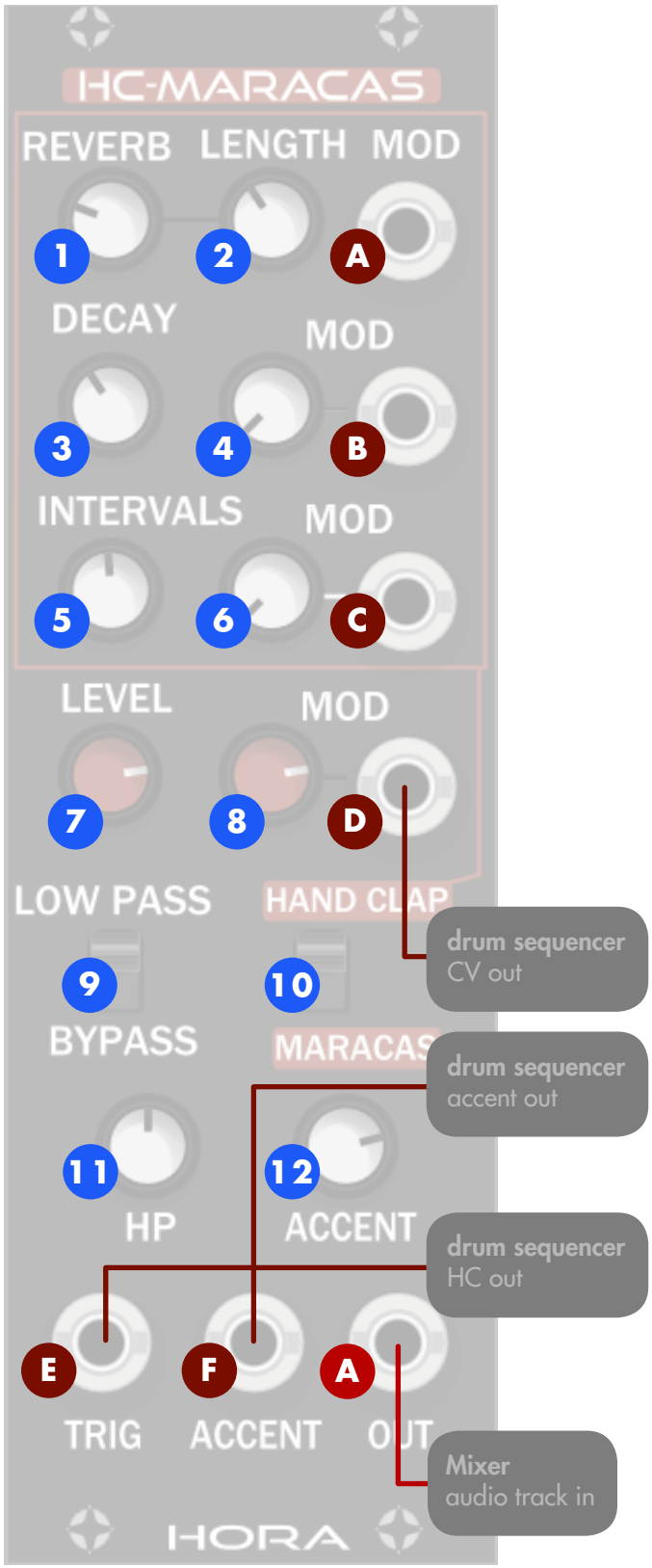
- **A** **Trigger**
  Gate input to trig a drum hit
- **B** **FM**
  Pitch/tune modulation CV input
- **C** **Pitch decay mod**
  Pitch decay length CV input
- **D** **Accent**
  Gate input to trig a louder drum hit

OUTPUTS

- **A** **Out**
  Mixed Toms/conga audio output


HC-MARACAS
REVERB
LENGTH
MOD
DECAY
MOD
INTERVALS
MOD
LEVEL
MOD
LOW PASS
HAND CLAP
BYPASS
MARACAS
HP
ACCENT
TRIG
ACCENT
OUT
HORA


NOISE
CLAP AMP
VOL
HAND CLAP
MARA-CAS
LP
HP
MAR. AMP
VOL
INTERVALS
GATE IN
AUDIO OUT
ENV
BURST ENV
REVERB ENV
ACCENT
HAND CLAP - MARACAS



CONTROLS

1. **Reverb**
   Level of the reverb
2. **Reverb Length**
   Length of the reverb rail
3. **Decay time**
   Amp decay length of the clap
4. **Decay mod**
   Amp decay modulation attenuator
5. **Intervals**
   Time between the 3 claps of the hands clap sound
6. **Intervals mod**
   Interval modulation attenuator
7. **Level**
   Level (volume) of the hand clap/maracas
8. **Level mod**
   Level modulation attenuator
9. **LP/BP**
   Low pass active switch
10. **Hand clap/ maracas**
    Sound type selector
11. **HP**
    High pass filter
12. **Accent**
    Set the increase of amplitude for each accent received.

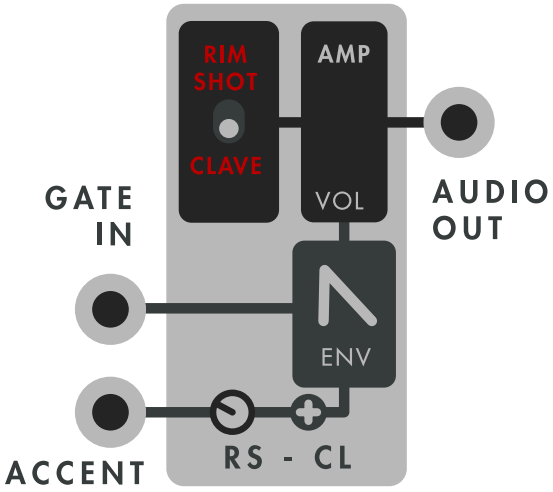
INPUTS

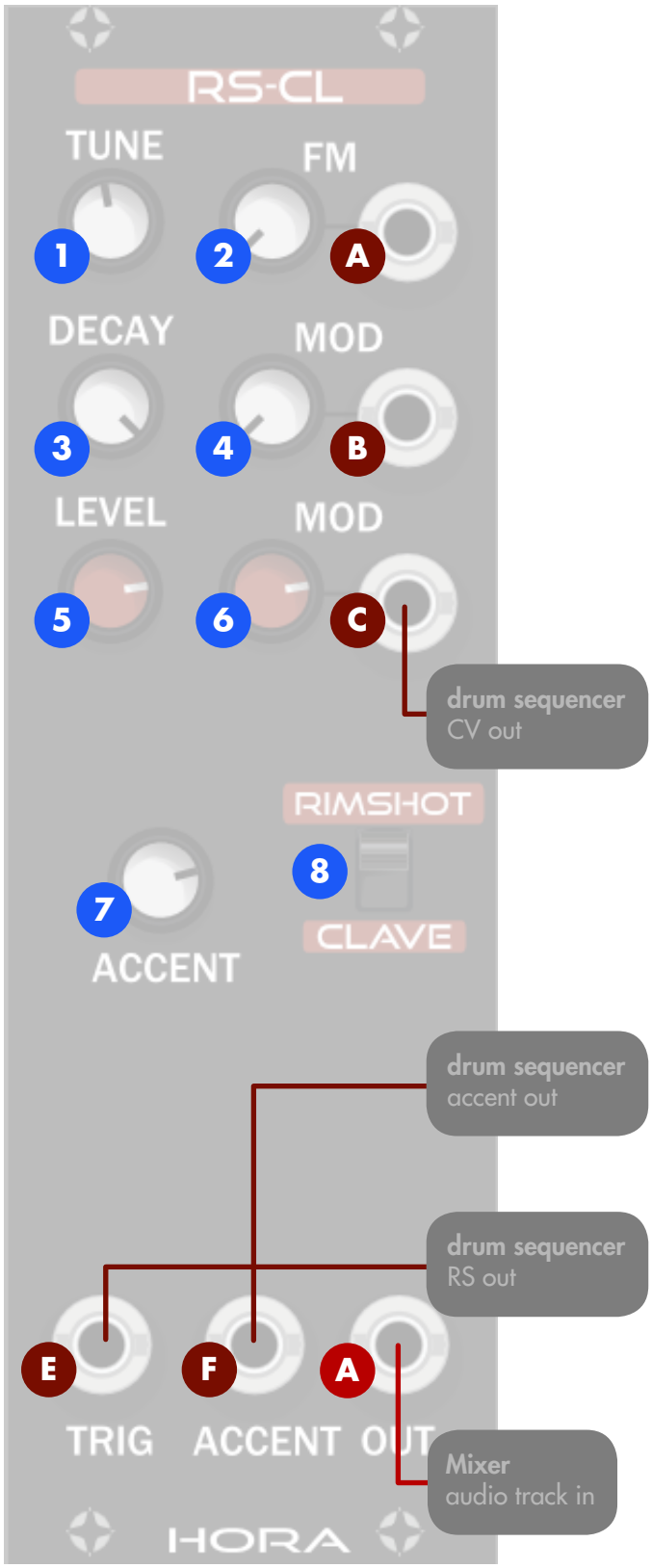
- **A** **Reverb mod**
  Reverb length modulation CV input
- **B** **Decay mod**
  Amp decay modulation CV input
- **C** **Intervals mod**
  Interval time modulation CV input
- **D** **Level mod**
  Level modulation CV input
- **E** **Trigger**
  Gate input to trig a drum hit
- **F** **Accent**
  Gate input to trig a louder drum hit

OUTPUTS

- **A** **Out**
  Hand clap/maracas sound audio output


RS-CL
TUNE
FM
DECAY
MOD
LEVEL
MOD
RIMSHOT
CLAVE
ACCENT
TRIG
ACCENT
OUT
HORA


RIM
SHOT
CLAVE
AMP
VOL
GATE
IN
AUDIO
OUT
ENV
ACCENT
RS - CL



CONTROLS

1. **Tune**
   Pitch/tune of the rs/clave
2. **FM**
   CV input attenuator
3. **Decay time**
   Amp decay length of the rs/clave
4. **Decay mod**
   Amp decay modulation attenuator
5. **Level**
   Level (volume) of the rs/clave
6. **Level mod**
   Level modulation attenuator
7. **Accent**
   Set the increase of amplitude for each accent received.
8. **Rimshot/clave**
   Sound type selector
   In the Vult DSP edition, a softbell is proposed instead of a rimshot

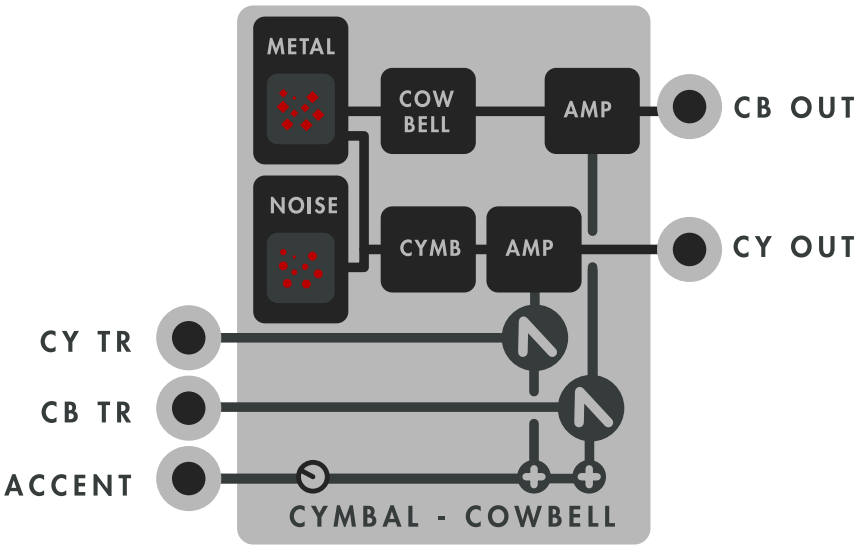
INPUTS

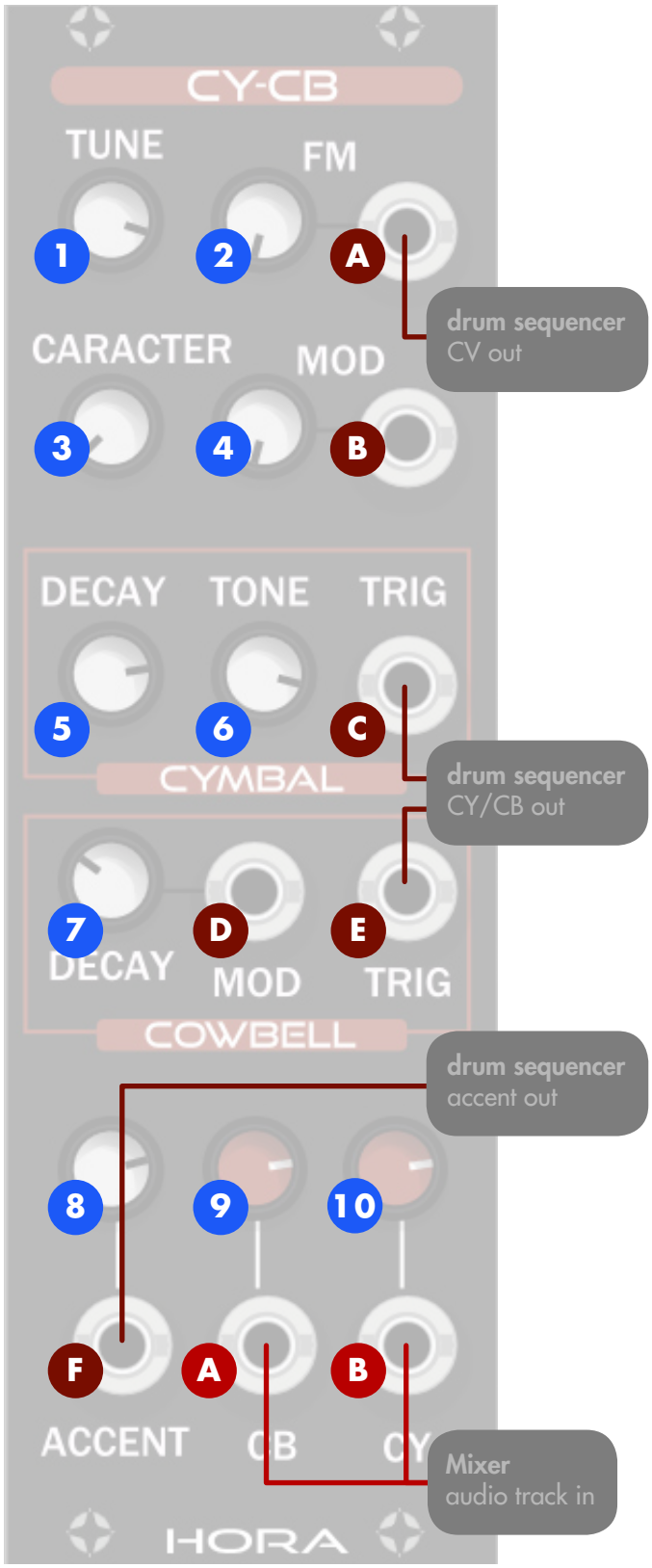
- **A** FM
  Pitch/tune modulation CV input
- **B** Decay mod
  Amp decay modulation CV input
- **C** Level mod
  Level modulation CV input
- **E** Trigger
  Gate input to trig a drum hit
- **F** Accent
  Gate input to trig a louder drum hit

OUTPUTS

- **A** Out
  Rimshot/softbell/clave sound audio output


CY-CB
TUNE
FM
CARACTER
MOD
DECAY
TONE
TRIG
CYMBAL
DECAY
MOD
TRIG
COWBELL
ACCENT
CB
CY
HORA


METAL
COW BELL
AMP
CB OUT
NOISE
CYMB
AMP
CY OUT
CY TR
CB TR
ACCENT
CYMBAL - COWBELL



CONTROLS

1. **Tune**
   Pitch/tune of the cymbal and cowbell
2. **FM**
   CV input attenuator
3. **Character**
   modifying the metallic noise harmonic content
4. **Character mod**
   Character modulation attenuator
5. **Cymbal decay**
   Amp decay length of the cymbal
6. **Tone**
   High pass filter
7. **Cowbell decay**
   Amp decay length of the cowbell
8. **Accent**
   Set the increase of amplitude for each accent received.
9. **Level CB**
   Level (volume) of the Cowbell
10. **Level CY**
    Level (volume) of the Cymbal

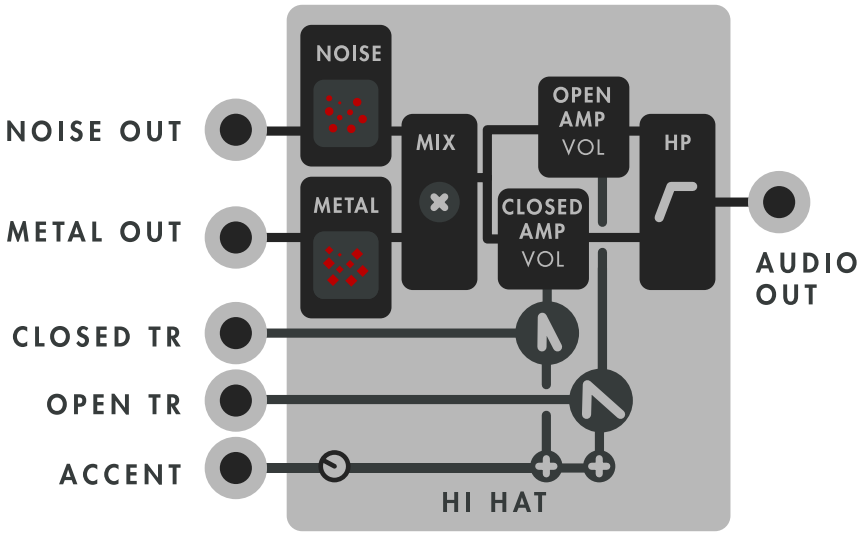
INPUTS

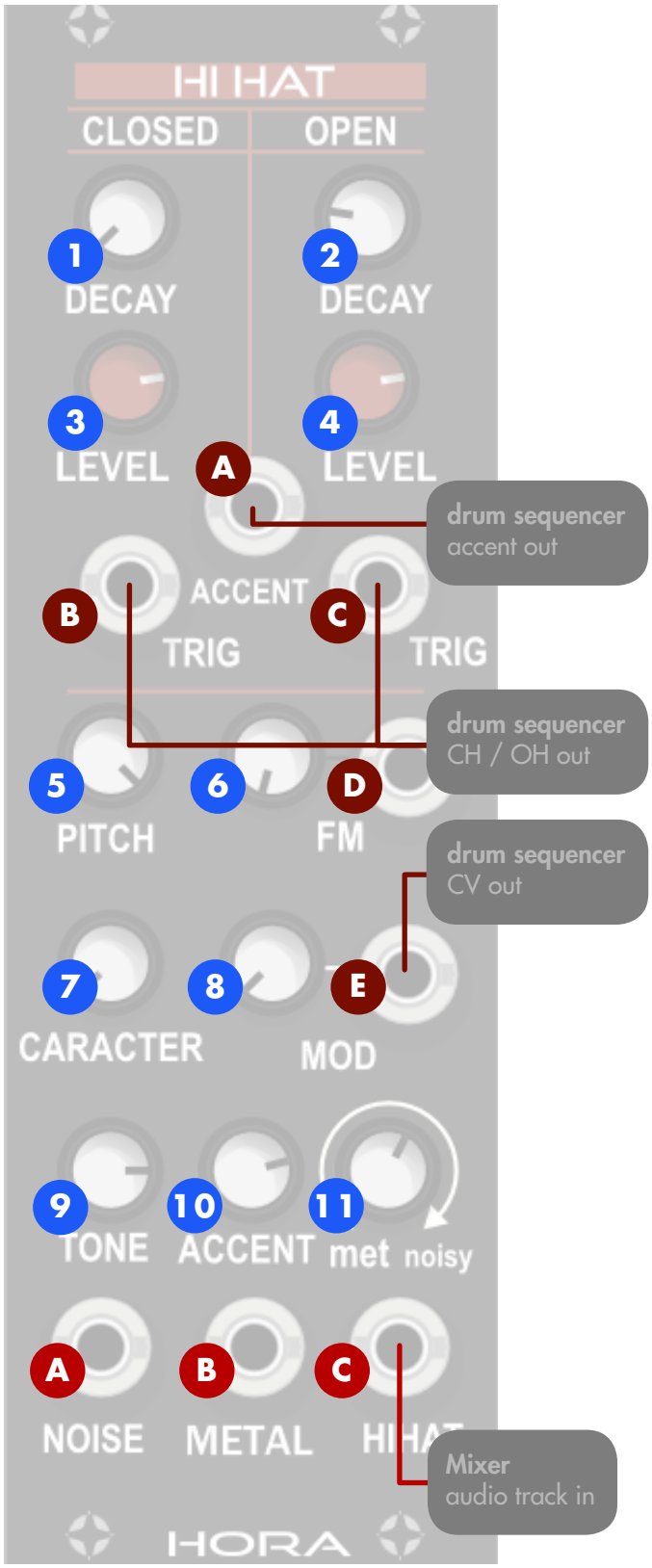
- **A** FM
  Pitch/tune modulation CV input
- **B** Character mod
  character modulation CV input
- **C** Cymbal trigger
  Gate input to trig a drum hit
- **D** Cowbell decay mod
  Amp decay modulation CV input
- **E** Cowbell trigger
  Gate input to trig a drum hit
- **F** Accent
  Gate input to trig a louder drum hit

OUTPUTS

- **A** CB
  Cowbell sound audio output
- **B** CY
  Cymbal sound audio output


HI HAT
CLOSED
OPEN
DECAY
DECAY
LEVEL
LEVEL
ACCENT
TRIG
TRIG
PITCH
FM
CARACTER
MOD
TONE
ACCENT
met
noisy
NOISE
METAL
HIHAT
HORA


NOISE OUT
METAL OUT
CLOSED TR
OPEN TR
ACCENT
NOISE
METAL
MIX
OPEN AMP VOL
CLOSED AMP VOL
HP
AUDIO OUT
HI HAT



CONTROLS

1. **Closed decay**
   Amp decay length of the closed hi hat
2. **Open decay**
   Amp decay length of the open hi hat
3. **Closed level**
   Level (volume) of the closed hi hat
4. **Open Level**
   Level (volume) of the open hi hat
5. **Tune**
   Pitch/tune of the hi hat
6. **FM**
   CV input attenuator
7. **Character**
   modifying the metallic noise harmonic content
8. **Character mod**
   Character modulation attenuator
9. **Tone**
   High pass filter
10. **Accent**
    Set the increase of amplitude for each accent received.
11. **Metal - noise**
    white and metallic noise mix

INPUTS

- **A** Accent
  Gate input to trig a louder drum hit
- **B** Closed trigger
  Gate input to trig a drum hit
- **C** Open trigger
  Gate input to trig a drum hit
- **D** FM
  Pitch/tune modulation CV input
- **E** Character mod
  character modulation CV input

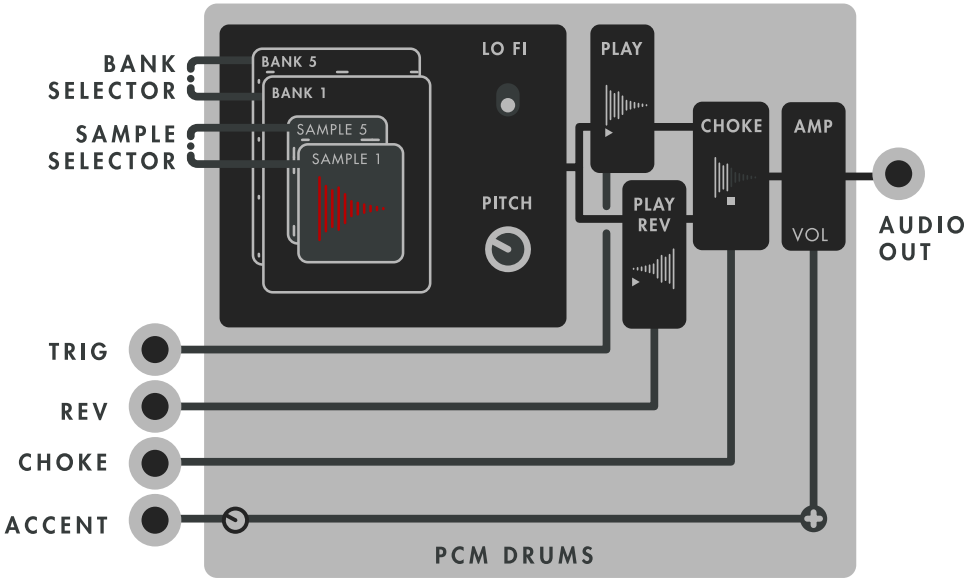
OUTPUTS

- **A** Noise out
  constant white noise audio output
- **B** Metal out
  constant metallic noise audio output
- **C** Hi hat out
  Hi hat sound audio output

HORA MUSIC

USER MANUAL

PCM DRUMS



Hora PCM Drums is a collection of modules that emulate the sounds and features of the classic sample based drum machines of the 80's.

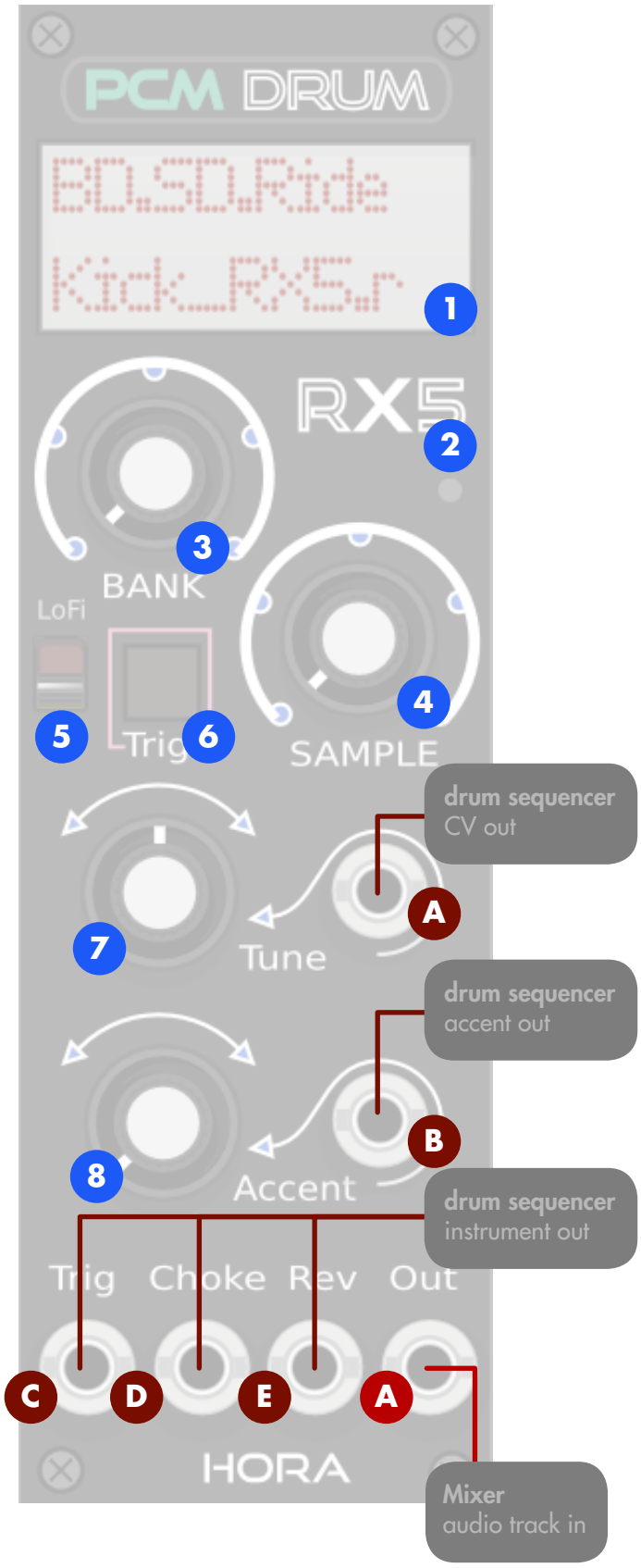
In addition to the expected controls (tune and accent), they also propose some advanced features such as reverse playing, CV control of the drum's tune and the choke on other instrument than hi hat.

The samples are carefully selected 8 bit PCM files that can be read with or without interpolation (LoFi mode). the bundle contains 9 modules with 5 banks of 5 samples for each so 225 samples that covering the sound of:

- Linndrum
- Oberheim DMX
- Roland TR707
- Roland TR626
- Yamaha RX5
- Hammond Sakata
- Emu drumulator
- Korg DDD1

It also features samples from other machines to complete the set of 25 samples per modules:

- Roland TR909,
- Yamaha Rx21,
- MXR-185,
- Sequential TOM
- Korg PSS 50



CONTROLS

1. **Display**
   Shows the selected bank and sample
2. **Model**
   Reference to the original drum machine
3. **Bank**
   type of sounds
4. **Sample**
   selected sound to be played
5. **LoFi**
   interpolation playback of sample
6. **Trig**
   Manual control to trig a sample
7. **Tune**
   Pitch/tune of the sample
8. **Accent**
   Set the increase of amplitude for each accent recieved

INPUTS

- **A** **Tune**
  Pitch/tune modulation CV input
- **B** **Accent**
  Gate input to trig a louder drum hit
- **C** **Trig**
  Gate input to play a sample
- **D** **Choke**
  Gate input to stop the playback of a sample
  Useful to stop the open hihat when a closed one is playing.
- **E** **Rev**
  Gate input play a sample backward

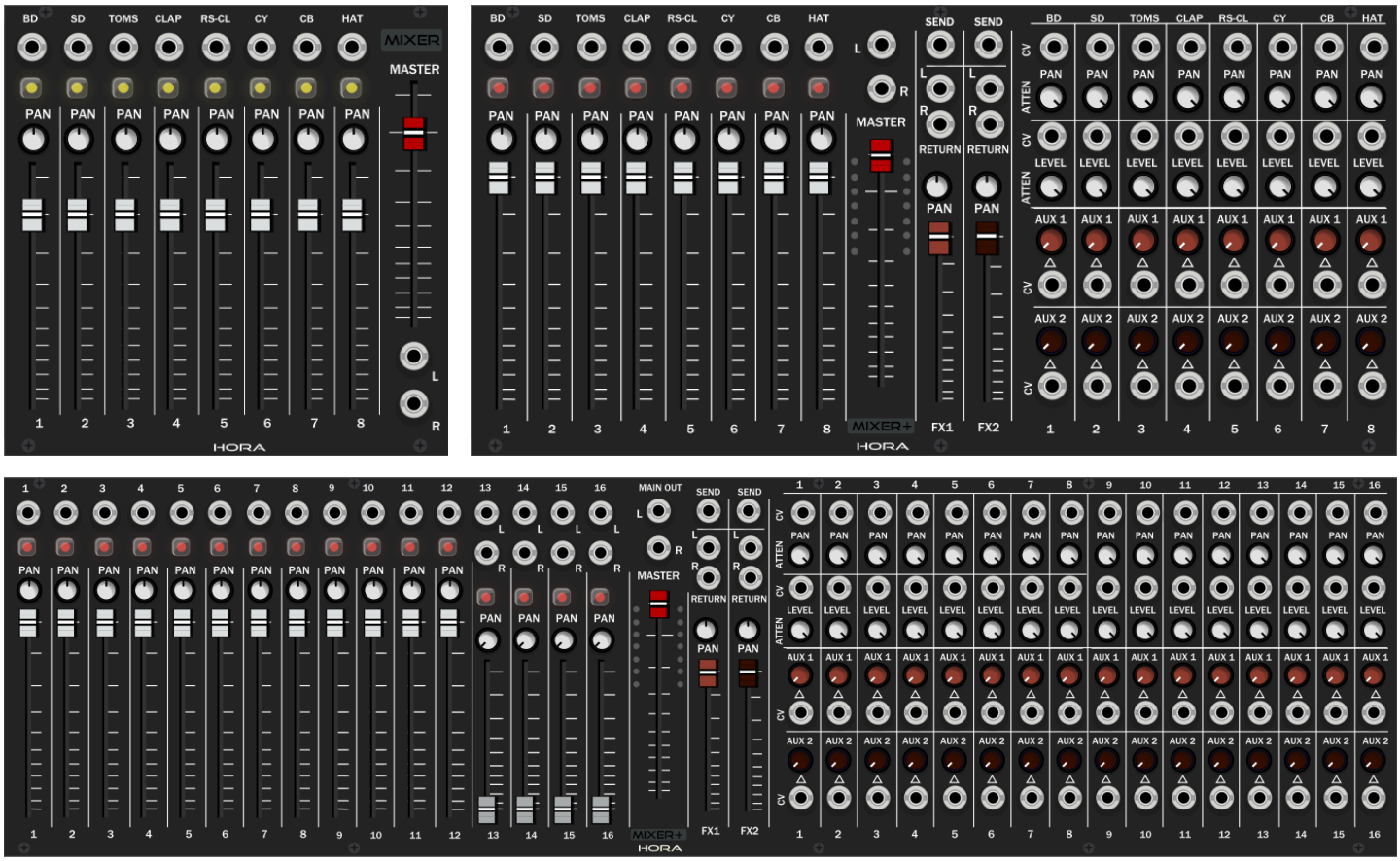
OUTPUTS

- **A** **Noise out**
  constant white noise audio output

HORA MUSIC

USER MANUAL

MIXERS



The mixer plugin includes 3 audio consoles:

MIXER

- 8 mono voices
- pan
- active-mute button for each track,
- stereo out

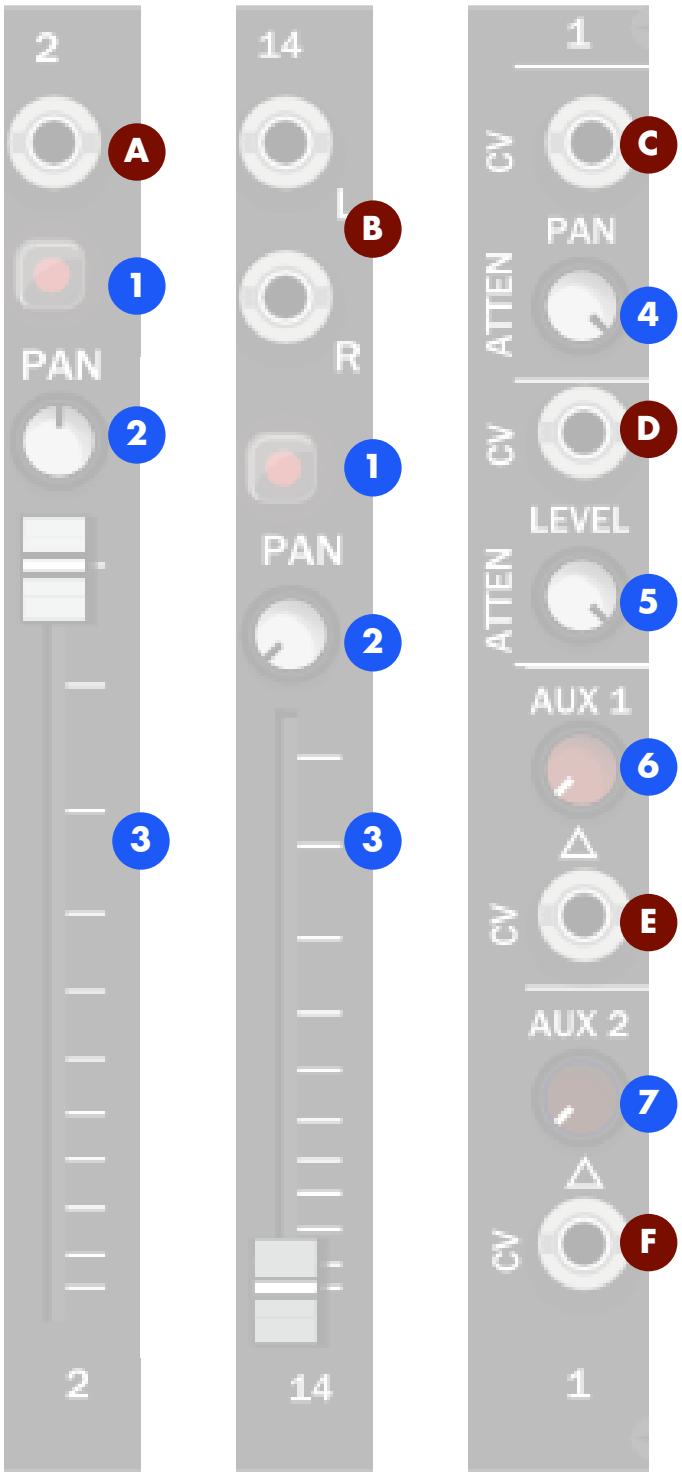
MIXER + 1

- All features of MIXER
- 2 fx loops,
- CV inputs for levels, pan and the FX sends.

MIXER + 2

- All features of MIXER + 1
- 12 mono voices
- 4 stereo voices

TRACK CONTROL



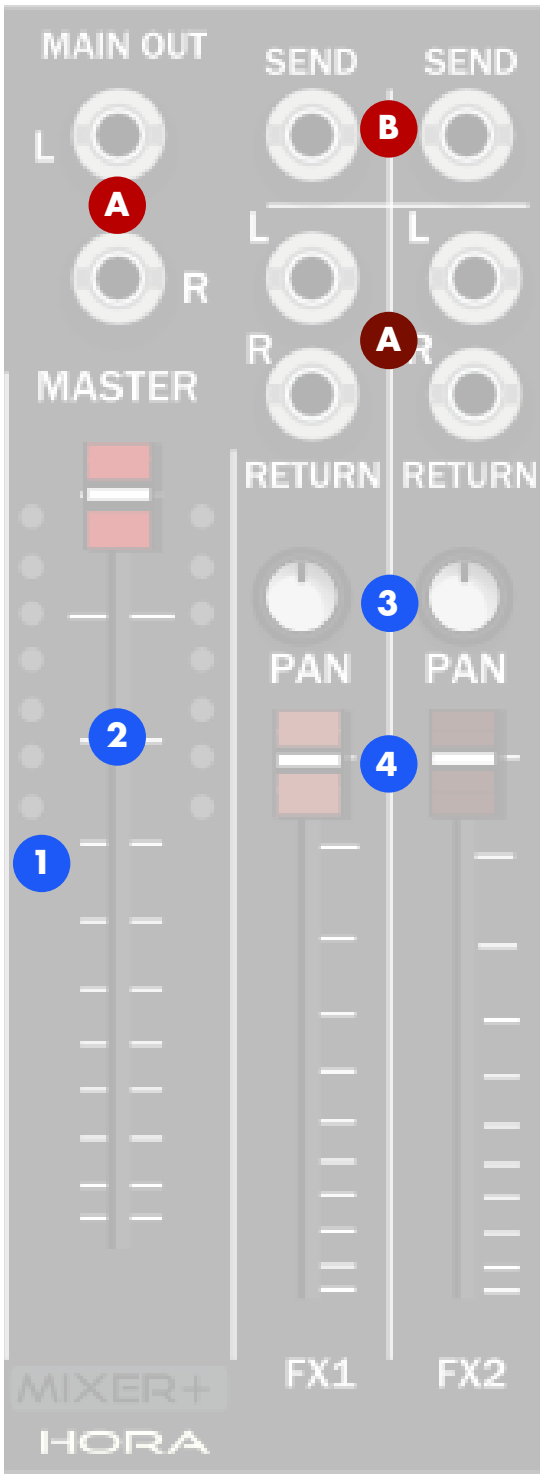
CONTROLS

1. **Active**
   turn off to mute the track
2. **Pan**
   set the stereo position in the mix
3. **Volume fader**
   set the volume of the track in the mix
4. **Pan attenuator**
   stereo CV control attenuator
5. **Level attenuator**
   volume CV control attenuator
6. **Aux 1**
   send level of the track to aux1
7. **Aux 2**
   send level of the track to aux2

INPUTS

- **A** Mono in
  mono track audio input
- **B** Stereo in
  stereo left and right audio inputs
- **C** Pan CV
  stereo CV input
- **D** Level CV
  volume CV input
- **E** Aux 1 CV
  send level to aux1 CV input
- **F** Aux 2 CV
  send level to aux2 CV input

MASTER AND AUX CONTROL



CONTROLS

1. **Meters**
   meters for the output stereo mix
2. **Master level**
   level of the output stereo mix
3. **Aux pan**
   set the stereo position of each return track
4. **Aux pan**
   set the stereo position of each return track

INPUTS

- **A** **Return**
  stereo input for each return track

OUTPUTS

- **A** **Master**
  Stereo mix output
- **B** **Send**
  Aux mix 1 and 2 output