VC T-NETWORKS

ADDAC104

ATTENUVERTER

L / M / H

ATTENUVERTER

L / M / H

ATTENUVERTER

L / M / H

FREQUENCY 4

ATTENUVERTER

L / M / H

MIX OUT

MIX

VOLUME

TRIG. IN

CV INPUT 1

OUTPUT 1

TRIG. IN 2

CV INPUT 2

OUTPUT 2

TRIG. IN 3

CV INPUT 3

OUTPUT 3

TRIG. IN 4
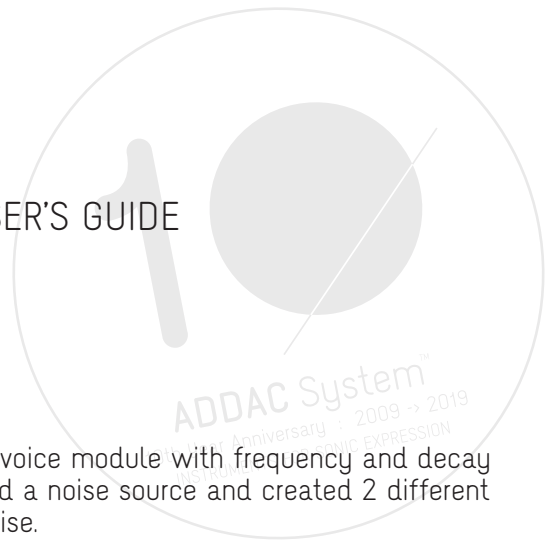
CV INPUT 4

OUTPUT 4

2019
ADDAC SYSTEM

ADDAC106 T-NOISEWORKS

USER'S GUIDE . REV01

March.2020

Welcome to:
ADDAC106 T-NOISEWORKS USER'S GUIDE
Revision.01 March.2020

OVERALL FEATURES

This is the last module in our T-Networks series, a straight forward 4 voice module with frequency and decay controls for each of the voices. As the name already unveils we added a noise source and created 2 different circuits that explores the timbre of a t-network when used to filter noise.

There are 2 different circuits in this module, voices 1 to 3 have a pre-vca t-network filter while in voice 4 the t-networks filter applied post-vca.

At each voice input there's a switch which sets which type of input to use, this signal will be used to control an internal VCA hence why the type of setting defined here is important:
1. Trigger - Any incoming CV will be converted into a 1ms trigger as soon as it crosses it's fixed threshold.
2. Mute - This disconnects then incoming signal effectivelly muting the voice.
3. Envelopes - This can be used with CV sources as well as Gate sources and simply follows the input signal.

This incoming signal will then be processed by a slew circuit which adds a decay factor allowing the user to set the "Tail" of each voice.

Trigger mode is mostly dedicated for percussive sounds while the Envelope mode is open to any external envelope control and able to control noise swooshes, swirls, crackles and pops simply out of t-networks filtered noise.

Audio inputs are also welcomed to be used as a Trigger/Envelope input, in fact the results of using this method had us all extremelly surprised, so please do try it out!

Diferences between voices:
The first 3 voices also feature a Timbre selector switch: Hat/Snare
In Snare mode all frequencies coming from the t-networks filter pass thru to the output .
In Hat mode it adds a High Pass circuit which removes the mid/bottom frequencies (characteristic of the snare strike) creating a higher spectrum output which is closer to a Hat timbre.
All of these 3 voices are also differently tuned from each other to offer more timbrical options.

Voice 4 is closer to a typical t-networks circuit but this time peculiar one where the noise is gated by the vca and then sent through the t-networks filter.

Hat and Snare are terms used very looselly here, they are timbrical references and do not in any shape or form try to effectivelly replicate the complex timbres of a real world Hat or Snare.

This module will also be available as a full DIY kit.

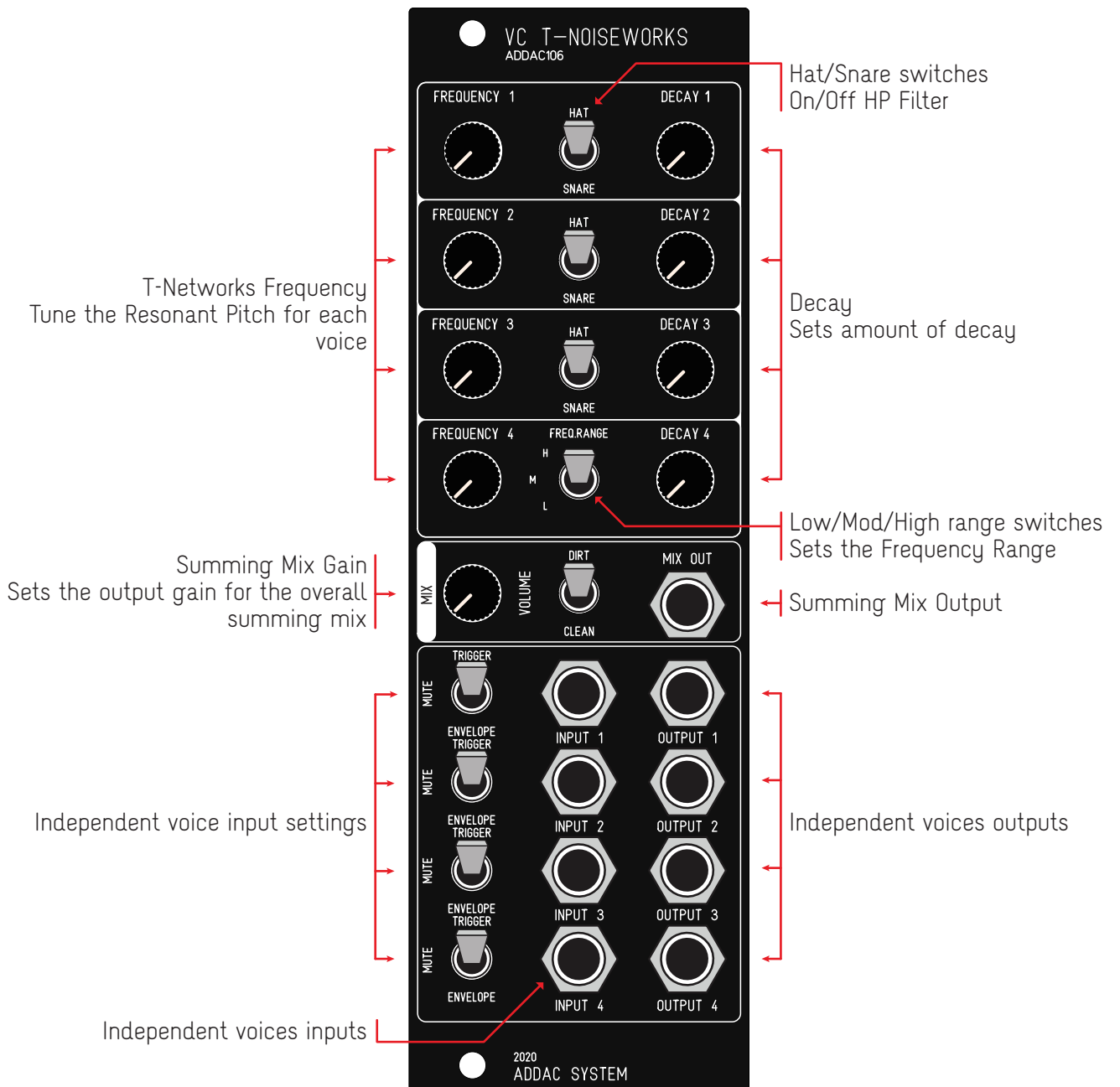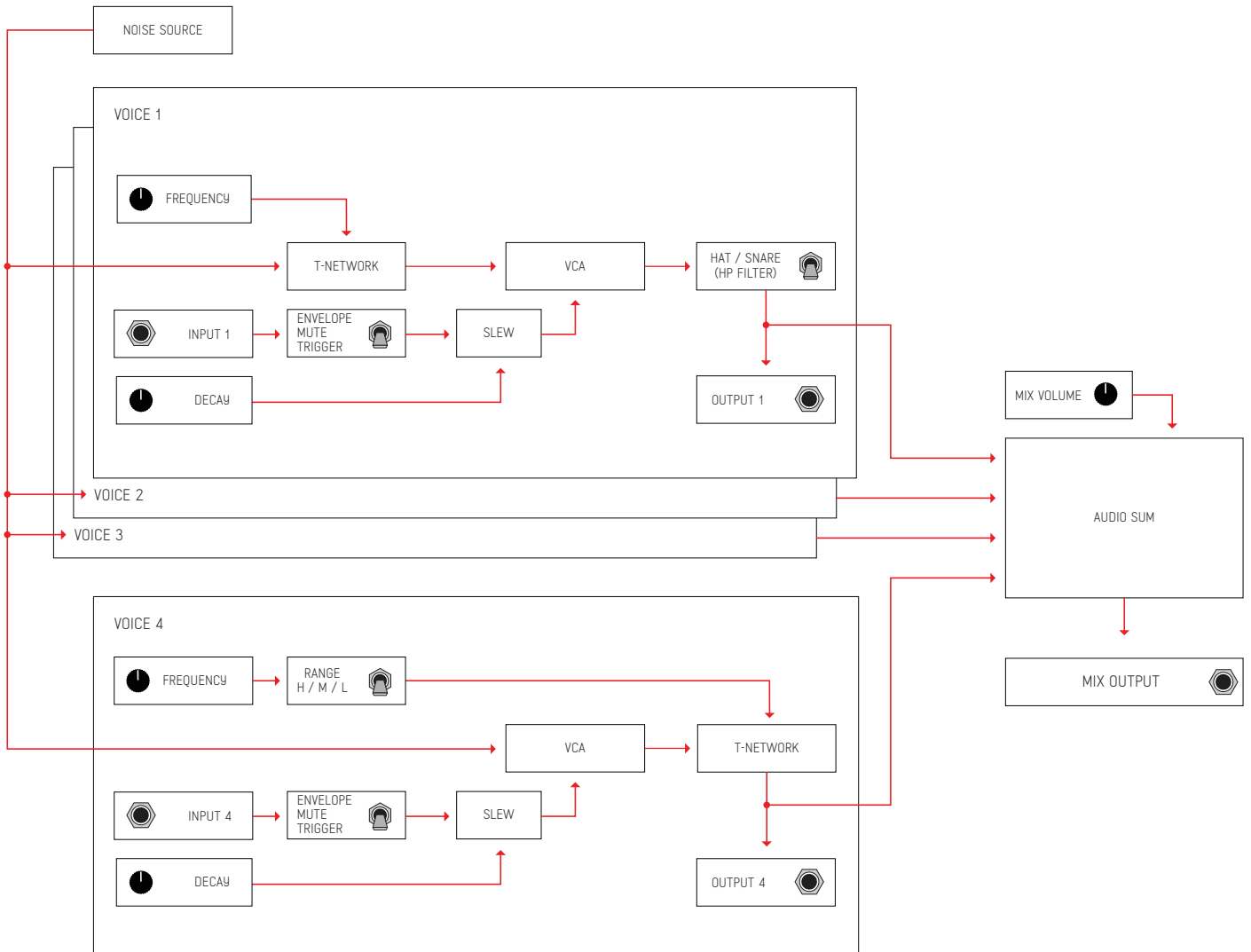| Features;	Tech Specs:
4 Voices each with:	4HP
Frequency control	4cm deep
Decay control	40mA +12V
Timbre type, Hat/Snare (Voice 1 to 3)	40mA -12V
Frequency Range Switch, Low/Mod/High (Voice 4)	
Input	
Audio Output	

Also and overall Summing Mix output with Volume control and 2 diferent output types (Normal/Dirt)

CONTROLS DESCRIPTION

VC T−NOISEWORKS
ADDAC106

FREQUENCY 1   HAT   DECAY 1
SNARE

FREQUENCY 2   HAT   DECAY 2
SNARE

FREQUENCY 3   HAT   DECAY 3
SNARE

FREQUENCY 4   FREQ.RANGE   DECAY 4
H
M
L

MIX   VOLUME   DIRT   MIX OUT
CLEAN

MUTE   TRIGGER
ENVELOPE   INPUT 1   OUTPUT 1
TRIGGER

MUTE   ENVELOPE   INPUT 2   OUTPUT 2
TRIGGER

MUTE   ENVELOPE   INPUT 3   OUTPUT 3
TRIGGER

MUTE   ENVELOPE   INPUT 4   OUTPUT 4

2020
ADDAC SYSTEM

Hat/Snare switches
On/Off HP Filter

Decay
Sets amount of decay

T-Networks Frequency
Tune the Resonant Pitch for each
voice

Low/Mod/High range switches
Sets the Frequency Range

Summing Mix Gain
Sets the output gain for the overall
summing mix

Summing Mix Output

Independent voice input settings

Independent voices outputs

Independent voices inputs

ADDAC106
T-NOISEWORKS SIGNAL FLOW DIAGRAM

NOISE SOURCE

VOICE 1

FREQUENCY

T-NETWORK → VCA → HAT / SNARE (HP FILTER)

INPUT 1 → ENVELOPE MUTE TRIGGER → SLEW

DECAY

OUTPUT 1

VOICE 2

VOICE 3

VOICE 4

FREQUENCY → RANGE H / M / L

VCA → T-NETWORK

INPUT 4 → ENVELOPE MUTE TRIGGER → SLEW

DECAY

OUTPUT 4

MIX VOLUME

AUDIO SUM

MIX OUTPUT

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