Oenkenstein Audio

RUMBLIT BIT CRUSHER EFFECT

Operation Manual

RUMBLIT Bit Crusher Effect Operation Manual

Content

1 Introduction

Rumblit Bit Crusher Effect is a digital effects processor with different types of filtering and distortion.

Front panel:

Back panel:

Included are 28 patches.

1.1 Description

This device in the Rumble series is a bit crusher effect. Rumblit Bit Crusher Effect is a pedal board with 3 distortion units: A bit crusher, multi band distortion, saturation and 2 filter units with 3 different filtering types. The back panel provides CV inputs. This Rack Extension comes with 30 patches.

Rumblit Bit Crusher Effect uses 6 devices to generate sound:

- Filty, a filtering device.
- Cruzzer, a bit crusher.
- Mudix, a multi band distortion unit.
- Saturn, for saturation.
- BEQ, another filtering device
- Master, to control the master output level.

You also can change the routing order of the effects.

This device is for everyone who wants to:

- Use the Cruzzer bit crusher to downgrade audio to a desired sample rate and bit depth.
- Use the Mudix multi band distortion curve to add 200 different distortion types on specific frequency bands.
- Use the Mudix multi band distortion panning as a stereo widener.
- Use the Saturn saturation drive to add overtones, distortion and grunge.
- Use the Filty and BEQ filtering for precise filtering before and after distortion.
- Go modular. Rumblit Bit Crusher Effect has CV inputs on the back panel.

The Rumble series derives its name from the legendary guitar 101 hero and inventor of the power chord: Link Wray, who poked a pencil in an amplifier speaker to get a gritty, distorted sound.

1.2 Specifications

- Minimal requirements for the Rack Extension: Duo Core based computer with at least 2 GHz processor, 4 GB of RAM and Reasonstudios Reason 10.2 or higher running on Windows or Mac OSX.
- Type of device: Digital effects processor.
- Effects:
    1. Filty, high pass 12 filter and low pass 24 filter.
    2. Cruzzer, bit crusher.
    3. Mudix, multi band distortion.
    4. Saturn, saturation.
    5. BEQ, low pass 12 filter.
- CV Inputs: 24.
- A stereo audio input and a stereo audio output.

2 Front of the device

2.1 Panel overview

- **Bypass / On / Off**.
- **Patch Browser**.
- **Logo**.
- **Device name**.
- **Filters** panel (1) with:
    - High pass 12 filter.
    - Low pass 24 filter.
- **Bit Crusher** panel (2).
- **Multi Band Distortion** panel (3).
- **Saturation** panel (4).
- **Filter** panel (5) with:
    - Low pass 12 filter.
- **Master** panel (6).

3 Panels front

Rumblit Bit Crusher Effect is divided in panels, each with one or more sections. A section displays a set of various automatable controllers like knobs, pop up menus and on / off buttons or switches.

3.1 Panel 1: High Pass 12 and Low Pass 24 filters

The filters panel has 3 sections. The High Pass 12 Filter section (1 - 3), the Low Pass 24 Filter section (4 - 6) and the Route Filty To section (7).

3.1.1 Section 1: High Pass 12 Filter

The high pass 12 filter allows altering frequency and resonance before distortion takes place. for example: If you want to boost some bass before the distortion set the High Cutoff to around 40 to 80 Hz.

- **1: High Pass 12 Filter Switch**: Determines whether the high pass filter is added to the signal chain (Scale: On / Off. Default: Off).

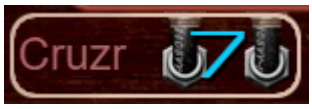
- **2: High Pass 12 Filter Cutoff**: Determines the cutoff frequency (Scale: 20,0 Hz / 25,0 kHz. Default: 1,00 kHz).
- **3: High Pass 12 Filter Resonance**: Determines the strength of the resonant peak at the cutoff frequency (Scale: 0 % / 100 %. Default: 0 %).

3.1.2 Section 2: Low Pass 24 Filter

The low pass 24 filter allows altering frequency and resonance before distortion takes place.

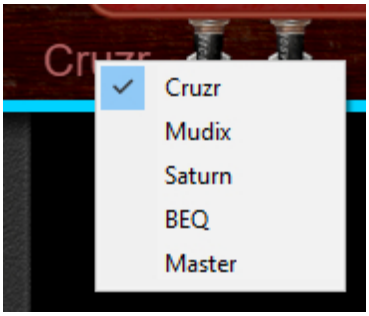
- **4: Low Pass 24 Filter Switch**: Determines whether the low pass filter is added to the signal chain (Scale: On / Off. Default: Off).
- **5: Low Pass 24 Filter Cutoff**: Determines the cutoff frequency (Scale: 20,0 Hz / 25,0 kHz. Default: 1,00 kHz).
  6: Low Pass 24 Filter Resonance: Determines the strength of the resonant peak at the cutoff frequency (Scale: 0 % / 100 %. Default: 0 %).

3.1.3 Section 3: Route Filty To



The output of Filty can be routed to the other devices. Please note the following rule: Filty is always the first device in the signal path and Master must always be the last device in the signal path.

- **7: Route Filty To**: Determines to which device the output of Filty is routed to. Click on the device name next to the virtual cables at the bottom and a pop up menu will appear to choose the desired destiny (Options: Cruzr, Mudix, Saturn, BEQ and Master. Default: Cruzr).

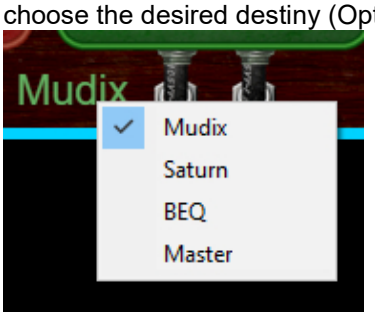


3.2 Panel 2: CRUZZER Bit Crusher

The Cruzzer bit crusher panel has 1 section (1 - 8). The bit crusher reduces the sample rate and / or bit depth of the audio signal, making the sound 'lofi'.

3.2.1 Section 1: Bit Crusher controllers

- **1: Bit Crush Switch**: Determines whether the bit crusher is added to the signal chain (Scale: On / Off. Default: Off).
- **2: Bit Crush Sample Rate**: Determines the downsampling rate. (Scale: 2,00 kHz / 50,0 kHz. Default: 10 kHz).
- **3: Bit Crush Bit Depth**: Determines the bit reduction in bits. (Scale: 2 / 16. Default: 8).
- **4: Bit Crush Mix**: Determines the dry / wet mix (Scale: 0 % / 100 %. Default: 100 %).
- **5: Bit Crush Jitter**: Determines the random modulation of the downsampling rate (Scale: 0 % / 50 %. Default: 0 %).
- **6: Bit Crush Bit Bias**: Determines the offset to adjust the quietest audio that jumps from one bit level to the next (Scale: 0 % / 100 %. Default: 50 %).
- **7: Bit Crush Slew Rate**: Limits the change from one sample to the next. Simulates ADPCM / companding converters (Scale: 0 % / 100 %. Default: 50 %).
- **8: Route Cruzzer To**: Determines to which device the output of Cruzzer is routed to. Click on the device name next to the virtual cables at the bottom and a pop up menu will appear to choose the desired destiny (Options: Mudix, Saturn, BEQ and Master. Default: Mudix).

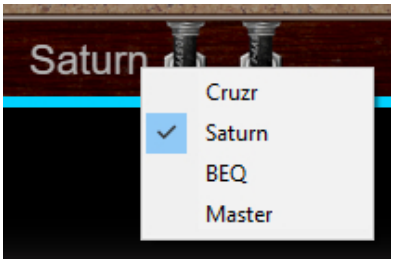


3.3 Panel 3: *Mudix* Multi Band Distortion

The multiband distortion provides a stereo mix of four distortions, each preceded by a multi-mode filter.

3.3.1 Section 1: Multiband Distortion controllers

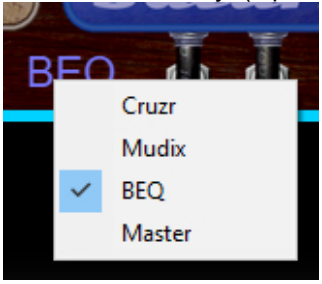
- **1: Multiband Distortion Switch**: Turns the Mudix device on or off. (Scale: On / Off. Default: Off).
- **2: Multiband Distortion Band 1 to 4 Switch**: Switches the bands 1 to 4 on and off (Scale: On / Off. Default: On).
- **3: Multiband Distortion Band 1 to 4 Drive**: Determines the bands 1 to 4 distortion input drive (Scale: -∞ dB / +12,0 dB. Default: -24,1 dB).
- **4: Multiband Distortion Band 1 to 4 Frequency**: Adjusts the cutoff frequency of the pre-distortion filter (Scale: 31,2 Hz / 8,00 kHz. Default band 1: 124 Hz. Default Band 2: 255 Hz. Default Band 3: 500 Hz. Default Band 4: 2,00 kHz).
- **5: Multiband Distortion Band 1 to 4 Resonance**: Adjusts the filter resonance. Values below 11 % result in a notch rather than a peak (Scale: 0 % / 100 %).
- **6: Multiband Distortion Band 1 to 4 Tilt**: Adjusts the filter mode from highpass, through notch or bandpass, to highpass (Scale: 0 % / 100 %. Default band 1: 25 %. Default Band 2: 50 %. Default Band 3: 75 %. Default Band 4: 100 %).
- **7: Multiband Distortion Band 1 to 4 Curve**: Selects different distortion curves. There are in total 200 distortion curves, see also chapter 9 (Scale: -100 / 100. Default: 0).
- **8: Multiband Distortion Band 1 to 4 Pan**: Determines the stereo position of the distorted signal. Also fades the distortion input between the left and right inputs to allow true stereo processing (Scale: -100 / 100. Default: 50).
- **9: Multiband Distortion Band 1 to 4 Level**: Determines the distortion output volume (Scale: -∞ dB / 0,0 dB. Default: -12,0 dB).
- **10: Multiband Distortion Low**: Cuts distorted low frequencies and let's dry lows pass through (Scale 10,0 Hz / 1000 Hz. Default: 10 Hz).
- **11: Multiband Distortion High Bypass**: Cuts distorted high frequencies and lets dry highs pass through (Scale 1, 00 kHz / 25,0 kHz. Default: 25 kHz).
- **12: Multiband Distortion Mix**: Determines the dry / wet mix (Scale: 0 % / 100 %. Default: 100 %).
- **13: Route Mudix To**: Determines to which device the output of Mudix is routed to. Click on the device name next to the virtual cables at the bottom and a pop up menu will appear to choose the desired destiny. (Options: Cruzr, Saturn, BEQ and Master. Default: Saturn).



3.4 Panel 4: Saturn Saturation

3.4.1 Section 1: Drive, Threshold, Density and Hi Bypass

- **1: Saturation Switch**: Turns the Saturn device on or off. (Scale: On / Off. Default: Off).
- **2: Saturation Drive**: Increases the input level resulting in more saturation and more level (Scale: -∞ dB / +40,0 dB. Default: : -∞ dB).
- **3: Saturation Threshold**: Determines the audio level at which saturation occurs. Reduce for more distortion without more level (Scale: -∞ dB / 0,0 dB. Default: -36,1 dB).
- **4: Saturation Density**: Adjust the distortion curve from concave to convex (Scale: 0 % / 100 %. Default: 75 %).
- **5: Saturation High Bypass**: Determines the crossover to allow high frequencies through unprocessed (Scale:40.0 Hz / 16,0 kHz. Default: 16,0 kHz).
- **6: Route Saturn To**: Determines to which device the output of Saturn is routed to. Click on the device name next to the virtual cables at the bottom and a pop up menu will appear to choose the desired destiny. (Options: Cruzr, Mudix, BEQ and Master. Default: BEQ).

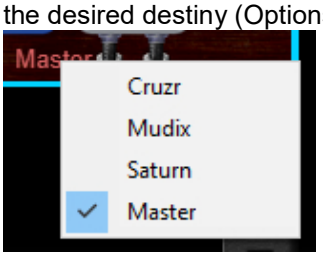


3.5 Panel 5: BEQ Low Pass 12 Filter

The low pass 12 filter allows altering frequency and resonance before or after distortion takes place.

3.5.1 Section 1: Low Pass 12 Filter controllers

- **1: Low Pass 12 Filter Switch**: Turns the BEQ device on or off. (Scale: On / Off. Default: Off).
- **2: Low Pass 12 Filter Cutoff**: Determines the cutoff frequency (Scale: 20,0 Hz / 25,0 kHz. Default: 1,00 kHz).
- **3: Route BEQ To**: Determines to which device the output of BEQ is routed to. Click on the device name next to the virtual cables at the bottom and a pop up menu will appear to choose the desired destiny (Options: Cruzr, Mudix, Saturn and Master. Default: Master).



3.6 Panel 6: Master

3.6.1 Section 1: Master Output Level

- **1: Master Level**: Determines the master output level (Scale: -∞ dB / +12,0 dB. Default: 0,0 dB).

4 Back of the device

4.1 Panel overview

- **Logo**.
- **Device name**.
- **Routing icons**.
- **Filters** panel (1) with:
  - Audio Inputs Left and Right.
  - High pass 12 filter CV Inputs.
  - Low pass 24 filter CV Inputs.
- **Bit Crusher** panel (2).
- **Multi Band Distortion** panel (3):
- **Saturation** panel (4) with:
- **Filter** panel (5) with:
  - Low pass 12 filter CV Input.
- **Master** panel (6) with:
  - Audio Outputs Left and Right.

5 Panels back

Rumblit Bit Crusher Effect is divided in panels, each with one or more sections. A section displays a set of various non - automatable controllers like Audio Input, Audio Output, CV input sockets and trim knobs.

5.1 Panel 1: Audio Inputs and FILTY High Pass 12 and Low Pass 24 filters CV Inputs

The filters panel has 3 sections. Audio Input (1) and High Pass 12 Filter CV Inputs (2 - 3) and Low Pass 24 Filter CV Inputs (4 - 5).

5.1.1 Section 1: Audio Input Left and Right

- **1: Audio Left In and Audio Right In**: Audio input sockets.

5.1.2 Section 2: High Pass 12 Filter CV Inputs

- **2: High Pass 12 Filter Cutoff CV Input**: Control Voltage input socket to control the High Pass 12 Filter Cutoff. The trim knob next to the input socket determines the amount of CV applied.
- **3: High Pass 12 Filter Resonance CV Input**: Control Voltage input socket to control the High Pass 12 Filter Resonance. The trim knob next to the input socket determines the amount of CV applied.

5.1.3 Section 3: Low Pass 24 Filter CV Inputs

- **4: Low Pass 24 Filter Cutoff CV Input**: Control Voltage input socket to control the Low Pass 24 Filter Cutoff. The trim knob next to the input socket determines the amount of CV applied.
- **5: Low Pass 24 Filter Resonance CV Input**: Control Voltage input socket to control the Low Pass 24 Filter Resonance. The trim knob next to the input socket determines the amount of CV applied.

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5.2 Panel 2: CRUZZER Bit Crusher CV Inputs

5.2.1 Section 1: Sample rate, Bit depth and Mix CV Inputs

- **1: Bit Crush Sample Rate CV Input**: Control Voltage input socket to control the Bit Crush Sample Rate. The trim knob next to the input socket determines the amount of CV applied
- **2: Bit Crush Bit CV Input**: Control Voltage input socket to control the amount of Bit Crush Bits. The trim knob next to the input sockets determines the amount of CV applied.
- **3: Bit Crush Mix CV Input**: Control Voltage input socket to control the Bit Crush Mix. The trim knob next to the input sockets determines the amount of CV applied.

5.3 Panel 3: Mudix Multi Band Distortion CV Inputs

5.3.1 Section 1: Multiband Distortion CV Inputs

- **1: Multiband Distortion Band 1 to 4 Drive CV Inputs**: Control Voltage input socket to control the amount of Multiband Distortion Drive. The trim knob next to the input socket determines the amount of CV applied..
- **2: Multiband Distortion Band 1 to 4 Freq CV Inputs**: Control Voltage input socket to control the amount of Multiband Distortion Frequency. The trim knob next to the input socket determines the amount of CV applied.
- **3: Multiband Distortion Band 1 to 4 Pan CV Inputs**: Control Voltage input socket to control the amount of Multiband Distortion Panning. The trim knob next to the input socket determines the amount of CV applied..
- **4: Multiband Distortion Mix CV Input**: Control Voltage input socket to control the amount of Multiband Distortion Mix. The trim knob next to the input socket determines the amount of CV applied.

5.4 Panel 4: Saturn Saturation CV Inputs

5.4.1 Section 1: Drive, Threshold, Density and Hi Bypass CV Inputs

- **1: Saturation Drive CV Input**: Control Voltage input socket to control the amount of Saturation Drive. The trim knob next to the input socket determines the amount of CV applied.
- **2: Saturation Threshold CV Input**: Control Voltage input socket to control the Saturation Threshold. The trim knob next to the input socket determines the amount of CV applied..
- **3: Saturation High Bypass CV Input**: Control Voltage input socket to control the Saturation High Bypass. The trim knob next to the input socket determines the amount of CV applied.

5.5 Panel 5: BEQ Low Pass 12 Filter CV Input

5.5.1 Section 1: Filter Cutoff CV Input

- **1: Low Pass 12 Filter Cutoff CV Input**: Control Voltage input socket to control the amount of Low Pass 12 Filter Cutoff. The trim knob next to the input socket determines the amount of CV applied.

5.6 Panel 6: Master Audio Outputs

5.6.1 Section 1: Audio Output Left and Right

- **1: Master Left and Right Out**: Audio output sockets.

6 Patch List

List of all the patches released with the Rumblit Bit Crusher Effect Rack Extension. Included are 30 effects patches made by two sound designers.

6.1 The sound designers

- Bes, made an experimental Rum Blunt combinator patch.
- Oenkenstein, made all the other patches.

6.2 Folder structure

The number behind the folder names indicates the amount of patches the folder contains.
Root (26)
Combinators Reason 10 (1)
Combinators Reason 12 (3)

Root folder:

- BA - Plucky Plectrum.repatch
- BA - Saturation.repatch
- DR - Bongos.repatch
- DR - D and B.repatch
- DR - Punchy Kick and Snare.repatch
- DR - Rytmik.repatch
- DR - Sharp Hihats.repatch
- FX - 8 Bit 22 kHz.repatch
- FX - Distortion.repatch
- FX - Fuzzy.repatch
- FX - Overdrive.repatch
- FX - Sounds Good to Me - Bes.repatch
- FX - SP-1200 High Boost.repatch
- FX - SP-1200.repatch
- FX - Spatial Dust.repatch
- GT - Bass and Treble.repatch
- GT - Bass.repatch
- Init Patch.repatch
- KY - 12 Bit Farfisa Organ.repatch
- KY - Organ Mud.repatch
- KY - Piano Bite.repatch
- KY - Warm Vibes.repatch
- SX - Edgy Baritone.repatch
- SY - 4 Bit Crackle.repatch

Combinators Reason 10 folder:

- Init Patch.cmb

Combinators Reason 12 folder:

- FX - Rum Blunt - Bes.cmb
- Rumblit Init Big.cmb
- Rumblit Init.cmb

7 Credits

- Reasontalk, beta tests forum hosting.
- Reasonstudios Software AB for their support.
- Bes, for the experimental signature combinator patch.
- Eusti, advice on graphics.
- Loque, advice on graphics and came with the original idea making a bit crusher effect.
- All the beta testers for their bug reports and suggestions.

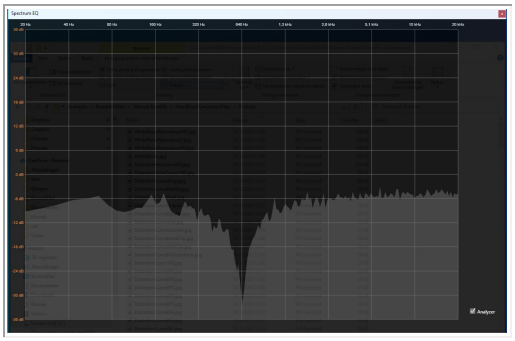
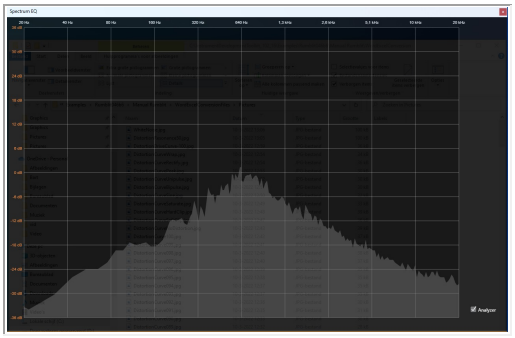
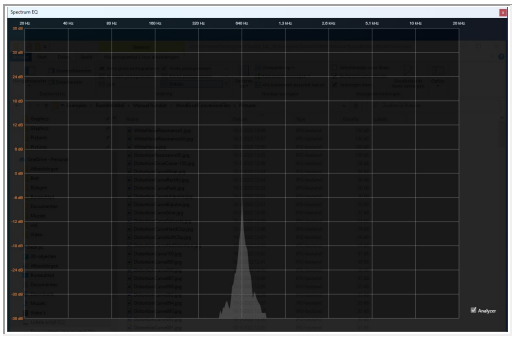
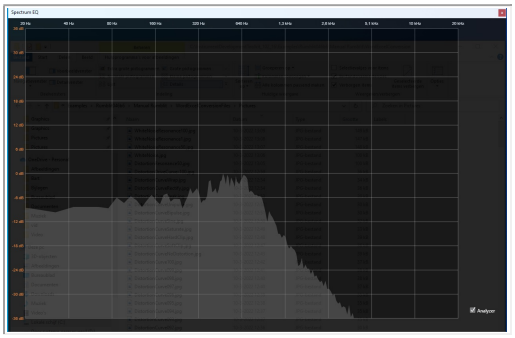
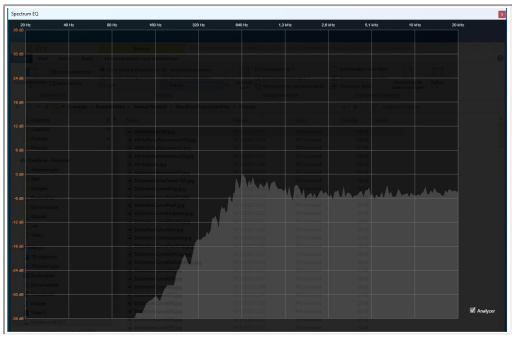
8 Appendixes

Warning:
Rumblit Bit Crusher Effect has a built in hard limiter. You can pump up the volume to an insane amount before the master output starts to clip in RMS peak mode. Please be careful to your ears when you change the filters frequency and resonance settings to high values.

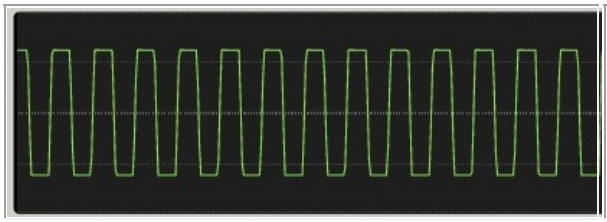
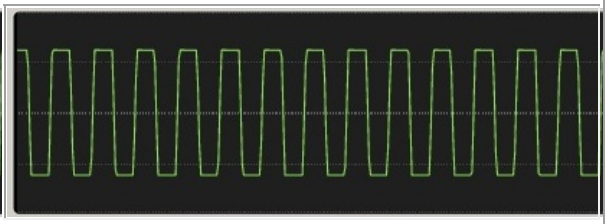
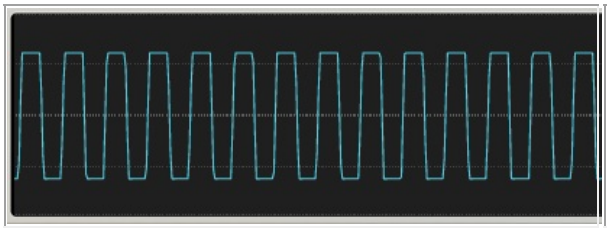
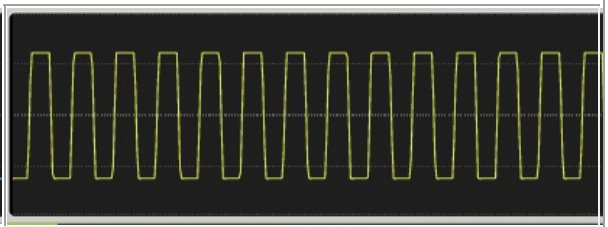
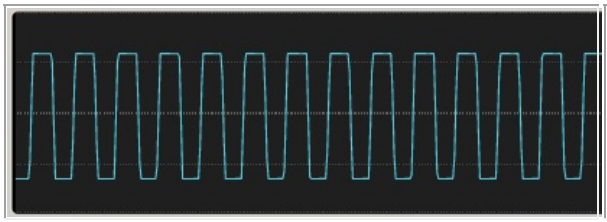
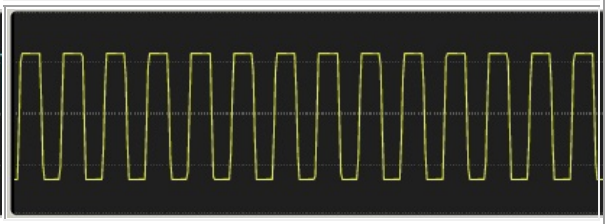
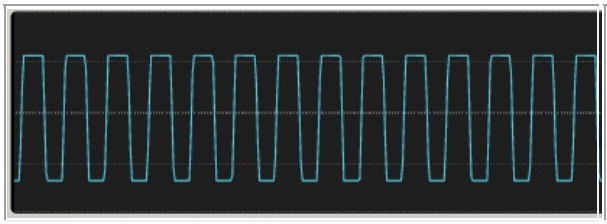
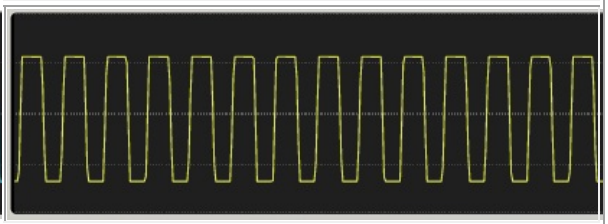
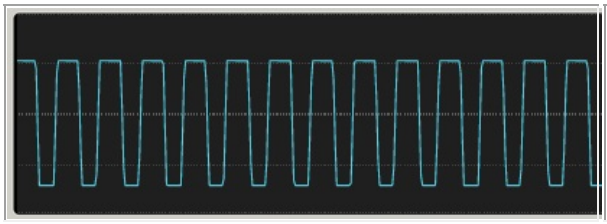
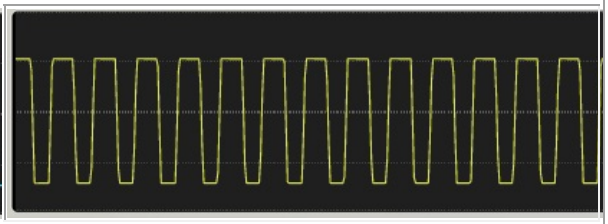
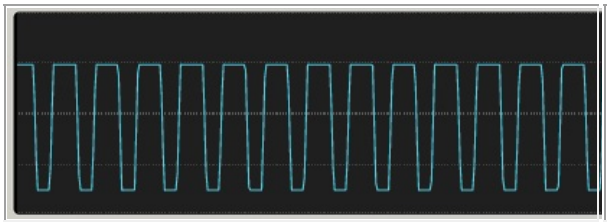
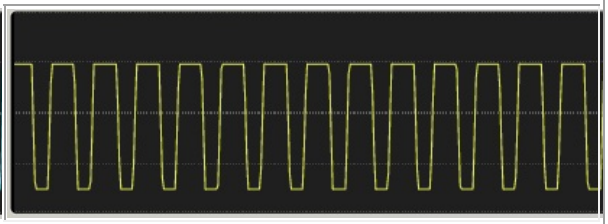
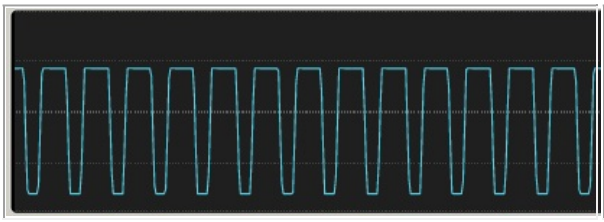
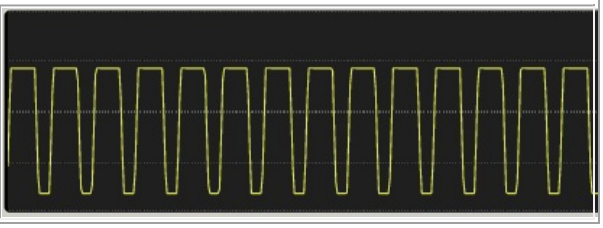
9 Mudix Drive, Resonance, Tilt behaviour and Curves Waveforms list

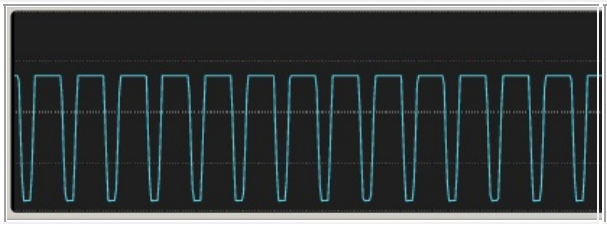
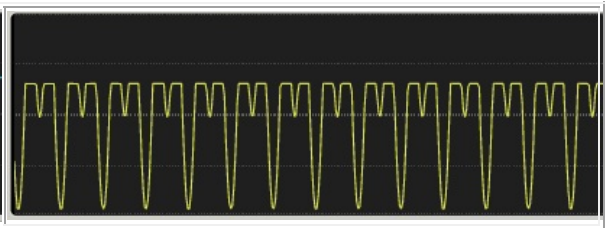
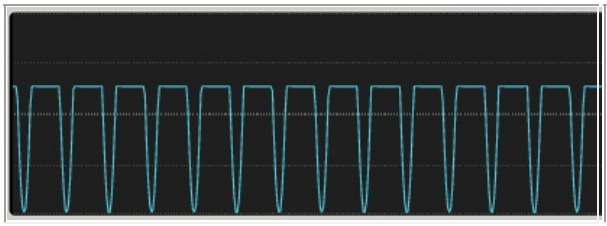
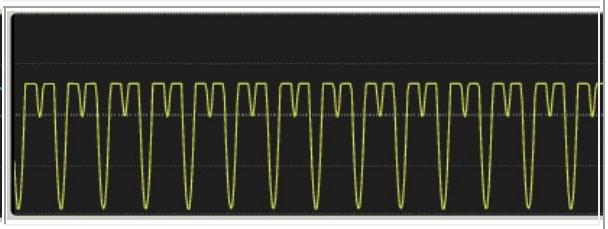
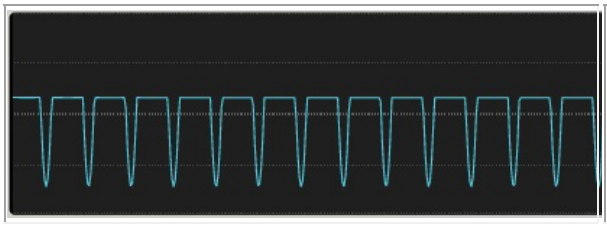
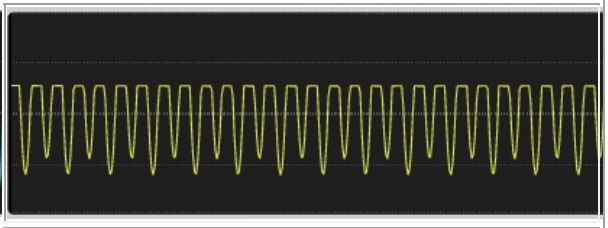
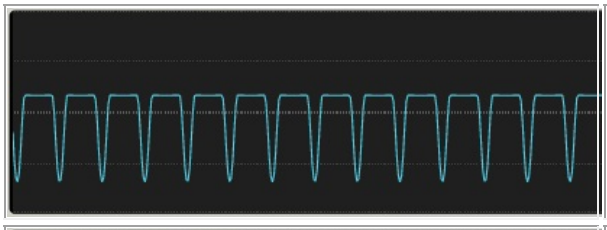
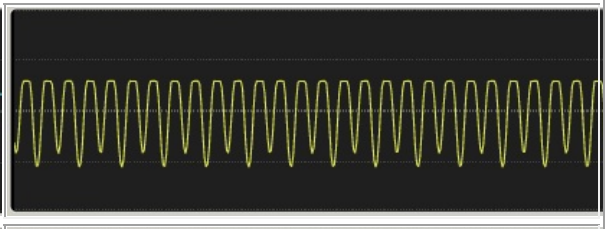
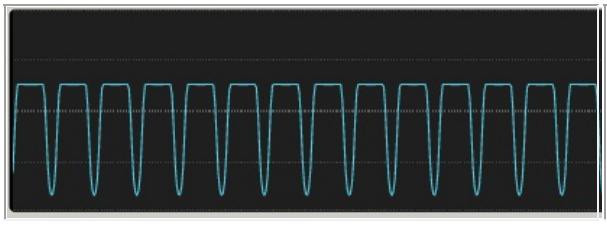
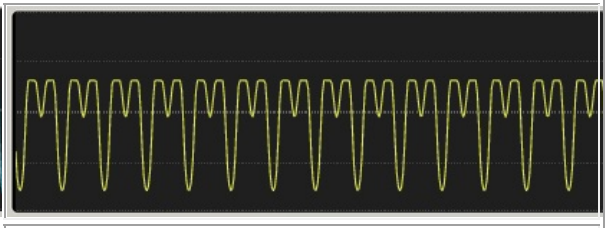
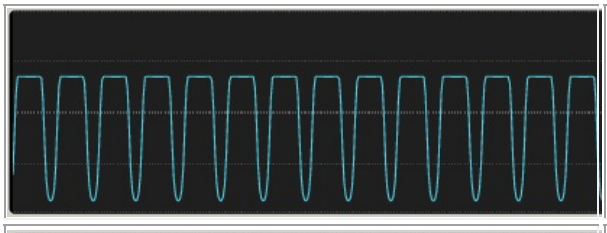
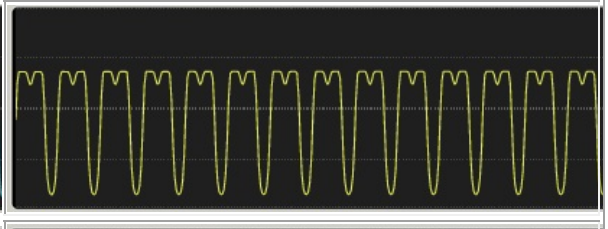
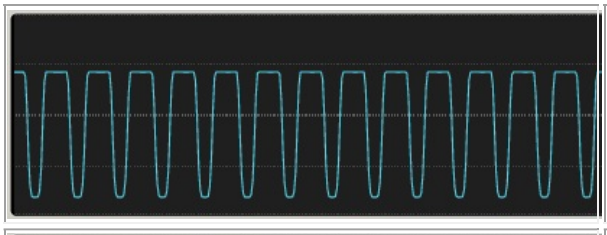
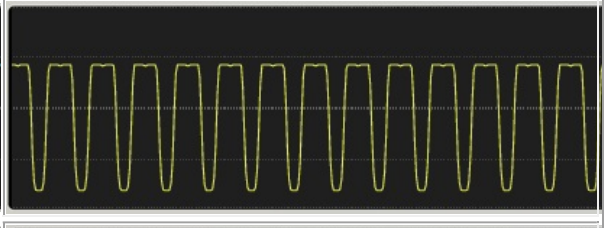
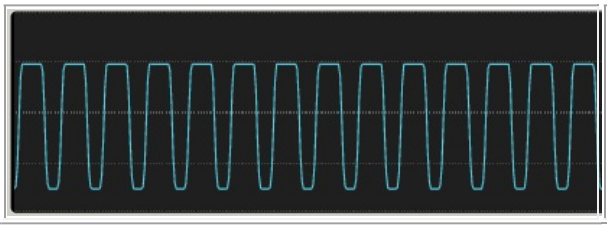
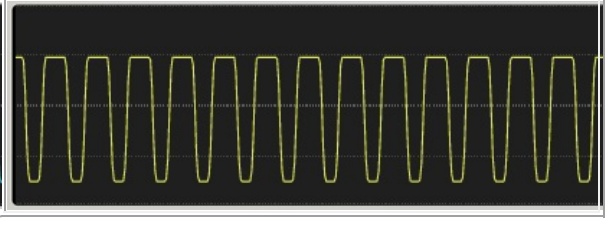
Mudix Drive ranging from 0 to 100%

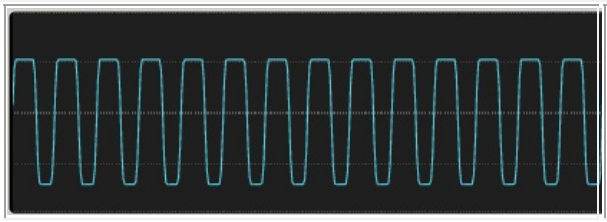
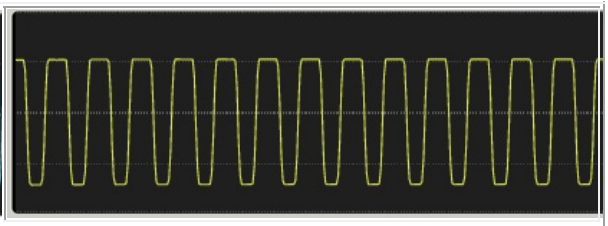
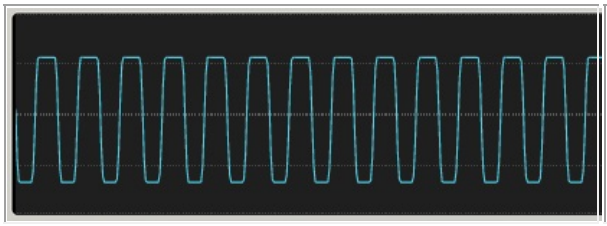
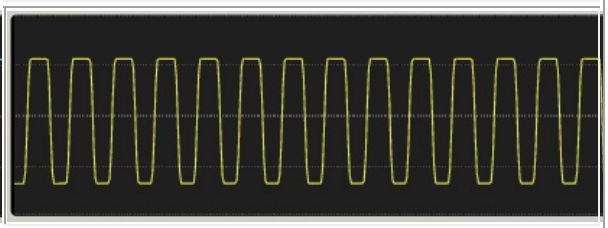
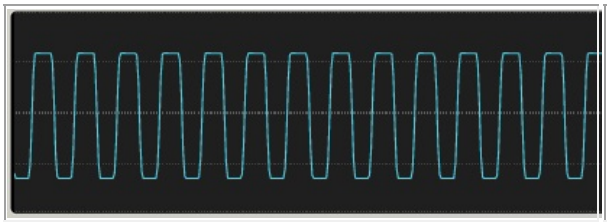
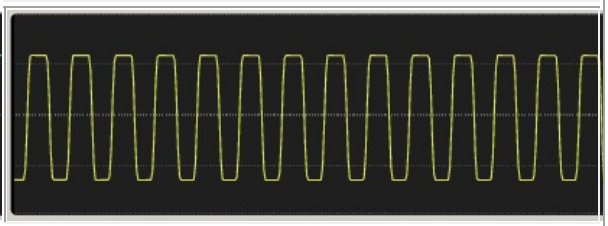
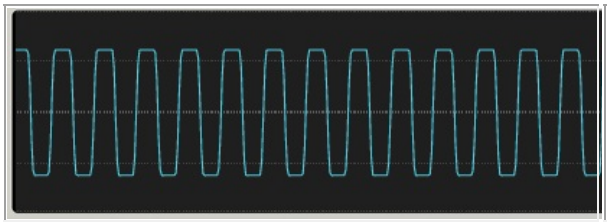
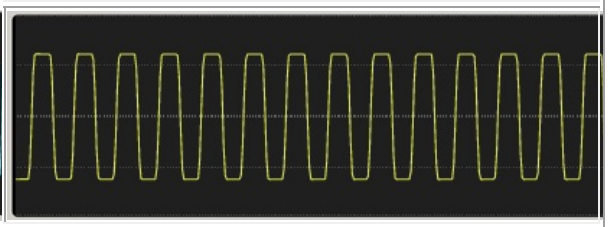
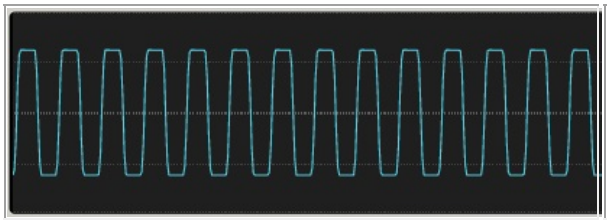
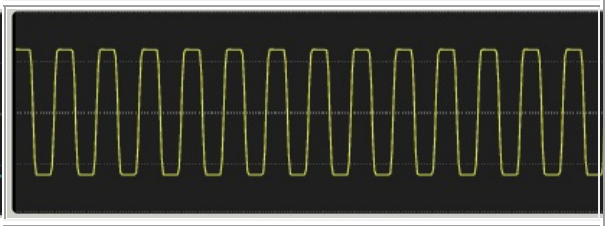
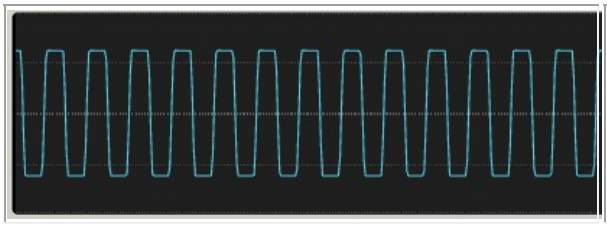
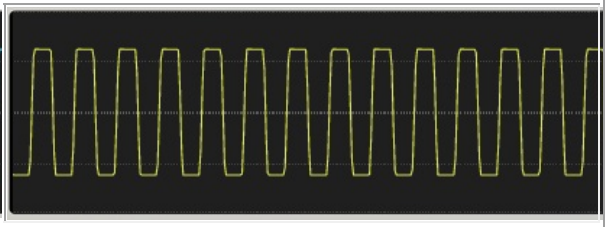
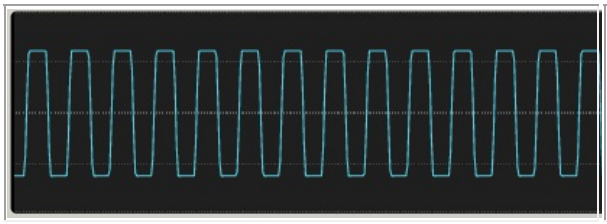
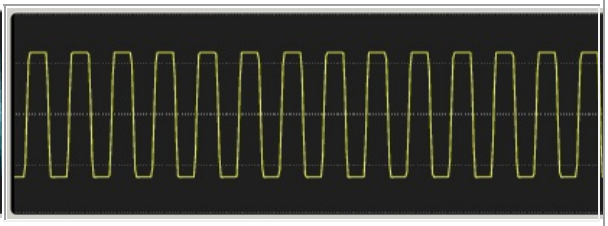
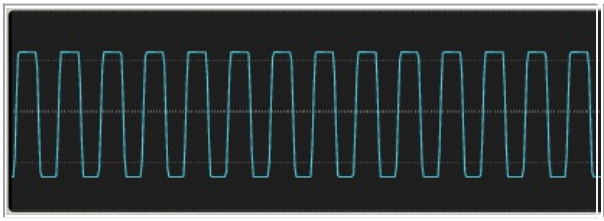
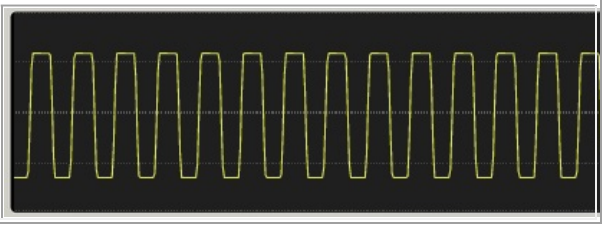
Mudix Resonance and Tilt

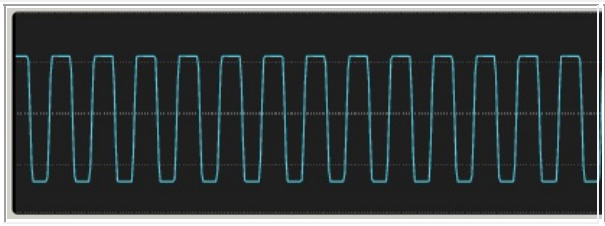
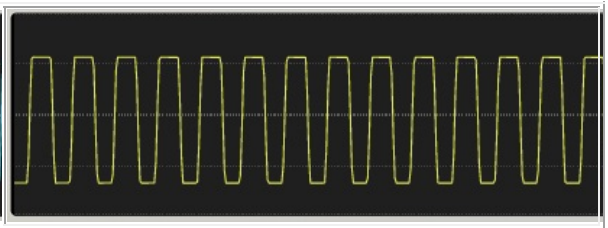
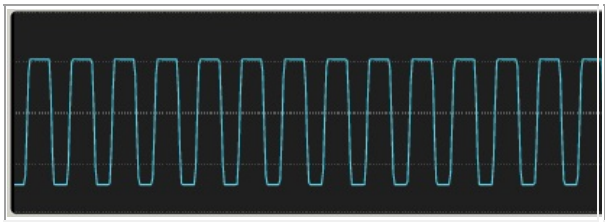
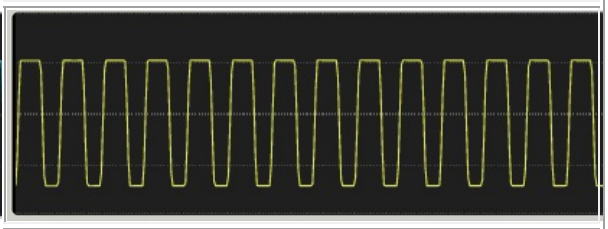
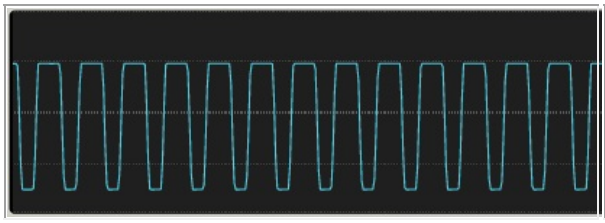
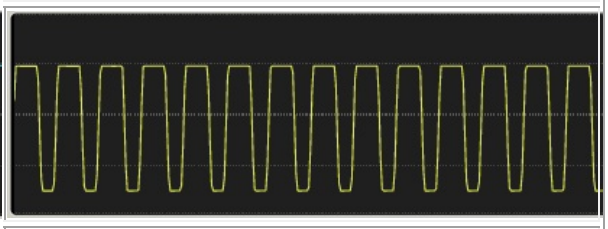
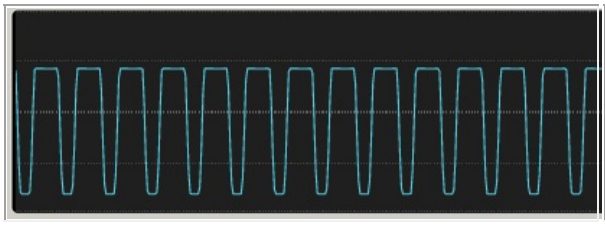
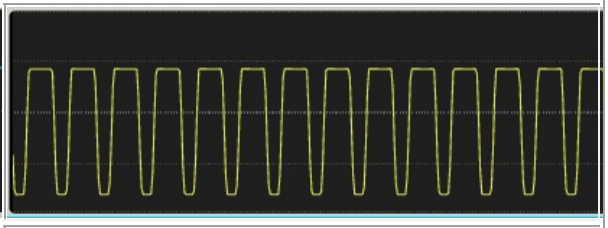
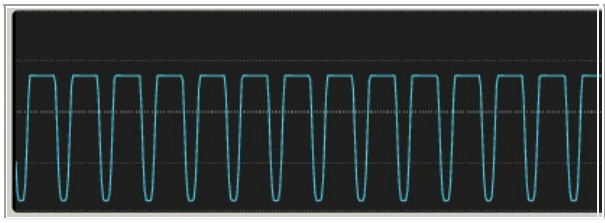
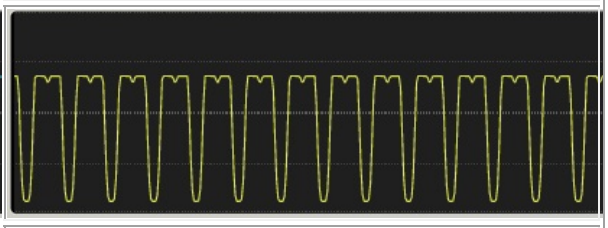
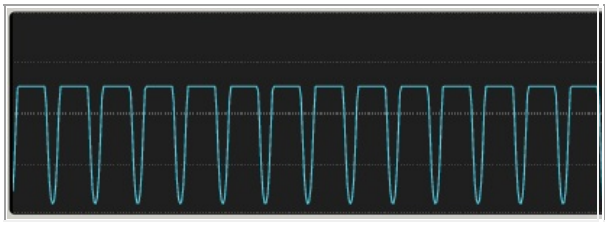
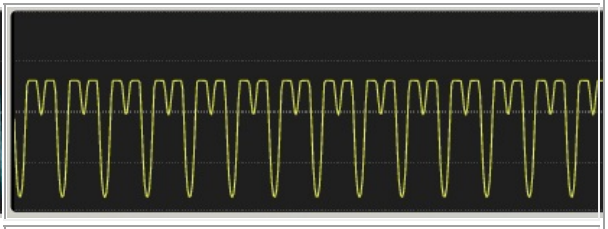
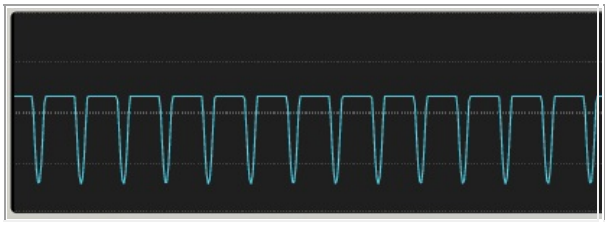
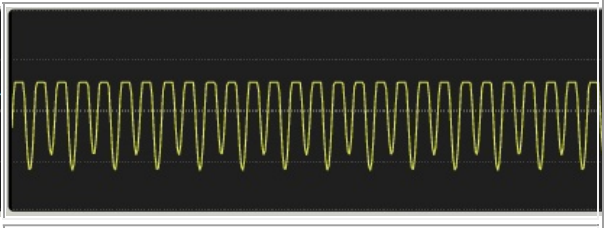
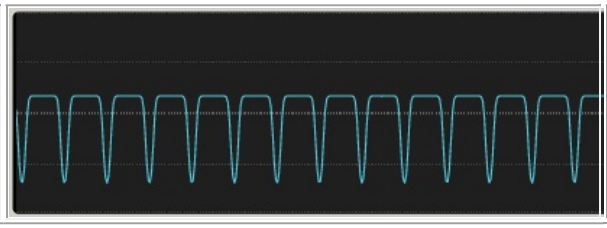
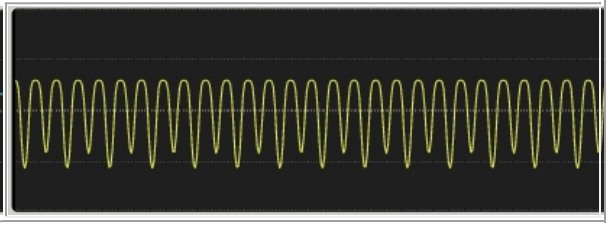
Mudix Resonance disabled and at 0%		
Mudix Resonance at 50 and 100%		
Mudix Tilt at 0 and 100%		

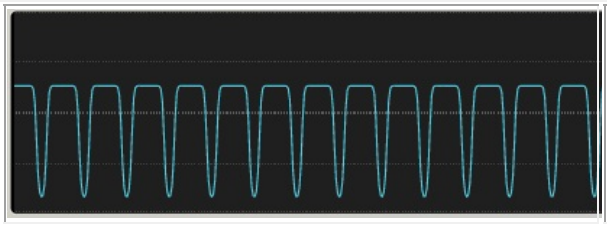
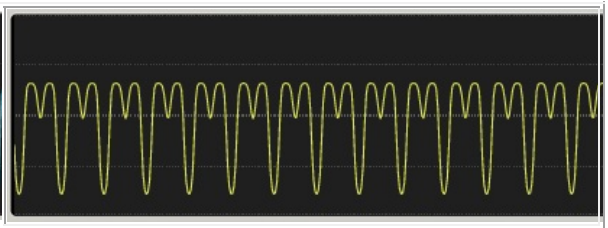
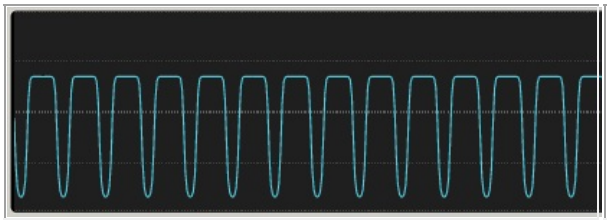
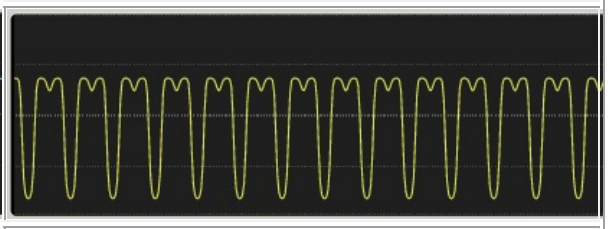
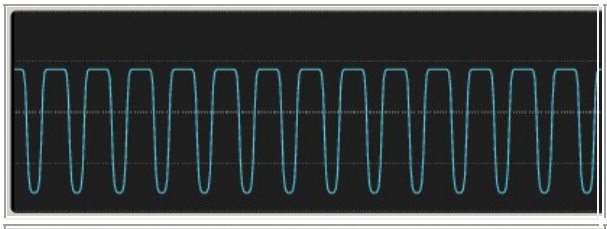
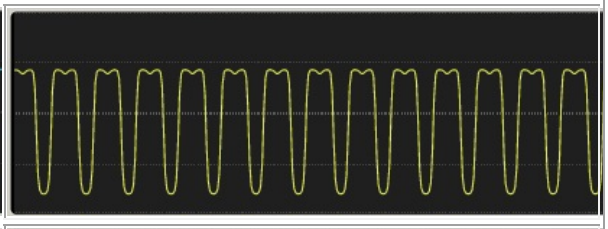
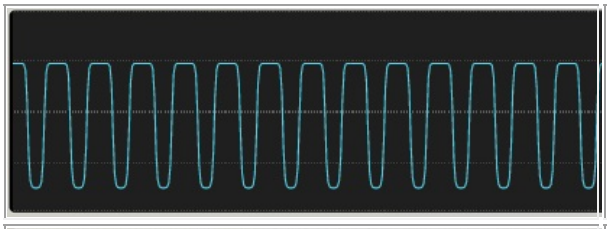
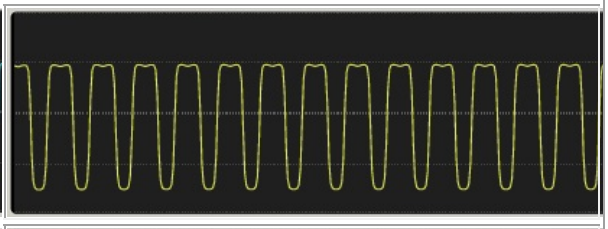
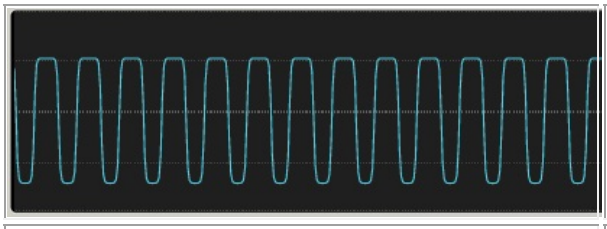
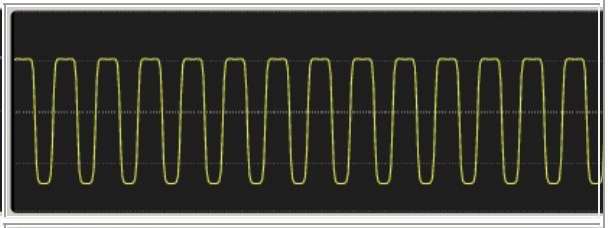
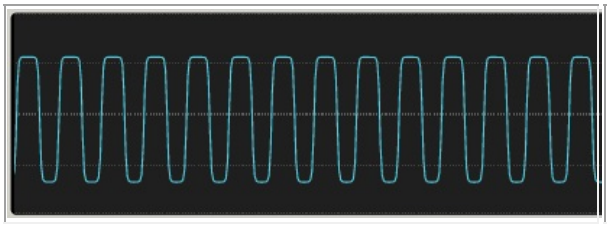
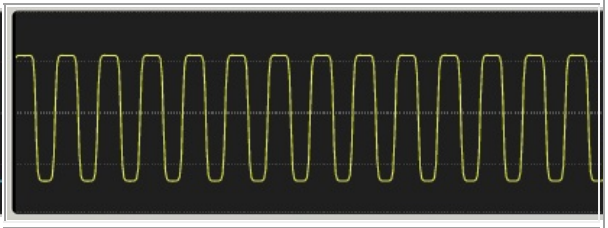
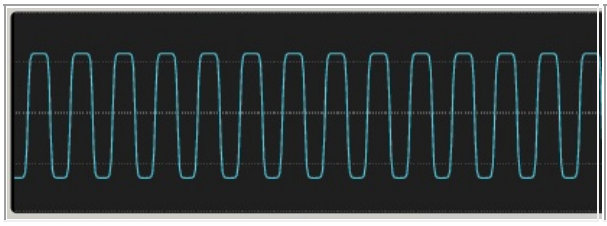
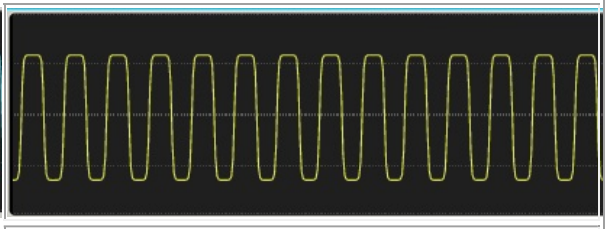
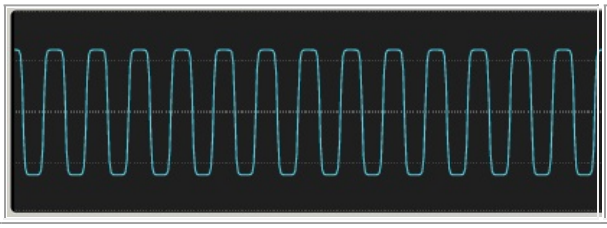
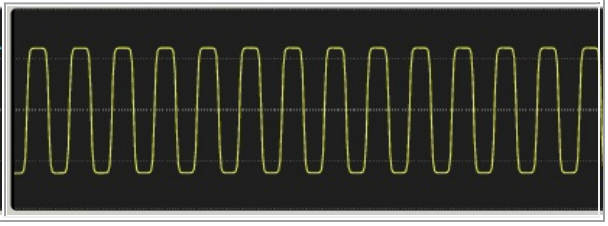
200 Mudix Curves Waveforms

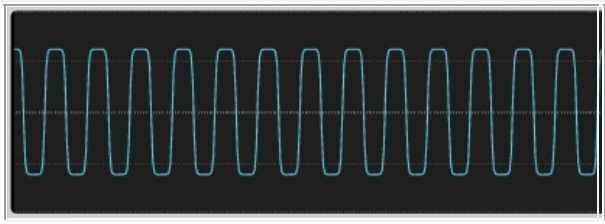
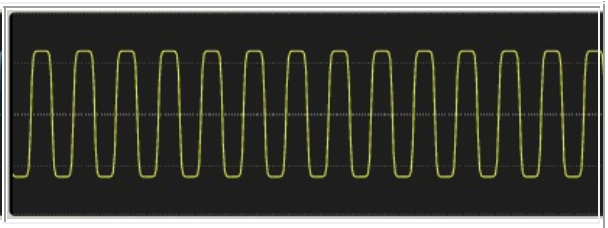
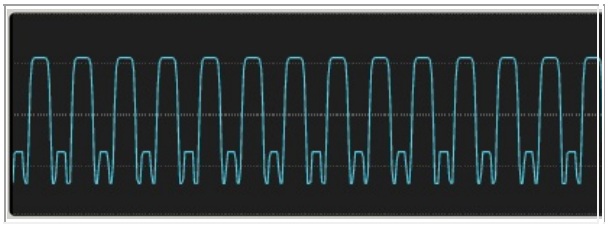
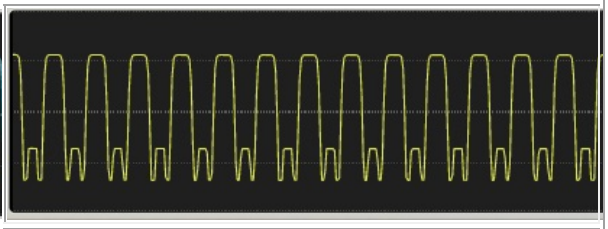
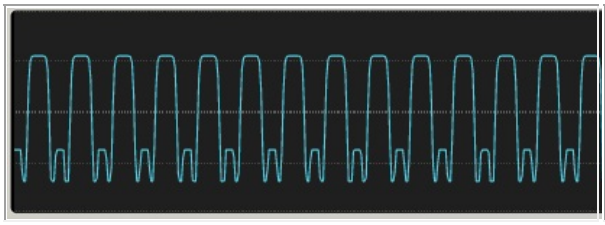
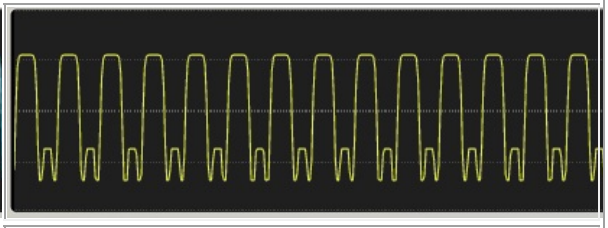
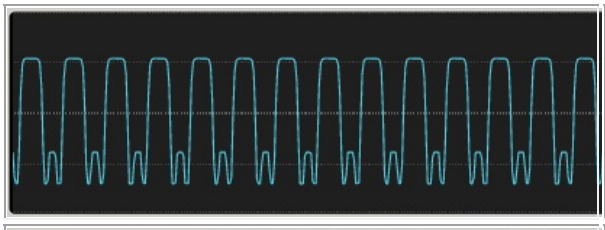
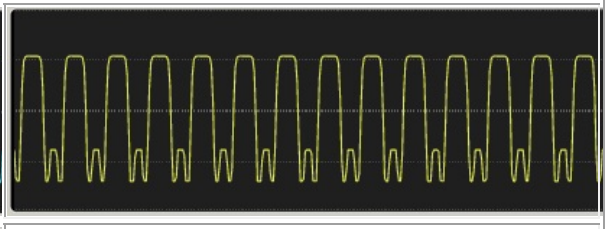
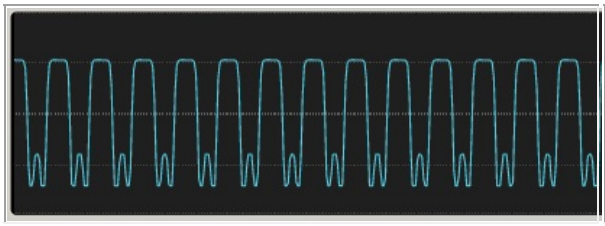
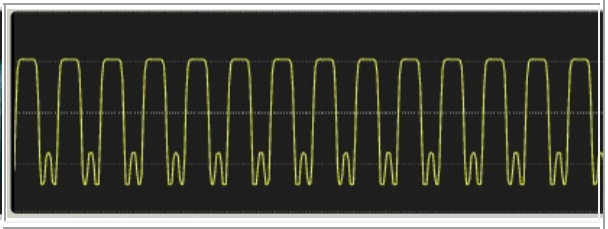
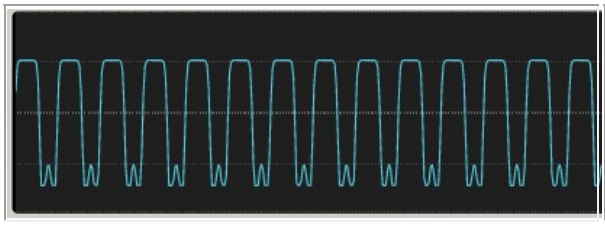
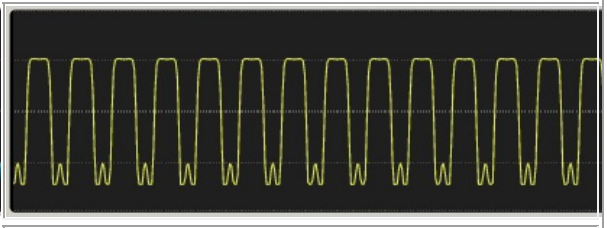
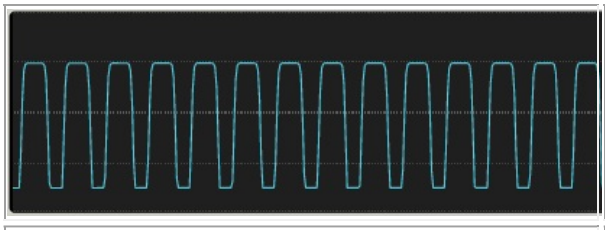
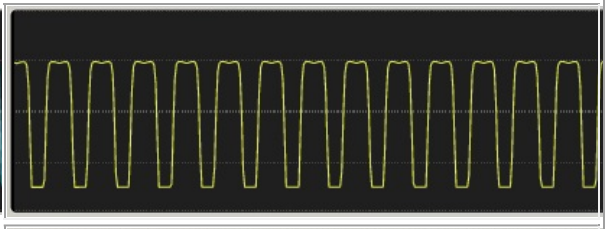
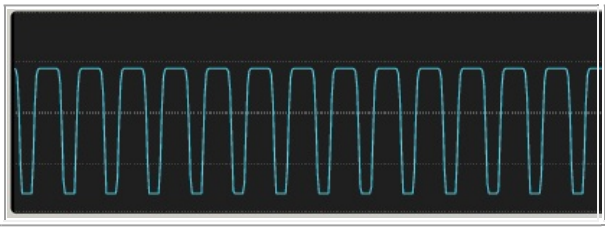
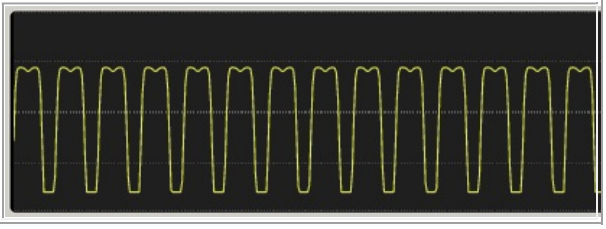
Nr	100 Positive Curves	100 Negative Curves
000		
001		
002		
003		
004		
005		
006		

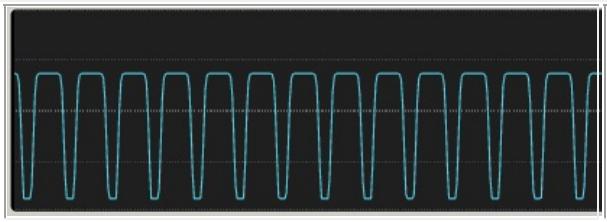
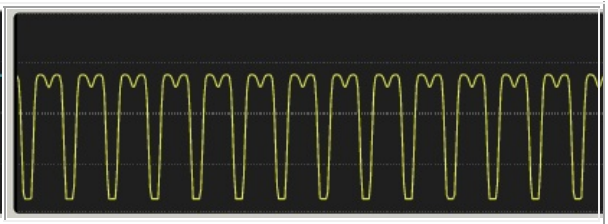
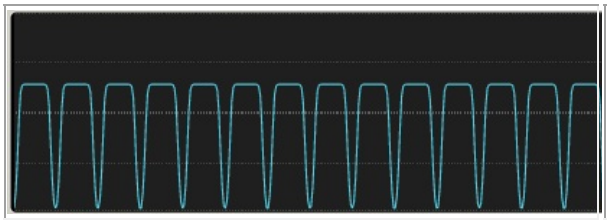
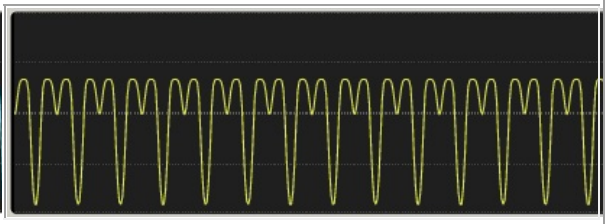
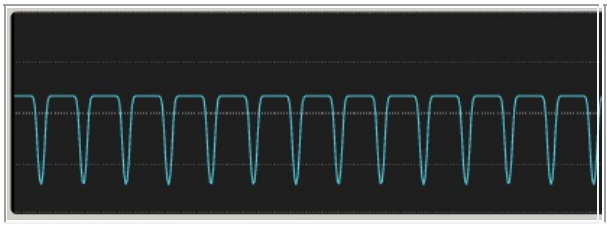
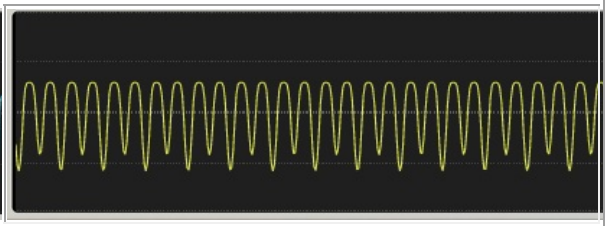
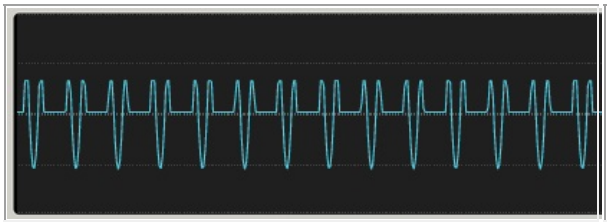
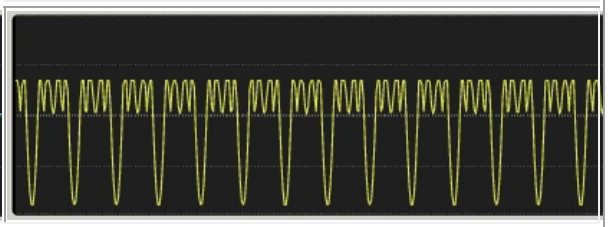
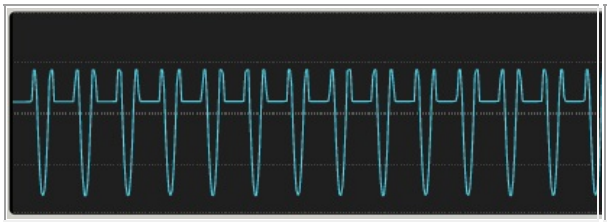
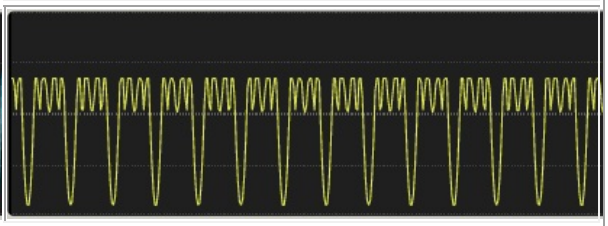
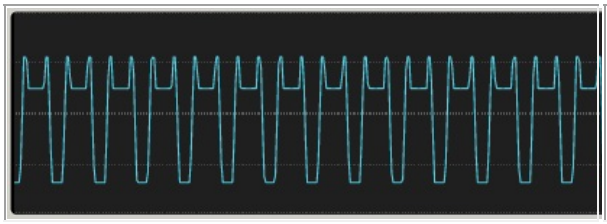
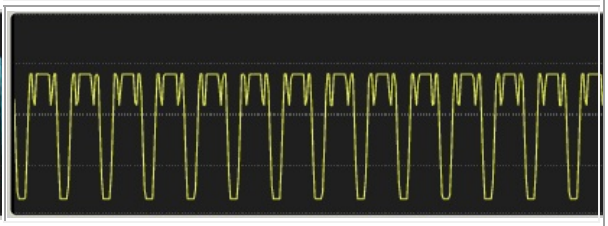
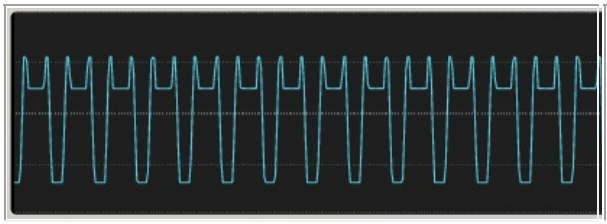
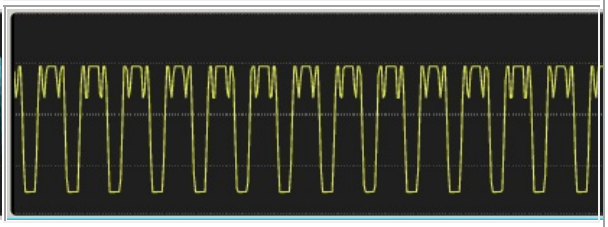
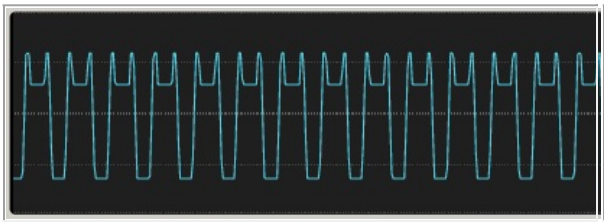
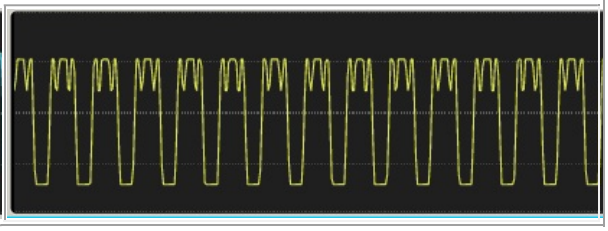
007		
008		
009		
010		
011		
012		
013		
014		

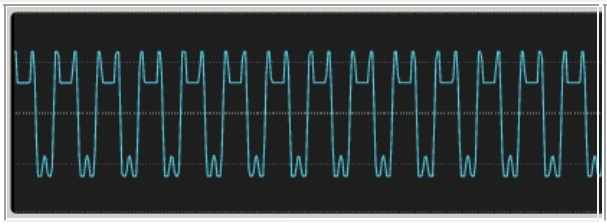
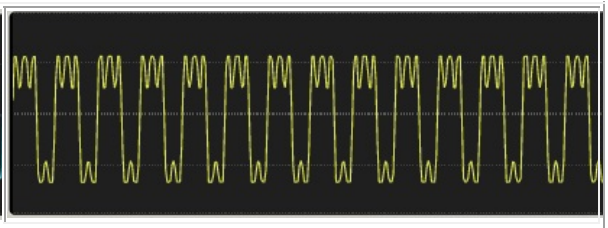
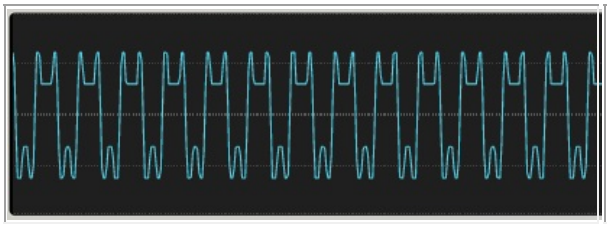
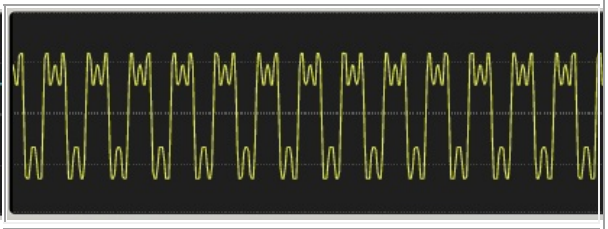
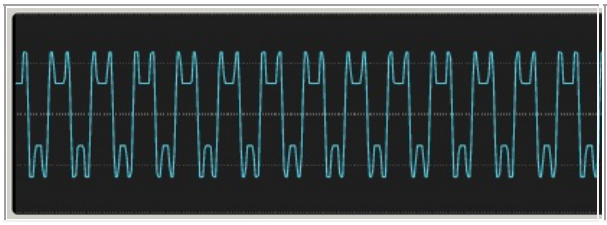
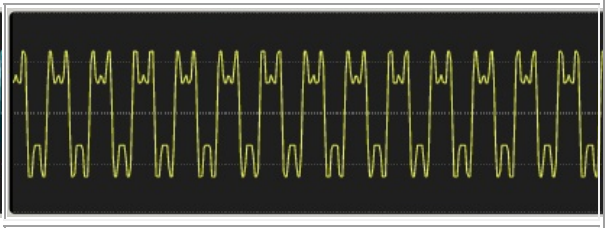
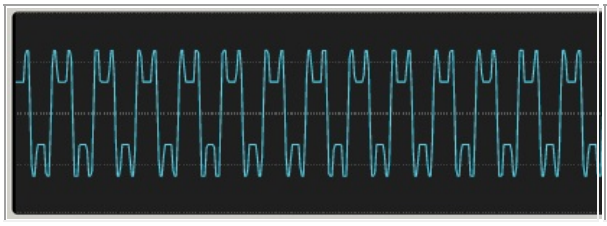
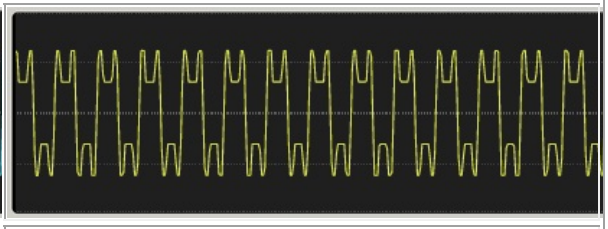
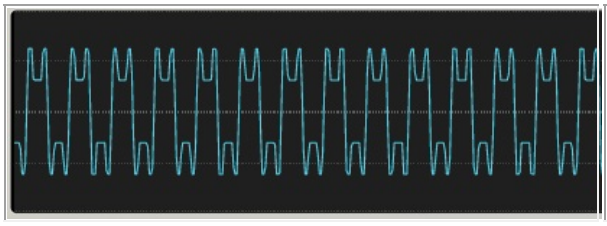
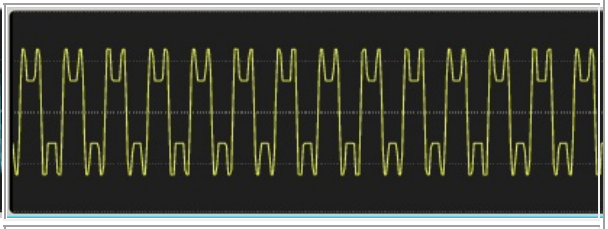
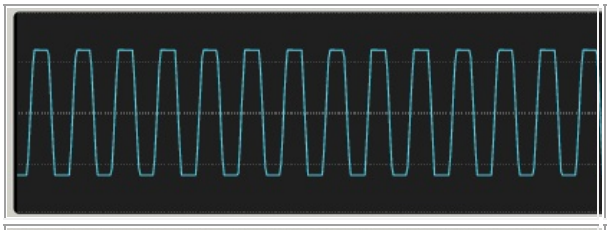
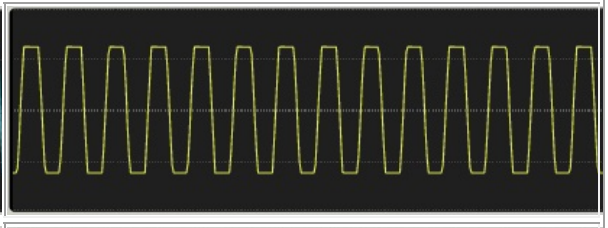
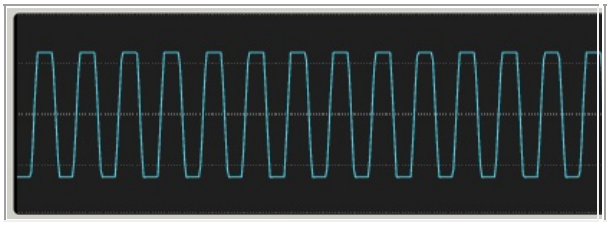
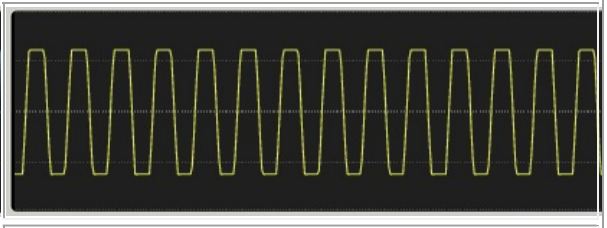
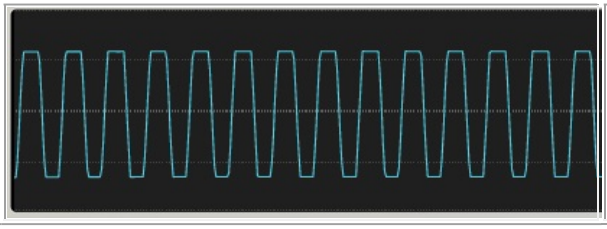
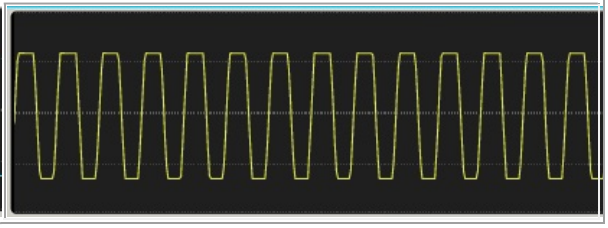
015		
016		
017		
018		
019		
020		
021		
022		

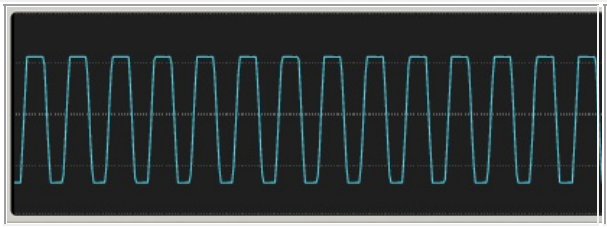
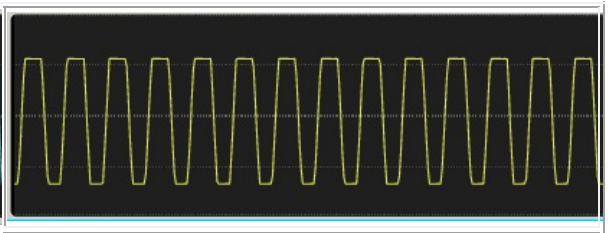
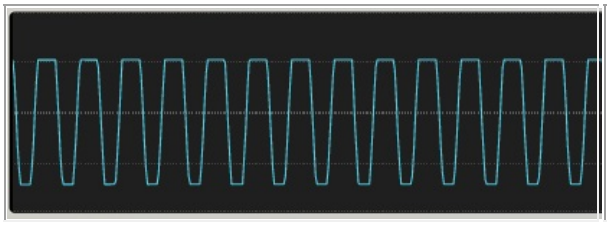
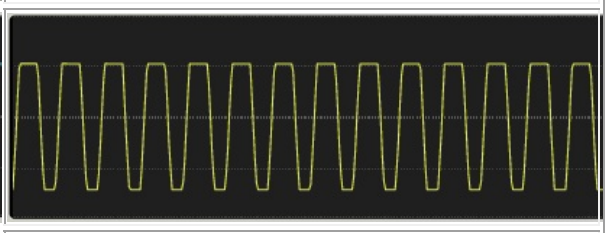
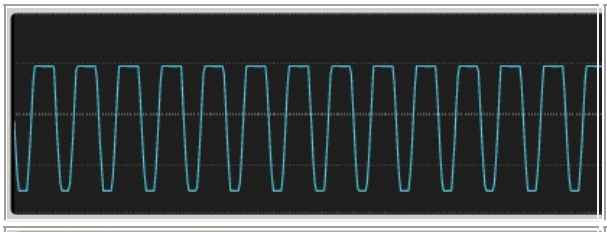
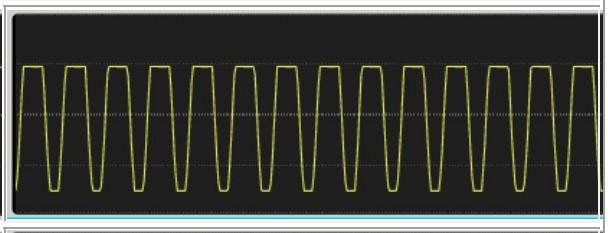
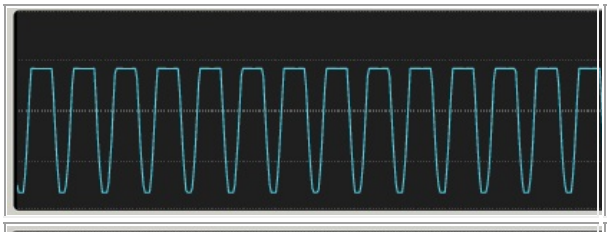
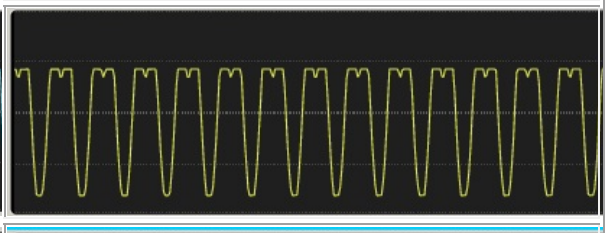
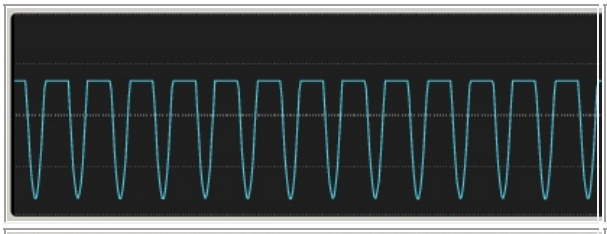
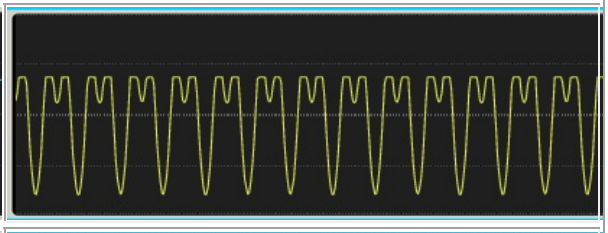
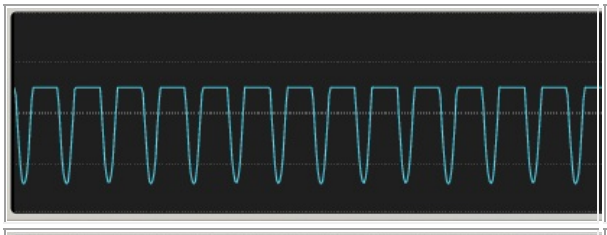
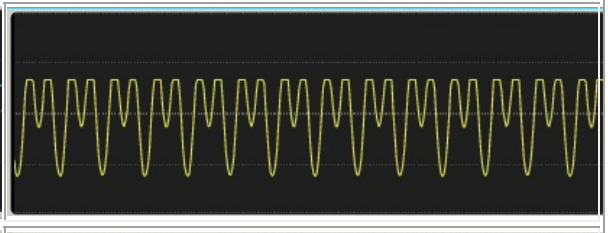
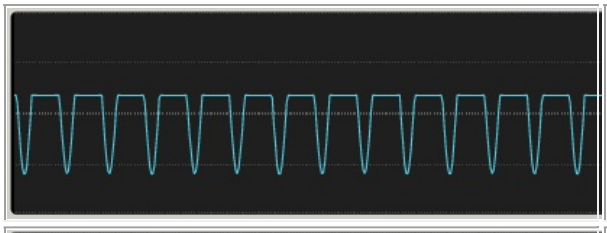
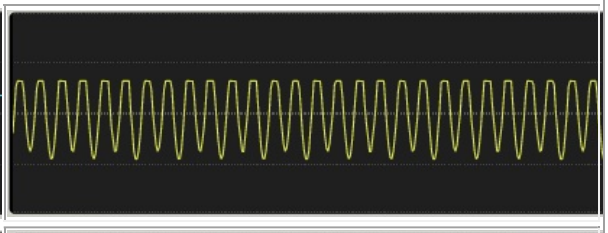
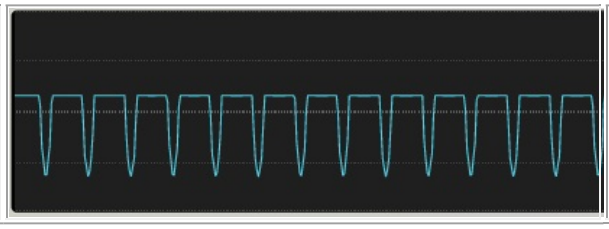
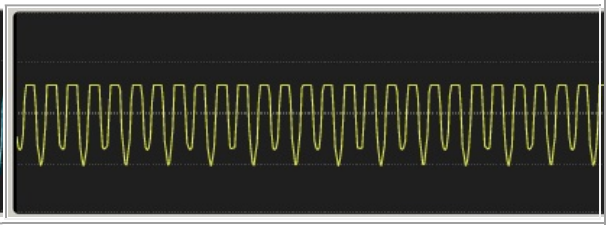
023		
024		
025		
026		
027		
028		
029		
030		

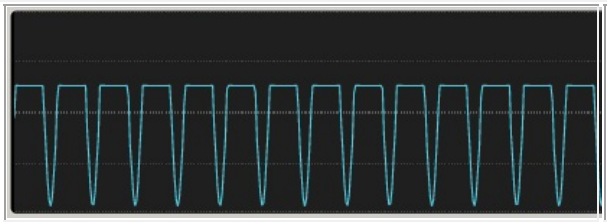
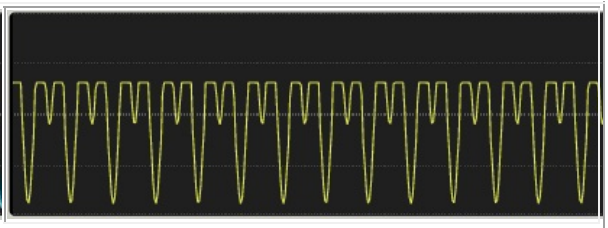
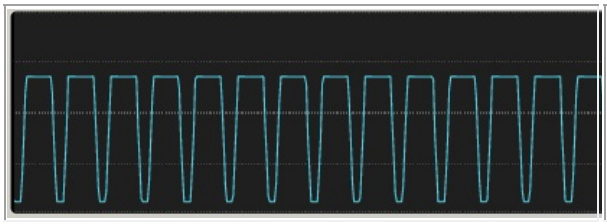
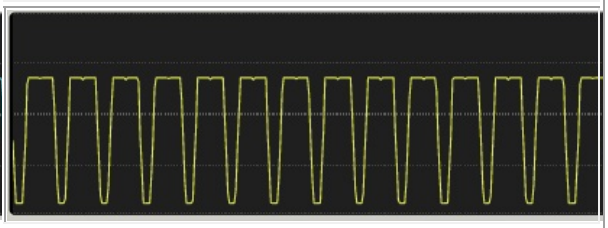
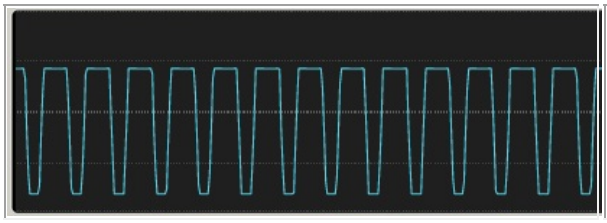
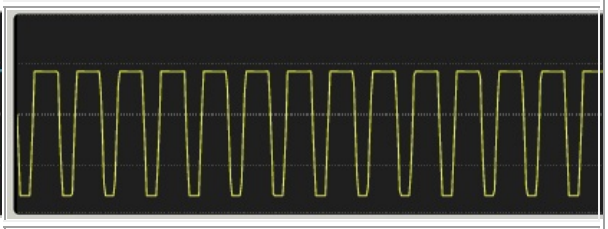
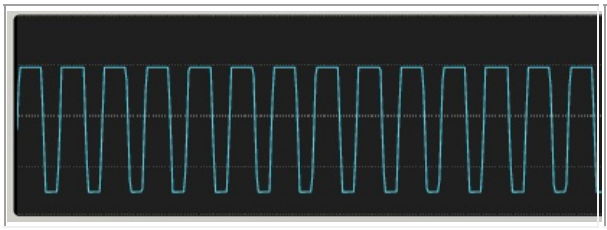
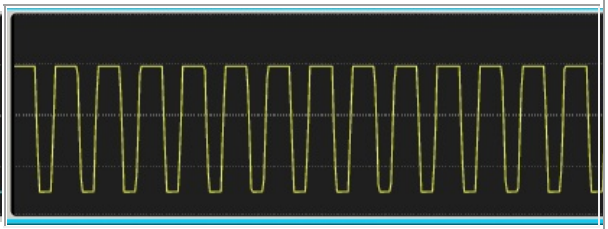
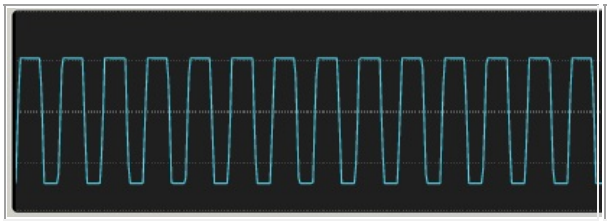
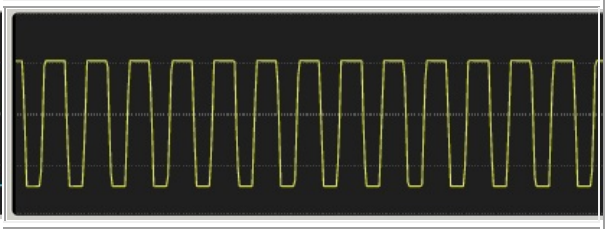
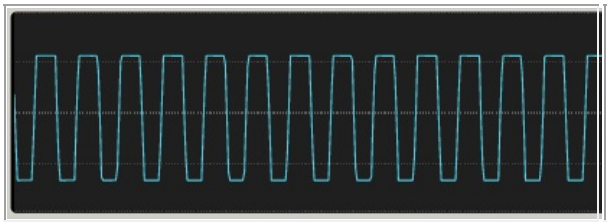
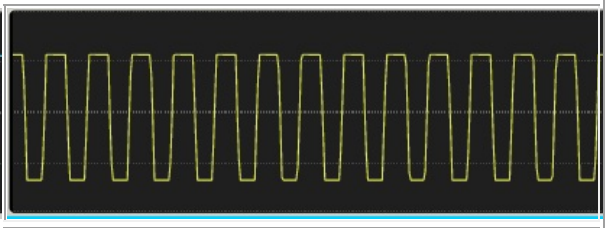
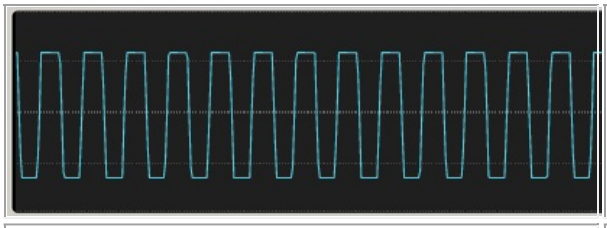
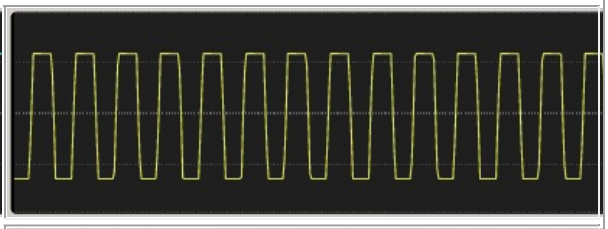
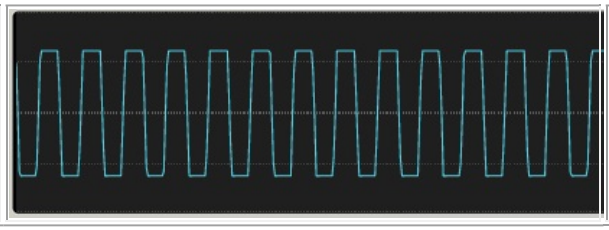
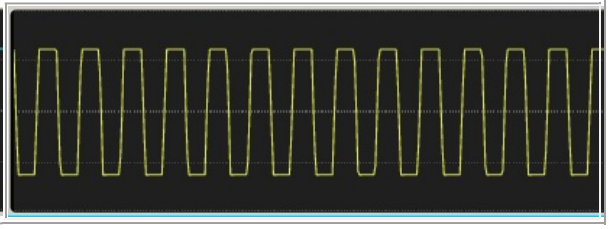
031		
032		
033		
034		
035		
036		
037		
038		

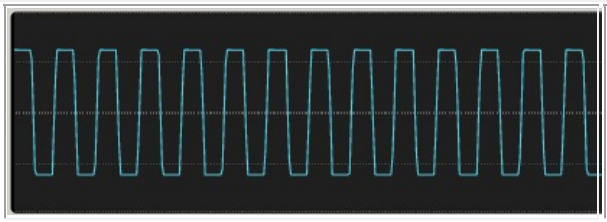
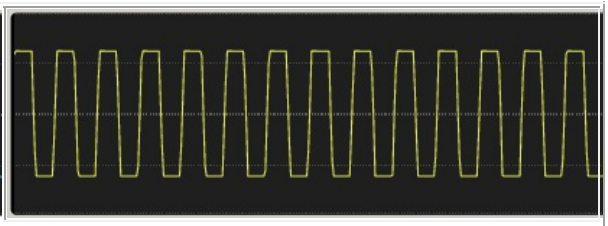
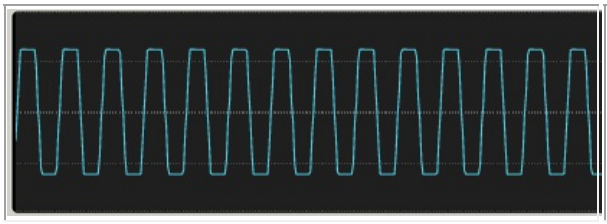
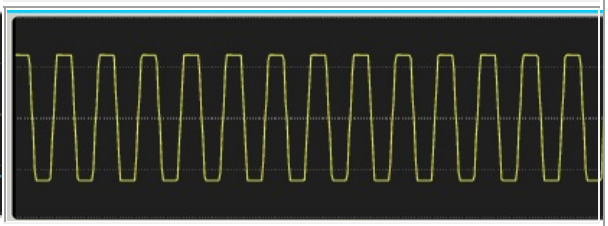
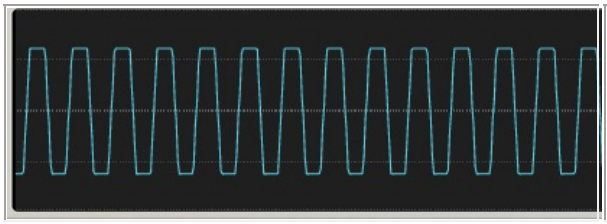
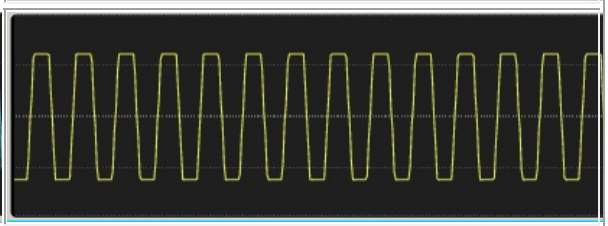
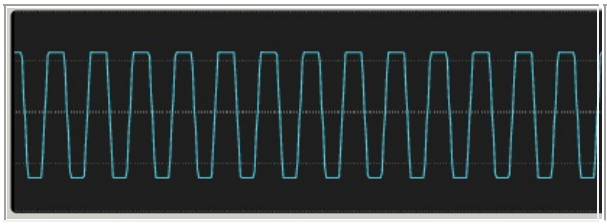
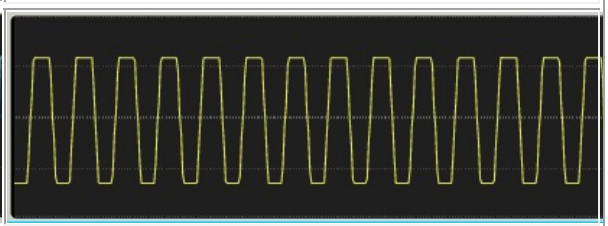
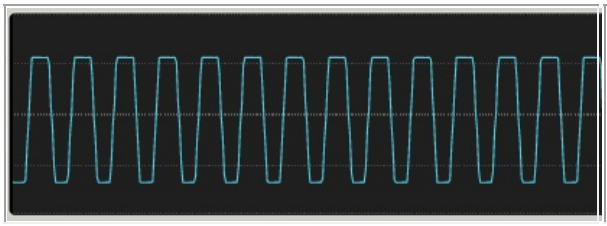
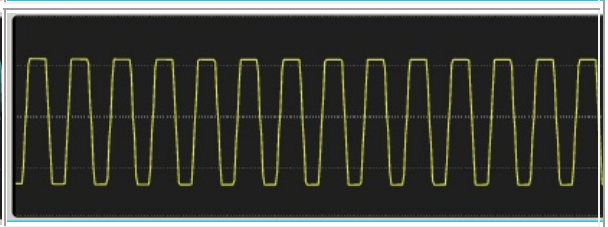
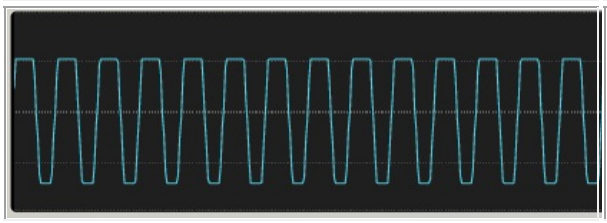
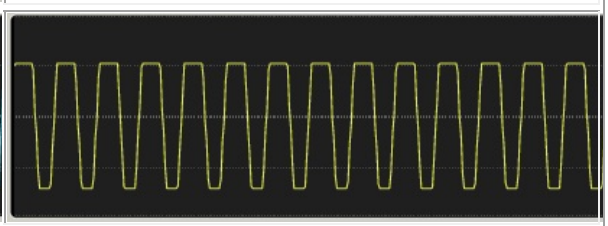
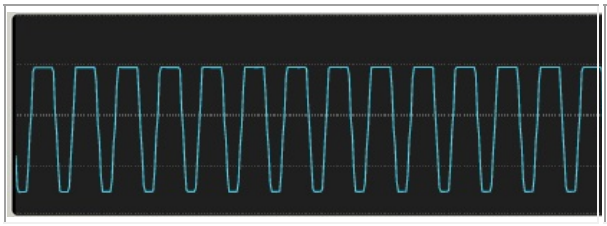
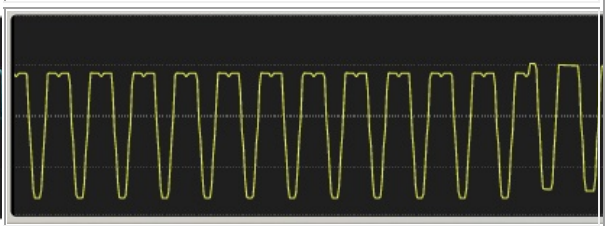
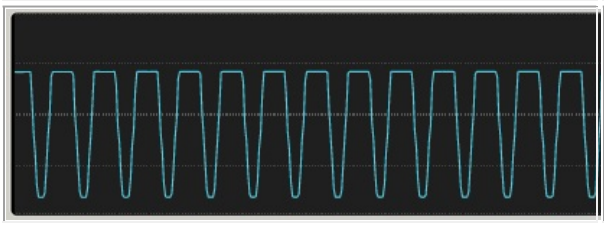
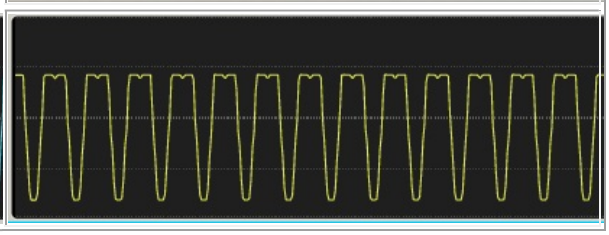
039		
040		
041		
042		
043		
044		
045		
046		

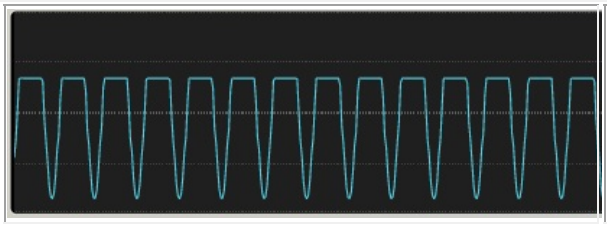
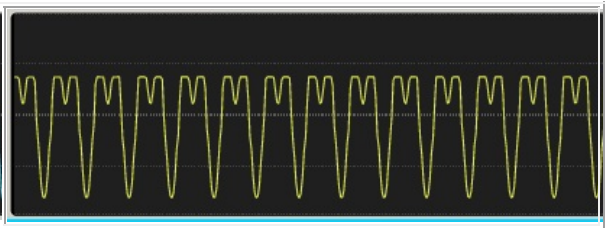
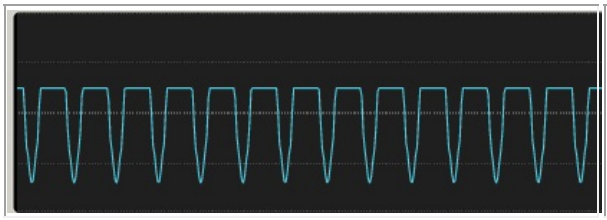
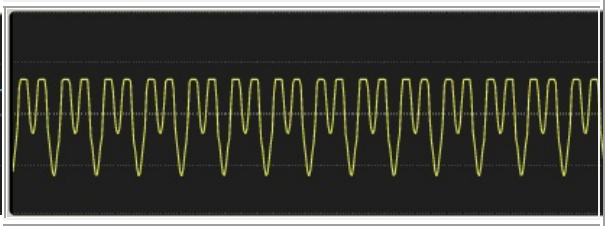
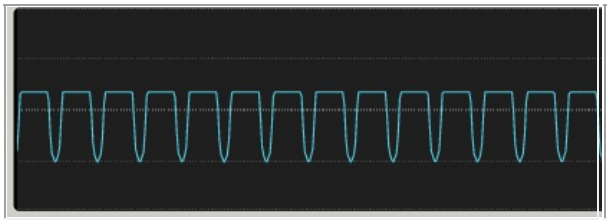
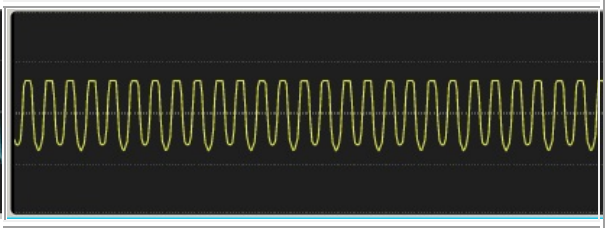
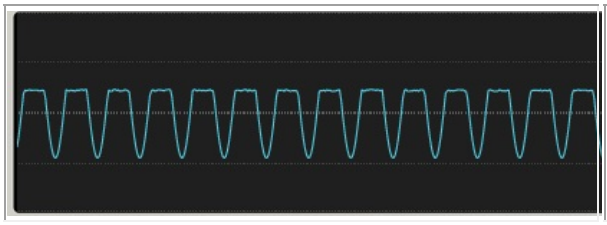
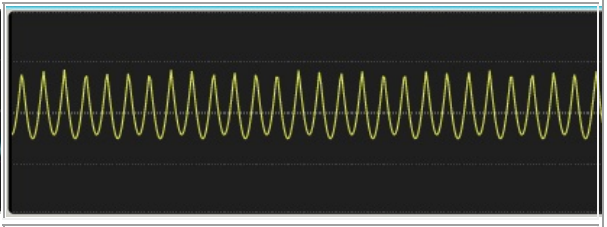
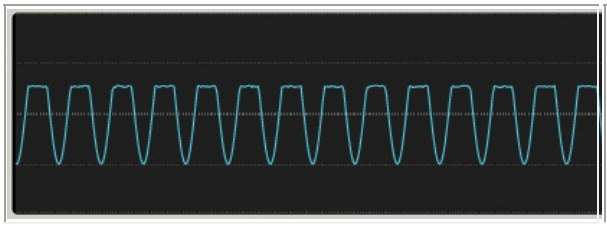
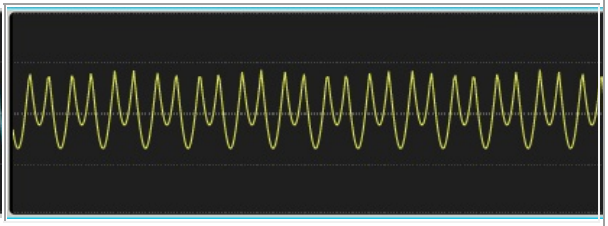
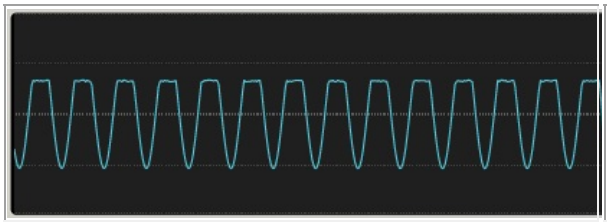
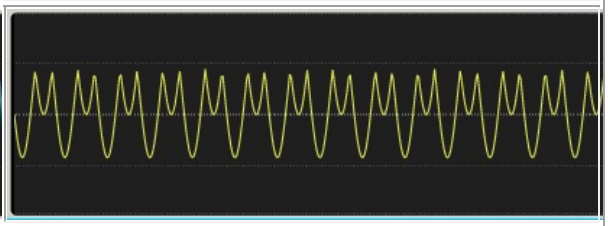
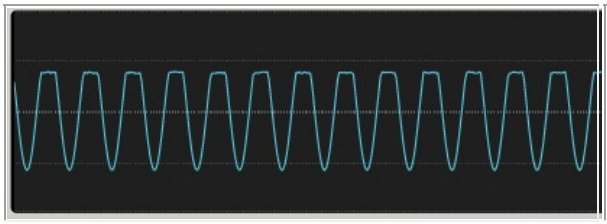
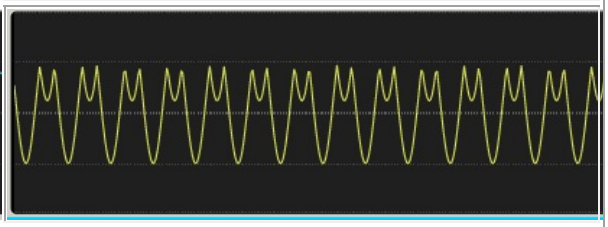
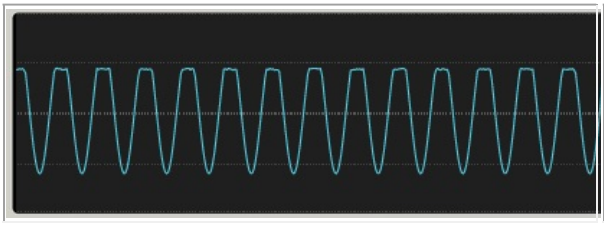
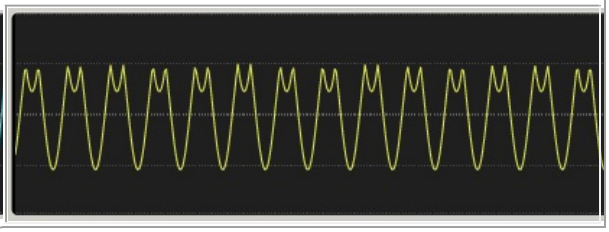
047		
048		
049		
050		
051		
052		
053		
054		

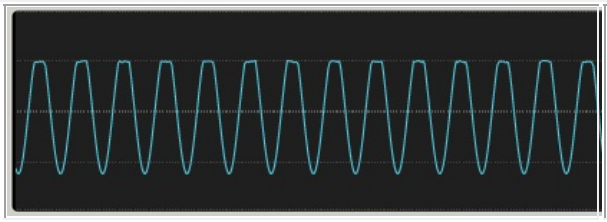
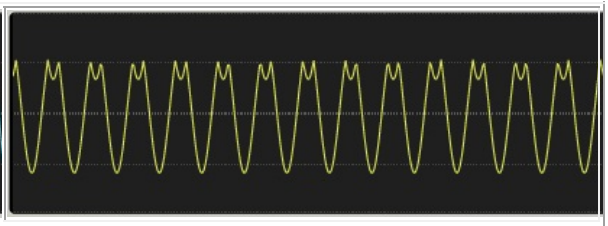
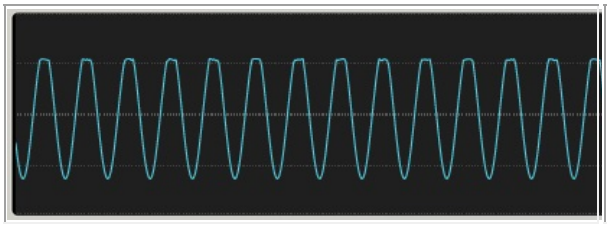
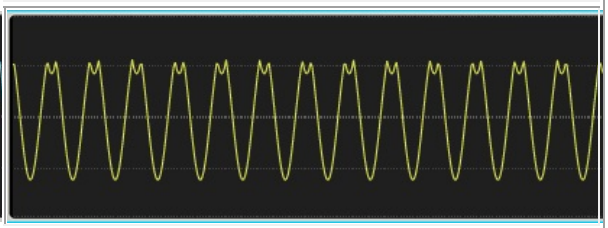
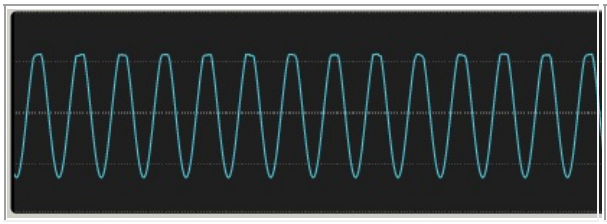
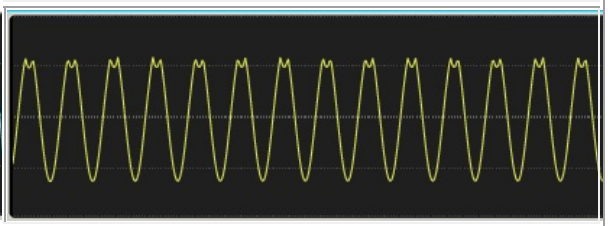
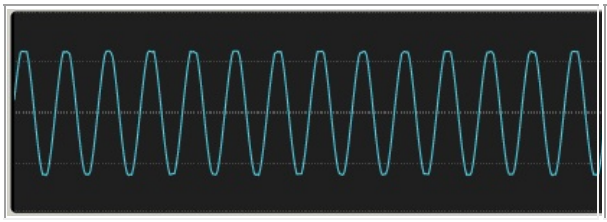
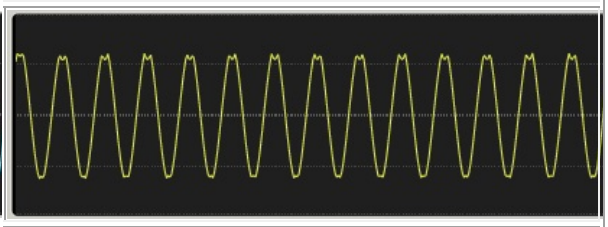
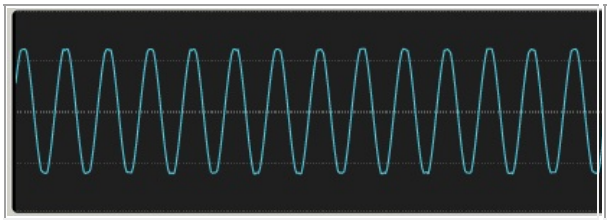
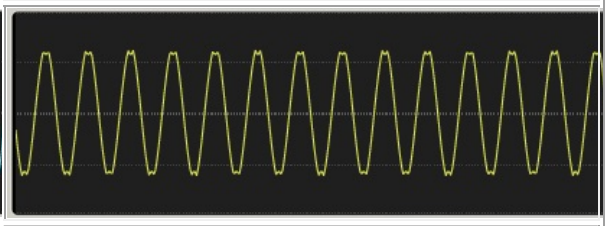
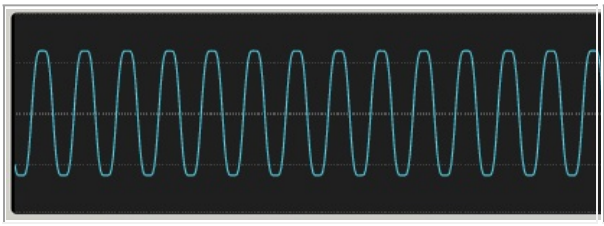
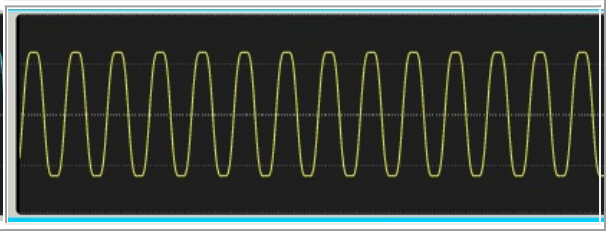
055		
056		
057		
058		
059		
060		
061		
062		

063		
064		
065		
066		
067		
068		
069		
070		

071		
072		
073		
074		
075		
076		
077		
078		

079		
080		
081		
082		
083		
084		
085		
086		

087		
088		
089		
090		
091		
092		
093		
094		

095		
096		
097		
098		
099		
100		

10 MIDI Implementation Chart

In the table below, first the MIDI CC Number is mentioned and is followed by the name of the function in Rumblit Bit Crusher Effect:

12	High Pass 12 Filter Switch
13	High Pass 12 Filter Cutoff
14	High Pass 12 Filter Res
15	Low Pass 24 Filter Switch
16	Low Pass 24 Filter Cutoff
17	Low Pass 24 Filter Res
18	Route Filty To
19	Bit Crush Switch
20	Bit Crush Sample Rate
21	Bit Crush Bit Depth
22	Bit Crush Mix
23	Bit Crush Jitter
24	Bit Crush Bit Bias
25	Bit Crush Slew Rate
26	Route Cruzzer To
27	MB Distortion Switch
28	MB Distortion Band 1
29	MB Distortion Band 2
30	MB Distortion Band 3
31	MB Distortion Band 4
33	MB Distortion Band 1
34	MB Distortion Band 2
35	MB Distortion Band 3
36	MB Distortion Band 4
37	MB Distortion Band 1
39	MB Distortion Band 2
40	MB Distortion Band 3
41	MB Distortion Band 4
42	MB Distortion Band 1 Res
43	MB Distortion Band 2 Res
44	MB Distortion Band 3 Res
45	MB Distortion Band 4 Res
46	MB Distortion Band 1 Tilt
47	MB Distortion Band 2 Tilt
48	MB Distortion Band 3 Tilt
49	MB Distortion Band 4 Tilt
50	MB Distortion Band 1
51	MB Distortion Band 2
52	MB Distortion Band 3
53	MB Distortion Band 4
54	MB Distortion Band 1 Pan
55	MB Distortion Band 2 Pan
56	MB Distortion Band 3 Pan

57 MB Distortion Band 4 Pan
58 MB Distortion Band 1
59 MB Distortion Band 2
60 MB Distortion Band 3
61 MB Distortion Band 4
62 MB Low Bypass
63 MB High Bypass
65 MB Mix
66 Route Mudix To
67 Saturation Switch
68 Saturation Drive
69 Saturation Threshold
70 Saturation Density
71 Saturation High Bypass
72 Route Saturn To
73 Low Pass 12 Filter Switch
74 Low Pass 12 Filter Cutoff
75 Route BEQ To
76 Master Level

11 Device Remote information

Scope	
Manufacturer	Model
Oenkenstein Audio	nl.oenkenstein.RUMBLIT

Remotable	Min	Max	Input type	Output type
Enabled	0	2	Value	ValueOutput
High Pass 12 Filter Switch	0	1	Toggle	ValueOutput
High Pass 12 Filter Cutoff	0	4194304	Value	ValueOutput
High Pass 12 Filter Res	0	4194304	Value	ValueOutput
Low Pass 24 Filter Switch	0	1	Toggle	ValueOutput
Low Pass 24 Filter Cutoff	0	4194304	Value	ValueOutput
Low Pass 24 Filter Res	0	4194304	Value	ValueOutput
Route Filty To	0	4	Value	ValueOutput
Bit Crush Switch	0	1	Toggle	ValueOutput
Bit Crush Sample Rate	0	4194304	Value	ValueOutput
Bit Crush Bit Depth	0	14	Value	ValueOutput
Bit Crush Mix	0	4194304	Value	ValueOutput
Bit Crush Jitter	0	4194304	Value	ValueOutput
Bit Crush Bit Bias	0	4194304	Value	ValueOutput
Bit Crush Slew Rate	0	4194304	Value	ValueOutput
Route Cruzzer To	0	3	Value	ValueOutput
MB Distortion Switch	0	1	Toggle	ValueOutput
MB Distortion Band 1 Switch	0	1	Toggle	ValueOutput
MB Distortion Band 2 Switch	0	1	Toggle	ValueOutput
MB Distortion Band 3 Switch	0	1	Toggle	ValueOutput
MB Distortion Band 4 Switch	0	1	Toggle	ValueOutput
MB Distortion Band 1 Drive	0	4194304	Value	ValueOutput
MB Distortion Band 2 Drive	0	4194304	Value	ValueOutput
MB Distortion Band 3 Drive	0	4194304	Value	ValueOutput
MB Distortion Band 4 Drive	0	4194304	Value	ValueOutput
MB Distortion Band 1 Frequency	0	4194304	Value	ValueOutput
MB Distortion Band 2 Frequency	0	4194304	Value	ValueOutput
MB Distortion Band 3 Frequency	0	4194304	Value	ValueOutput
MB Distortion Band 4 Frequency	0	4194304	Value	ValueOutput
MB Distortion Band 1 Res	0	4194304	Value	ValueOutput
MB Distortion Band 2 Res	0	4194304	Value	ValueOutput
MB Distortion Band 3 Res	0	4194304	Value	ValueOutput
MB Distortion Band 4 Res	0	4194304	Value	ValueOutput
MB Distortion Band 1 Tilt	0	4194304	Value	ValueOutput
MB Distortion Band 2 Tilt	0	4194304	Value	ValueOutput
MB Distortion Band 3 Tilt	0	4194304	Value	ValueOutput
MB Distortion Band 4 Tilt	0	4194304	Value	ValueOutput
MB Distortion Band 1 Curve	0	4194304	Value	ValueOutput
MB Distortion Band 2 Curve	0	4194304	Value	ValueOutput
MB Distortion Band 3 Curve	0	4194304	Value	ValueOutput
MB Distortion Band 4 Curve	0	4194304	Value	ValueOutput
MB Distortion Band 1 Pan	0	4194304	Value	ValueOutput
MB Distortion Band 2 Pan	0	4194304	Value	ValueOutput
MB Distortion Band 3 Pan	0	4194304	Value	ValueOutput

MB Distortion Band 4 Pan	0	4194304	Value	ValueOutput
MB Distortion Band 1 Level	0	4194304	Value	ValueOutput
MB Distortion Band 2 Level	0	4194304	Value	ValueOutput
MB Distortion Band 3 Level	0	4194304	Value	ValueOutput
MB Distortion Band 4 Level	0	4194304	Value	ValueOutput
MB Low Bypass	0	4194304	Value	ValueOutput
MB High Bypass	0	4194304	Value	ValueOutput
MB Mix	0	4194304	Value	ValueOutput
Route Mudix To	0	3	Value	ValueOutput
Saturation Switch	0	1	Toggle	ValueOutput
Saturation Drive	0	4194304	Value	ValueOutput
Saturation Treshold	0	4194304	Value	ValueOutput
Saturation Density	0	4194304	Value	ValueOutput
Saturation High Bypass	0	4194304	Value	ValueOutput
Route Saturn To	0	3	Value	ValueOutput
Low Pass 12 Filter Switch	0	1	Toggle	ValueOutput
BEQ - Low Pass 12 Filter Cutoff	0	4194304	Value	ValueOutput
Route BEQ To	0	3	Value	ValueOutput
Master Level	0	4194304	Value	ValueOutput
Mod Wheel	0	127	Value	ValueOutput
Breath Control	0	127	Value	ValueOutput
Expression	0	127	Value	ValueOutput
Sustain Pedal	0	127	Value	ValueOutput
Aftertouch	0	127	Value	ValueOutput
Pitch Bend	-8192	8191	Value	ValueOutput
Device Name	0	0	-	TextOutput
Patch Name	0	0	-	TextOutput
Select Patch Delta	0	0	Delta	TextOutput
Select Previous Patch	0	0	Trig	TextOutput
Select Next Patch	0	0	Trig	TextOutput