



Unruly Drums is a virtual drum kit where every drum, even the kick, is a snare. It requires Plogue Sforzando version 1.951 or higher, which is free and can be downloaded from <https://www.plogue.com/products/sforzando.html>

Any questions or comments? Contact us at samples@karoryfer.com

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INTRODUCTION



Lots of people sample classic drum kits which make familiar sounds. This is very different. Every drum in this kit is a snare. There's a relatively normal 14" snare, a deep 13" snare converted from a tom, and a giant 22" snare we constructed specifically for the purposes of sampling. Even the kick is a 20" marching band bass drum with two sets of microsnare wires under the reso head. We put this kit together specifically for the purposes of sampling it, starting with making the 22" snare and then looking for pieces to match it.

There are no toms, but the snares sampled with the snares off can be used as toms. There's also a woodblock, a hi-hat, a crash and a ride to complete the kit. Both sticks and brushes were used to record the samples.

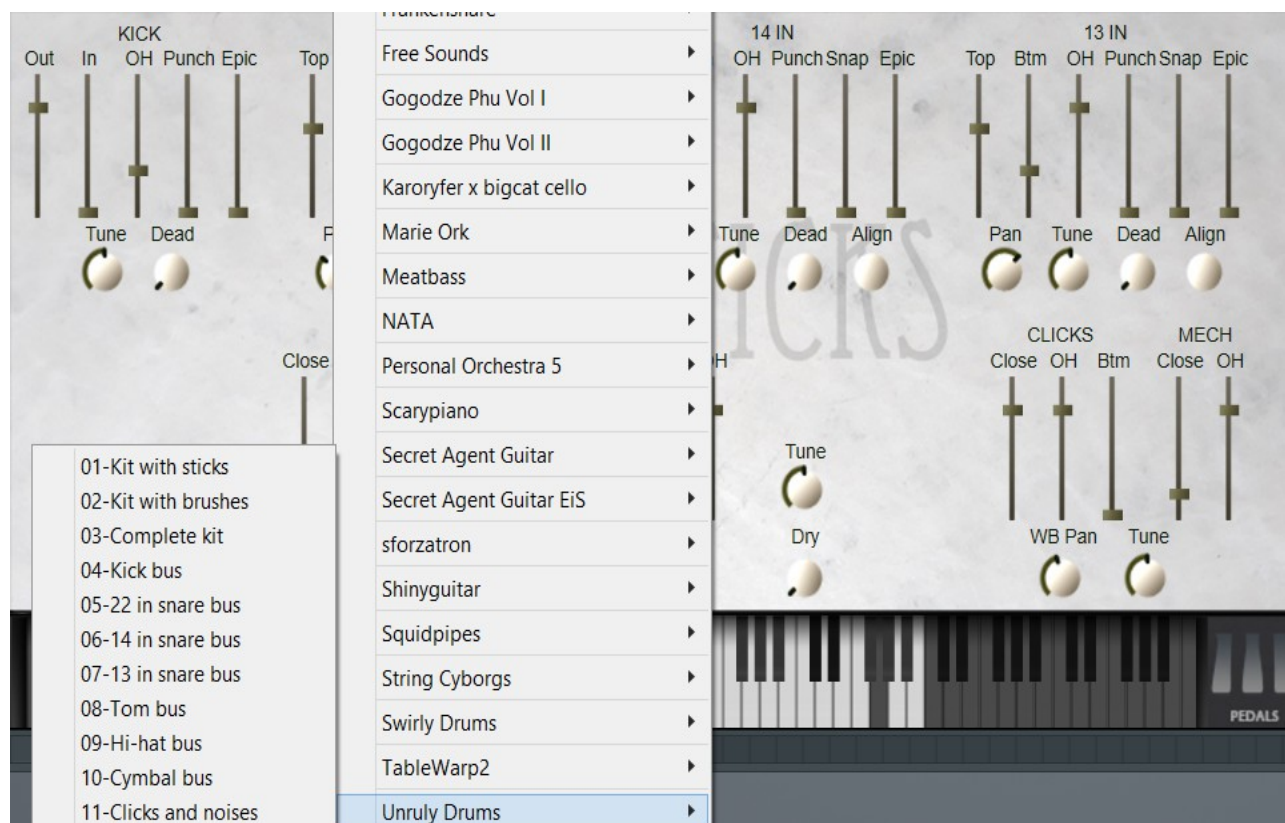
So what is it for? Well, for any music which needs unusual drums with a lot of character and dirt, though they're not being hit hard enough for extreme metal. We think they're most suitable for indie pop and organic hip-hop, though it would not surprise us if most owners end up using them in ways we never imagined.

INSTALLATION AND REGISTRATION

If you do not have Sforzando installed, install that first – version 1.951 or newer is required. After downloading and unzipping the Unruly Drums content into a folder, launch Sforzando, either in standalone mode or as a plugin. It is important that all the files stay in the same folder – changing the folder structure would require editing the SFZ files. Drag the Unruly Drums.bank.xml file onto the Sforzando interface – if this does not work in your DAW, try doing it with Sforzando in standalone mode. After providing administrator credentials, the instrument will be registered. On registration, the kit will also load, which can take several minutes on some systems – please be patient.

The SFZ files and WAV files can be used without registration, but registration causes Unruly Drums to appear in Sforzando's instrument list, which allows the instruments to be loaded with the GUI.

INSTRUMENT BANK



The instrument bank includes eleven instruments. The first three are complete kits – the first is the kit played with sticks. The second is played with brushes, except for the sidesticks, toms, woodblock and rim clicks which still use the sticks. The third has all the samples, and allows switching between sticks and brushes for everything that's sampled with both.

The remaining instruments are bus instruments – subsets of the full kit. There's a kick bus instrument, one for each snare, one for all the toms, one for hi-hat, one for the cymbals, and one for the woodblocks, clicks and noises. These include both sticks and brushes where relevant.

As Sforzando only has one stereo output, the bus instruments are useful for sending various kit pieces to different mixer channels for separate processing. Consult your DAW's documentation for sending the same MIDI data to multiple bus instruments at once. The note and MIDI CC assignments are consistent across the bank.

KIT PIECES AND ARTICULATIONS

20" bass drum:

pedal: kick (all snares on), kick (snare off, snares on on other drums),
kick (all snares off), pedal click noise, pedal spring noise, pedal return noise
stick: rim click with shank, rim click with tip

22" snare:

stick: sidestick, center hit, edge hit, rim click with shank, rim click with tip,
center hit (snare off, snares on on other drums), center hit (all snares off),
edge hit (snare off, snares on on other drums), edge hit (all snares off)
brush: center hit, edge hit, dig, stir, flutter

14" snare:

stick: sidestick, center hit, edge hit, rimshot, rim click with shank, rim click with tip,
center hit (snare off, snares on on other drums), center hit (all snares off),
brush: center hit, dig, rimshot, stir, flutter

13" snare:

stick: sidestick, center hit, edge hit, rimshot, rim click with shank, rim click with tip
center hit (snare off, snares on on other drums), center hit (all snares off),
brush: center hit, dig, rimshot, stir, flutter

14" hi-hat:

pedal: chik, splash, return noise, pedal noise, pedal return noise
stick: tip hit (six degrees of openness), shank hit (six degrees of openness)
brush: hit (six degrees of openness)

16" crash:

stick: edge, bow
brush: bow
edge choke

20" ride

stick: bow, bell, edge
brush: bow
edge choke

woodblock:

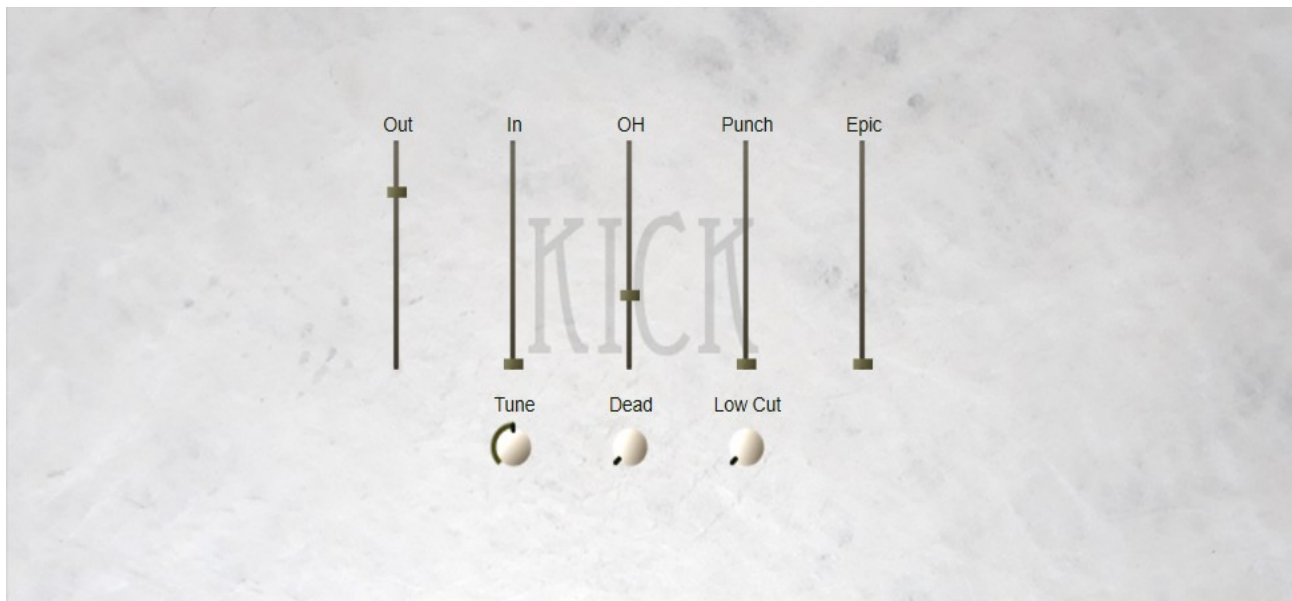
low, high

incidental noises:

sit down, turn



KICK SOUNDS



The kick was sampled three ways. The most standard clean kick sound was recorded with the snare wires off on both the kick and all the snares. The second „dirty” kick was recorded with the snare wires off on the kick, but on on all the snares, so the snares buzz sympathetically when the kick is hit – more sympathetic buzz than would usually sound in a typical drum kit with only one snare. The third „dirties” kick was recorded with snares on everything, with the two sets of 8” microsnare wires under the kick’s reso head making a sharp, high sound.

The snare buzz from these wires is short and very sharp, a little like a TR-808 snare. It’s possible to use the kick as a snare by tuning it high and/or turning up the Punch control.

THE SNARES



As there are three snares here, the question of what the differences between them are and when to use which one is a valid question. The 14” snare is by far the most „normal”, being a

vintage Trixon snare from the mid-1960s. It's about 6 1/2" deep and has a birch shell. It's probably a 1/400 model from 1965-1966, but we're not really sure. It has a very shallow snare bed, making it extremely sensitive, which means that the snare wires make a good amount of buzz even with very light hits or sidesticks. It's located in the standard snare position, between the kick and hi-hat, and mapped to the usual snare MIDI notes by default.

The 13" snare was converted from an Estonian 1980s-1990s RMIF rack tom, is 9" deep, and is not quite as sensitive. That gives it sidesticks that have less buzz, and a drier, snappier sound on hits. The snare bottom mic sounds downright bizarre, and a drummer friend described it as „pixelated” - it's definitely got potential for lo-fi. It's located to the side of the main snare and under the crash – further to the right from the audience point of view. In the default MIDI mapping, it's two octaves above the usual snare notes.

The 22" snare is the most interesting one, because are there even any other 22" snares in the world? It's an amalgamation of parts of known and unknown origin, including the bottom rim and lugs from the same RMIF kit that the 13" snare originated in, a shell cut down from an old kick by Grzegorz Smyczek Kurpiel of Fat Flying Drums, two short sets of snare wires tied together in the middle, and a top wooden hoop of totally unknown origin with mismatched clawhooks and tension rods. Also, the legs are just cut from a steel bar bought in a hardware store. It's only 5" deep, so while the diameter is huge it's a big flat pancake.

But what does it sound like? Well, low, deep and fat, obviously. Because of the deep wooden hoop we didn't sample rimshots here, but because it's big and there's more room to hit, there are additional edge hits with the brushes. It's actually quite sensitive, and again the bottom mic sounds unusual, this time being quite dirty and industrial.

Physically this snare is located where the floor tom normally would be – to the left from the audience's point of view. In the default MIDI mapping, it's one octave below the usual snare notes.

SNARE HITS

Each of the snares has standard sidestick, center hit and edge hit articulations recorded with a stick. The 14" and 13" snares also have rimshots – the 22" snare does not, as its deep wooden rim isn't practical for playing rimshots.

Brushes have center hits and digs recorded for each snare. Digs basically work like brush hits, except the brush stays in contact with the head throughout. At the start, the wire tips are already touching the head, and the brush is then pressed into the head, without being picked up afterwards. They are useful for using alongside stirs, and can also be used as an alternative hit type. The 22" snare also has edge hits recorded, while the 14" and 13" snares have rimshots.

Each snare has its own set of notes, so it's possible to play multiple snares at once – for example, play a complex pattern on the 14" snare and accent the backbeats by hitting the 22" snare as well.

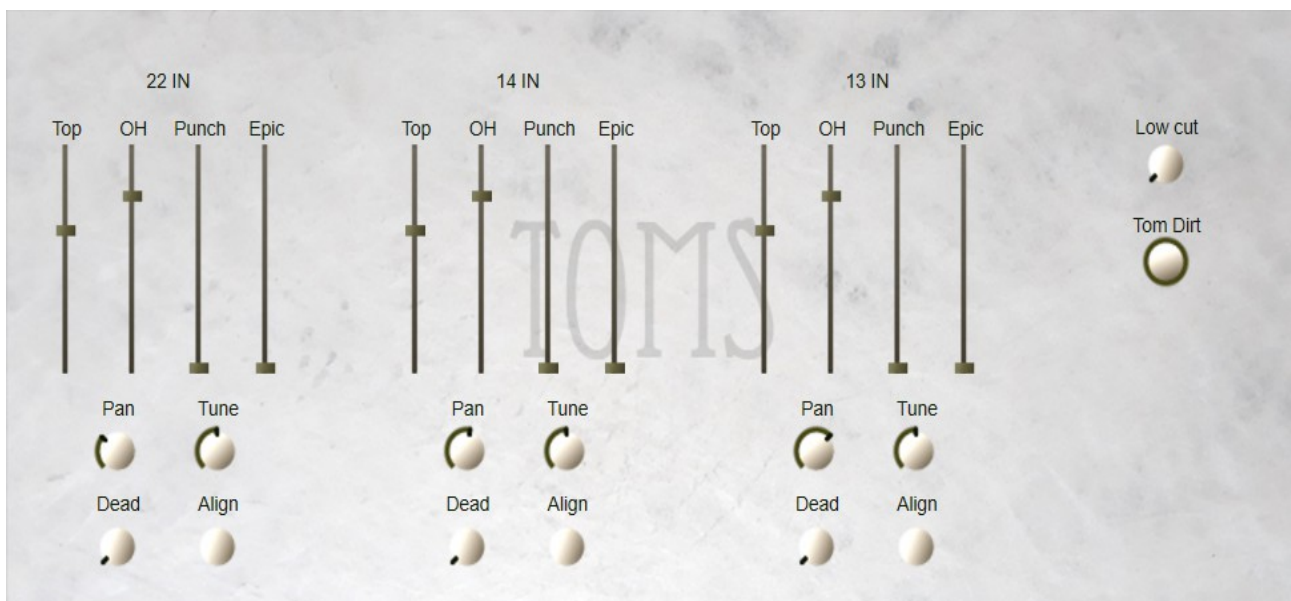
SNARE STIRS AND FLUTTERS

There are stirs and flutters recorded on the three snares. While the other sounds generally work the way drum kits normally do – hit a note, get a sound – these brush articulations are different. There's a stir start key, stir ornament, stir accent, a flutter start key, and a stir/flutter mute key.

The stir start triggers a sound which rises in volume, stays steady for a while, peaks, and then decays back to silence, with the duration dependent on the Stir Length control parameter. The stir accent rises quickly and makes a sharper sound, then immediately starts to decay to silence with the same duration as the stir start would after its peak. The flutter starts quickly, stays at steady volume for a time, and then decays to silence.

The stir/flutter mute key mutes any stir, flutter or stir accent which is currently playing. Stirs, flutters and stir accents also all mute each other. The stir ornament does not mute whatever else is currently happening, and just makes a quick little whoosh which can be added to add interest to a stir pattern.

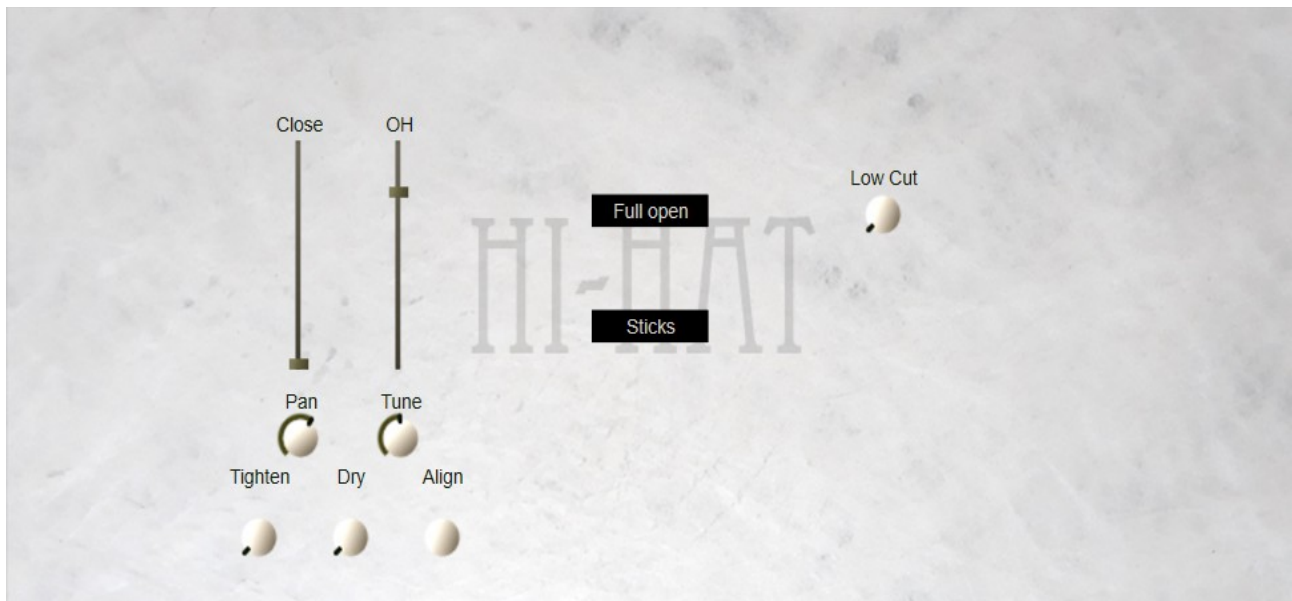
TOMS



There are no true toms in this kit, but the snares were also recorded with their wires off to make sounds which can be used as toms. These samples were recorded with sticks only. The 22" snare has center and edge hits, and the 14" and 13" snare have center hits only. All these sounds are recorded in two ways: with the snares on on the other two snares (resulting in sympathetic buzz), and the snares off on everything.

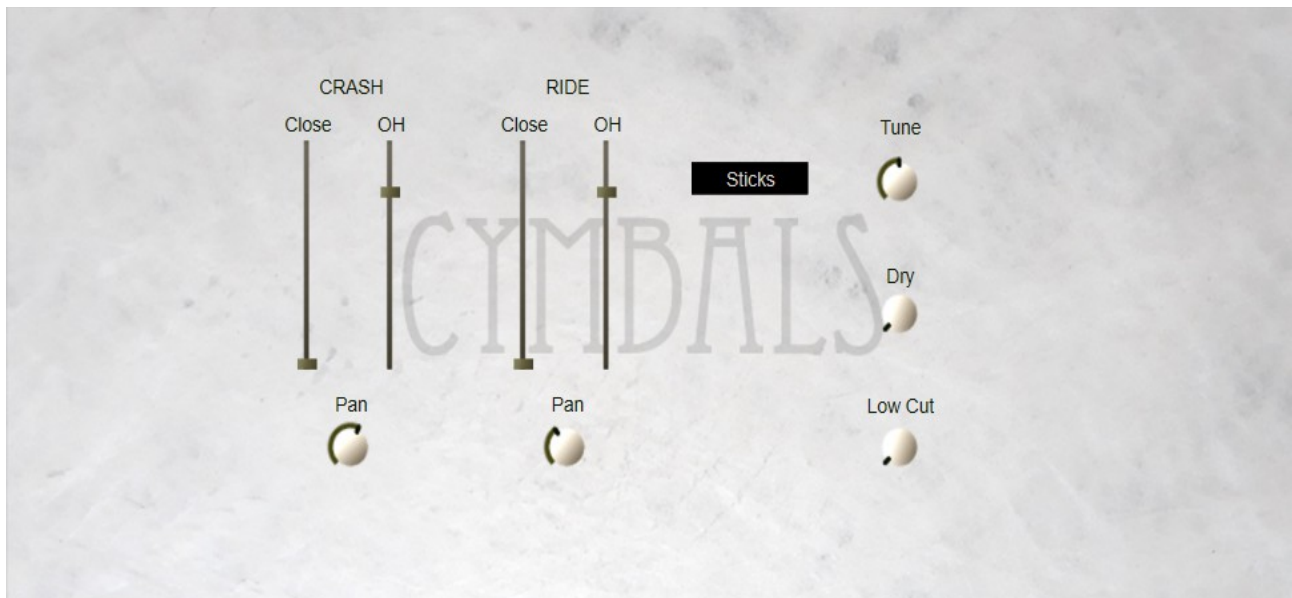
This setup allows the user to realistically use one snare as a snare and the other two as toms, or two snares and one tom. It's also possible to ignore the restrictions of reality and simply pretend that there are three snares and three toms in the kit.

HI-HAT



The hi-hat has six degrees of openness: tightly closed, closed, loosely closed, quarter open, half open and open. Each of these is recorded with stick tips, stick shanks, and brushes. There are also foot chick and foot splash articulations.

CYMBALS

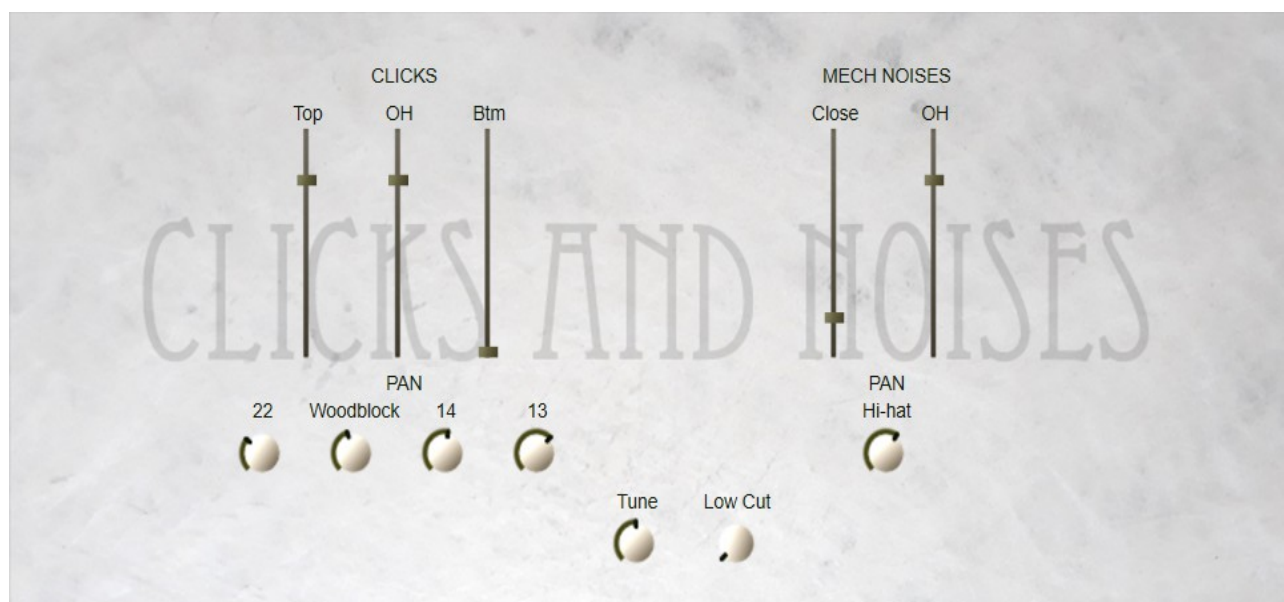


The crash has edge hits (crashes) and bow hits (allowing it to be used like a ride) recorded with sticks, bow hits with brushes, plus edge chokes.

The ride has bow hits (typical ride hits), bell hits and edge hits (using the ride as a crash) recorded with sticks, bow hits with brushes, plus edge chokes.

The choke mutes any hit on this cymbal currently playing, and it is up to the user to trigger the choke at the correct velocity for the desired volume. That usually means higher-velocity chokes soon after a hit, and low-velocity chokes when the cymbal's been ringing longer. Lower-velocity chokes will also be less obvious and sound more like a gradual fadeout.

CLICKS



Every drum has rim clicks sampled, with both the shank of the stick and closer to the tip, which makes a brighter sound. Again, these are sampled with sticks only. Along with the wood block, these can be used as extra percussion.

MECHANICAL NOISES

There are samples of sitting down on the drum stool (actually a cajon in this case), and turning while seated on the stool. The hi-hat has a return sound recorded with the hi-hat installed, plus pedal click and pedal return noises with no hi-hat in place. The kick pedal also has pedal click, slow spring groan, and pedal return noises recorded without the drum. The pedal click and pedal return mute any spring groan currently playing. That's called attention for detail.

STICKING SELECTION

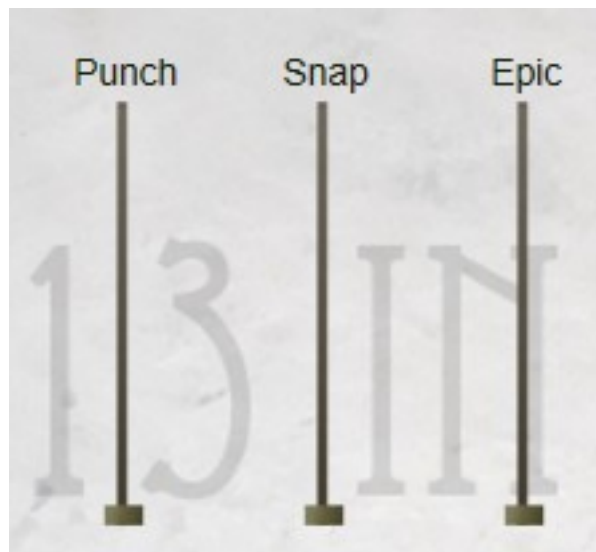
The snares and cymbals were recorded with both sticks and brushes. In the sticks version of the kit, everything is played with sticks, and brush stirs and flutters are not available. In the brushes version, the snares, hi-hat and cymbals are played with brushes, brush stirs and flutters are available, but some things recorded only with sticks are also available. These are the sidesticks, toms and clicks.

The complete kit loads all samples. The sticking can be selected separately for each snare, and together for the hi-hat and two cymbals. This allows emulating using a brush on a snare and a stick on cymbals, as many drummers will do in real life. It's also possible to use a stick on one snare and brush on another. The snare, hi-hat and cymbal bus instruments also load all samples.

CONTROLS

The Controls tab contains graphical controls for the parameters. All parameters are also accessible as MIDI CC. The functionality of the Volume, Tune and Pan controls is fairly standard. It's worth noting, though, that the tonal contrast between the snares is greatest with the bottom mics. The Tune controls' range is from one octave down at 0% to one octave up at 100%, except for the clicks which are one octave down at 0% and natural pitch at 50%, but two octaves up at 100%. The hi-hat, cymbals and mechanical noises were miked with a mono close mic and a pair of stereo overheads, and thus have two volume controls each.

PUNCH, SNAP AND EPIC



The kick and snares were close-miked from both sides, and thus have three normal volume controls each, plus additional transposed volume controls. The Punch is the out mic of the kick or top mic of a snare transposed an octave up, and adds definition and punch to the attack. On the dirtiest kick, it also includes the noise of the kick's snare wires, so it adds that as well.

Snap is a bottom snare mic transposed an octave up. In general this makes the snare sound brighter and drier, though it sounds quite different on each snare. In the case of the 22 inch snare it makes it sound more like a normal snare. Epic is the overhead mics transposed an octave down, and makes the drums sound like they are in a much larger room.

ALIGN



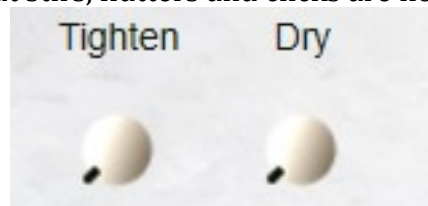
Normally, a drum kit is recorded with the overhead mics at equal distances from the snare drum, so it will be in phase. Here, with three snares instead of „the snare“, that is not possible, so we set up the overheads at equal distances from the kick, and added the Align buttons to align the overheads for the particular drum. This allows one snare to be aligned and placed in the center to be used as „the snare“ with the other two sounding like they're off to the sides, or all snares and hi-hat to be aligned and in phase better than any real drum kit could ever be in reality.

The transposed overheads controlled by the Epic volume control are always aligned.

DEAD, DRY AND TIGHTEN

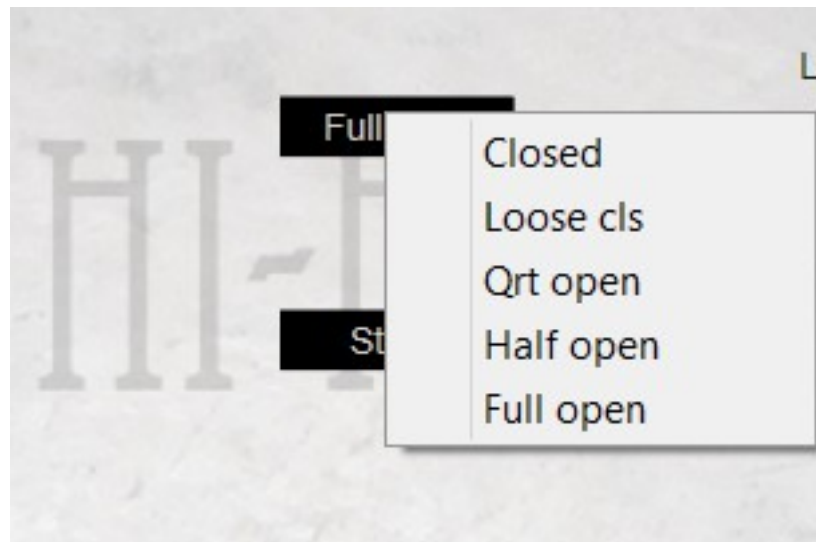


The Dead controls for the kicks, snare, toms apply envelopes which shorten the sound. They have no effect at 0%, and at 100% leave only a short percussive noise. This is obviously not realistic, but we decided to allow it, as it can be musical in an organic yet unrealistic way. Intermediate values are useful for emulating drums which have been muted with towels, tape etc. Digs are affected by this, but stirs, flutters and clicks are not.



The Dry control for the hi-hat and cymbals are similar to Dead, but much less extreme. At 100%, the sound fades out completely approximately by the midpoint of the sample. Dry can be useful for controlling sound buildup in dense patterns, increasing ride stick definition, or just emulating cracked cymbals which have lost much of their natural sustain. For the hi-hat it does not affect the closed, tightly closed or foot chik articulations, because those are instead shortened by the Tighten control, which has a more extreme effect like the Dead controls do.

HI-HAT POSITION



The hi-hat pedal position can be selected from the drop-down menu, which will also display the current hi-hat pedal position if using an external controller.

STIR CONTROLS



The stirs and flutters have a Length control, which makes stirs longer. Lower values of Length are obviously going to work better for faster tempos and more active patterns. At very low values of Length these stop sounding realistically like stirs, but we included the possibility to use those values because they can be useful for emulating shakers or for special effects.

The Fadeout control sets how quickly the sound fades out when a stir or flutter is muted, either by the stir/flutter mute key or by another stir, stir accent or flutter.

The Vol Trim control adjusts the volume of the stirs from natural when set at 0 to a 24 dB boost at maximum. As stirs are not naturally loud, boosting them to be closer in volume to snare hits can be convenient.

The Stir Shape selection offers a choice of three curves for the stir attack and decay. Smooth is a basic flat envelope, and the other two will have a less immediate attack and a more distinct peak in the middle of the stir. Generally, the more curved envelopes sound more similar to how a drummer would play stirs in faster tracks. This control does not affect the flutters.

The Stir Select control is used to pick which snare is used for stirs and flutters. Stirs and flutters can be played on any of the snares, but only on one at a time. If playing stirs on two snares at once is desired, just use bus instruments and select stirs to be on on those.

TOM DIRT



The Tom Dirt control is a switch which selects either the „tom” samples with snares on on the other snares, or the samples with snares off on everything.

LOW CUT



Low Cut cuts low frequencies from everything except the kick close mic and kick punch, which cleans up the bottom end.

SAMPLER FEATURES

The below are standard features of Sforzando, and are explained in more detail in the Sforzando manual. This is just a short summary of how these features apply to Unruly Drums.

SNAPSHOTS

Specific control settings can be saved using Sforzando's Snapshot function – basically, these are presets. This saves a snapshot of the instrument currently loaded into one instance of Sforzando and its MIDI CC settings. A few factory presets are included.

EFFECTS AND SETTINGS TABS

The Effects tab and Settings tab contain default Sforzando functions. Effects can be used to add more reverb (together with the Send control at the top of the Sforzando interface). Settings can be used for monitoring adjusting RAM usage and polyphony, though in general, the default settings appear to work well when using one guitar in a project.

Increasing the maximum engine RAM may be needed in projects which use multiple instances of Sforzando and other ARIA engine products which combine to use a large amount of RAM.

KEYMAP EDITING

The default keymap (see appendix) is based on General MIDI, but as these drums have a lot of things General MIDI didn't anticipate, such as lots and lots of snares, it mostly goes off on its own beyond the basics. Editing the keymap for the Sforzando instrument requires using a text editor to make changes to the keymap file. The Programs/keymap folder contains the keymap.sfx file, plus MIDI CC ranges for the hi-hat. To change the user keymap, edit the keyamp.sfx file in this folder using a text editor. Avoid putting multiple sounds on the same MIDI note, unless they are not to be used anyway (see below).

USE WITH E-KIT CONTROLLERS

Electronic drum kit controllers have some additional considerations, and we've provided e-kit versions of configuration files for both the instruments in the bank and the graphics to better suit e-kit users. Hi-hat Direction By default, the hi-hat is fully open with CC4 at 127, and fully closed with CC4 at 0. However, most electronic drum kits will have pedals which use a MIDI CC value of 0 for fully open, and 127 for fully closed. To reverse the hi-hat, copy the files from the Programs/ekit folder into the Programs folder, overwriting those files there. This will make the hi-hat work backwards.

The Programs/default folder contains a backup copy of the default SFZ files as well as the default keymap, and the GUI/default folder contains a backup copy of the default XML files.

GUI CONTROLS

The hi-hat's degree of openness labeling also needs to match the correct order in the user interface. To fix this, copy the files from the GUI/ekit folder into the GUI folder, overwriting the files there.

KEYMAP

Keymap editing works as described above, but most e-kits won't have enough pads and zones to cover all the sounds present in this kit. Some decisions must be made about how priorities. Sounds which will not fit should not be commented out or deleted from these files, as that would cause errors with missing variables. They can be moved to a placeholder note which the controller is not capable of sending. Multiple sounds can be put on the same placeholder note, as it will never be triggered anyway.

CREDITS AND ACKNOWLEDGMENTS

Recording by Drogomir Smolken. Sample start points (the biggest part of the job) marked by Percy Bansah. SFZ mappings by Drogomir Smolken. Thanks to the Hańba guys for hauling the drums which donated many parts to this on their way back from gigs in the middle of the night and loaning the kick, and to Michał Węglowski for loaning us the cymbals and playing in the kit demo video. Plogue Art et Technologie Inc. for support and Sforzando. Peter Jones for the hi-hat muting SFZ and testing. Michael LaFlamme for being the most active tester this time around. Octavia Pearl for the Unruly Drums name.



APPENDIX

KEYMAP

The default keymap mostly follows the General MIDI specification where practical, but makes significant departures. As General MIDI does not have any place for stirs and other brush techniques or performance noises, or three snares, we tried to arrange the sounds in a user-friendly way. The various hi-hat sounds are all on F#, G# and A# notes. The snare hits are on C#, D, D# and E. The „toms” are on the standard tom notes.

25	C#2	22" snare sidestick
26	D2	22" snare center hit
27	D#2	22" snare stick edge hit/brush dig
28	E2	22" snare edge hit
29	F2	stir start
30	F#2	stir ornament
31	G2	stir accent
32	G#2	flutter start
33	A2	stir/flutter mute
34	A#2	kick with all snares on
35	B2	kick with other snares on
36	C3	kick with all snares off
37	C#3	14" snare sidestick
38	D3	14" snare center hit
39	D#3	14" snare stick edge hit/brush dig
40	E3	14" snare rimshot
41	F3	22" tom center hit
42	F#3	hi-hat tightly closed tip hit/brush hit
43	G3	22" tom edge hit
44	G#3	hi-hat foot chik
45	A3	14" tom center hit
46	A#3	hi-hat variable openness tip hit/brush hit
47	B3	13" tom center hit
49	C#4	crash edge hit/brush hit
50	D4	crash edge choke
51	D#4	ride bow hit/brush hit
52	E4	ride edge choke
53	F4	ride bell hit/brush hit
54	F#4	hi-hat tightly closed shank hit/brush hit
55	G4	ride edge hit/brush hit
56	G#4	hi-hat foot splash
57	A4	crash bow hit/brush hit
58	A#4	hi-hat variable openness shank hit/brush hit
59	B4	wood block low hit
60	C5	wood block high hit
61	C#5	13" snare sidestick
62	D5	13" snare center hit

63	D#5	13" snare stick edge hit/brush dig
64	E5	13" snare rimshot
65	F5	kick rim click with shank
66	F#5	kick rim click with tip
67	G5	22" snare rim click with shank
68	G#5	22" snare rim click with tip
69	A5	14" snare rim click with shank
70	A#5	14" snare rim click with tip
71	B5	13" snare rim click with shank
72	C6	13" snare rim click with tip
74	D6	kick pedal click
76	E6	kick pedal spring groan
77	F6	kick pedal return
78	F#6	hi-hat pedal down
80	G#6	hi-hat return
81	A6	sit down on stool
82	A#6	hi-hat pedal return
83	B6	turn on stool

MIDI CC ASSIGNMENTS

4	Hi-hat position
15	Stir length
17	Stir crossfade
18	Stir shape
19	Stir select
20	Tom dirt
21	22" snare sticking
22	14" snare sticking
23	13" snare sticking
25	Cymbal and hi-hat sticking
30	22" snare top mic volume
31	22" snare bottom mic volume
32	22" snare OH mic volume
33	22" snare pan
34	22" snare tune
35	22" snare align
36	22" snare dead
37	22" snare punch
38	22" snare snap
39	22" snare epic
40	14" snare top mic volume
41	14" snare bottom mic volume
42	14" snare OH mic volume
43	14" snare pan
44	14" snare tune
45	14" snare align
46	14" snare deaden
47	14" snare punch

48	14" snare snap
49	14" snare epic
50	13" snare top mic volume
51	13" snare bottom mic volume
52	13" snare OH mic volume
53	13" snare pan
54	13" snare tune
55	13" snare align
56	13" snare deaden
57	13" snare punch
58	13" snare snap
59	13" snare epic
70	Kick out mic volume
71	Kick in mic volume
72	Kick OH mic volume
74	Kick tune mic volume
76	Kick deaden
77	Nonkick low cut
78	Kick punch
79	Kick epic
80	Hi-hat close mic volume
81	Hi-hat OH mic volume
82	Hi-hat pan
83	Hi-hat tune
84	Hi-hat align
85	Crash close mic volume
86	Crash OH mic volume
87	Crash pan
90	Ride close mic volume
91	Ride OH mic volume
92	Ride pan
95	Cymbal tune
96	Cymbal dry
98	Hi-hat tighten
100	Click close mic volume
101	Click OH mic volume
102	Click bottom mic volume
103	Click tune
105	Mechanical noise close mic volume
106	Mechanical noise OH mic volume
107	Woodblock pan