SWIRLY DRUMS USER GUIDE

Version 1.100

Swirly Drums by Karoryfer Samples is a virtual drum kit played with brushes. It includes two instruments. One works in the Plogue Sforzando sampler version 1.933 or higher, which is free and can be downloaded from https://www.plogue.com/products/Sforzando/ and the other requires the full version of Native Instruments Kontakt (not Kontakt Player) 5.5 or higher which can be purchased from Native Instruments.

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

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INTRODUCTION

A complete and detailed brushed drum kit with thousands of samples, the most innovative and important feature of Swirly Drums are the snare stirs. This core brushed snare technique is often left out of sampled drum kits, because of its nature – using the brush to make circles on the snare head in sync with the rhythm – which means they are tempo-dependent and can't be sampled like regular drum hits. This kit solves that problem by using sampled stirs as raw ingredients for a model of the stir technique with adjustable length and feel.

KIT PIECES AND ARTICULATIONS

Swirly Drums includes the following kit pieces:

20" marching kick
: hit, pedal noise

Cajon used as a kick
: hit

Snare
: center hit, edge hit, dig, long and short stir, long and short flutter, dig release noise

Hi-hat
: hits with six degrees of openness, foot chik, splash, pedal return noise

Crash, ride, splash, China crash, broken crash and cracked splash cymbal
: hits

16", 13", 12", 10" and 8" toms
: hits

Cowbell
: hit

Djembe
: hit

Bongos
: low and high

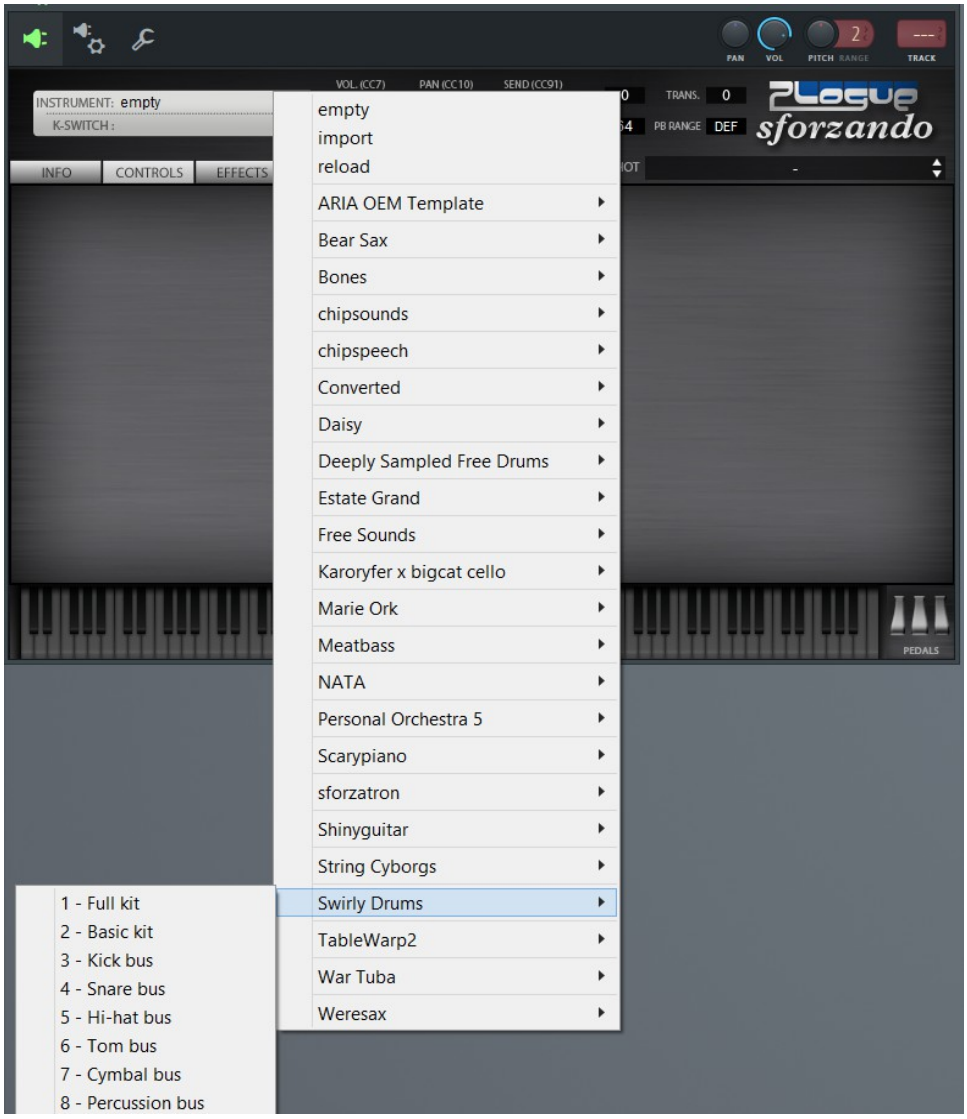
Darbouka
: hit

INSTALLATION AND REGISTRATION

SFORZANDO INSTALLATION

If you do not have Sforzando installed, install that first – version 1.933 or newer is required. After downloading and unzipping the Swirly 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 Swirly 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. The SFZ files and WAV files can be used without registration, but registration causes Swirly Drums to appear in Sforzando's instrument list, which allows the instruments to be loaded with the GUI.

If upgrading from an earlier version, extract the new version's zip file into the previously installed folder and overwrite all files. There is no need to delete any contents first, or repeat the Sforzando bank registration.



KONTAKT INSTALLATION

As this is not a Kontakt Player library, no special installation or registration is needed. Simply unzip the Swirly Drums content into a folder, open Kontakt, and then open the Swirly Drums.nki file as you would any other Kontakt instrument. As with Sforzando, it is important that all the files remain in their original folder structure, especially that the nki, nkc and nkr files remain in the same folder. On first loading the instrument, it may be necessary to Browse for the folder (select the Swirly_Drums folder, not one of its subfolders such as Samples or Resources) to tell the operating system where to look for it. The instrument should then be resaved with the local file paths – we recommend resaving under a different name, in order to retain an unaltered version of the Swirly Drums.nki file.

Kontakt version 5.5 (full version, not Kontakt Player) or higher is required. Due to the large number of outputs used by this instrument, before loading Swirly Drums, make sure Kontakt has at least 10 stereo outputs, meaning 20 total mono outputs, plus at least the „aux 1" output for the stereo reverb. With fewer available outputs, some instruments may not be routed properly to reverb.

KIT PIECES WITH SPECIAL FEATURES

While most of Swirly Drums work like any other drum kit - hit a note, and get the sound of a kit piece being hit - the snare is somewhat different, and there are also performance noises included for the kick, snare and hi-hat. The below information applies to both the Sforzando and Kontakt versions.

SNARE

The center hit and edge hit articulations are completely conventional. There is no rim click articulation, as that doesn't sound very good when performed with plastic brush handles. The dig articulation is a hit that leaves the brush on the head, which mutes the sound and keeps it from ringing. Digs will also mute regular hits.

The stirs are where things get more unusual, and they are the main reason we made this kit. Hitting one of the stir notes results in a stir sound which rises gradually, then falls. The Stir Time and Stir Tail parameters control the duration of this, meaning the stirs can be set up to fit a track's feel and tempo.

There are four stir articulations. The long stir (MIDI note 60 in the default mapping) is the most basic, and is mainly designed for stirs which make one circle per measure. The short stir (MIDI note 64) is shorter, louder and has the brush moving across the head faster, making it useful for accents. There is also a long flutter (MIDI note 61), which has the same rise time as the short stir but a shorter decay time, and which involves moving the brush back and forth rapidly. The short flutter (MIDI note 63) is similar, but is half the length.

All these articulations mute each other. This means long stirs can be accented with short stirs or flutters without all the sounds playing simultaneously. There is also a special stir mute key (MIDI note 62 in the default mapping), which makes no sound but mutes any stir or flutter currently playing, again using the same release time as above. It can be used to shorten stirs if needed.

At very low values of Stir Time and Stir Tail 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.

PERFORMANCE NOISES

Another feature not found in most drum kits is the performance noises. There are three, and all are very low in volume by default. There is a kick pedal noise, which is a recording of the kick pedal being stepped on. It can be used immediately before a kick note.

The snare has a dig release noise, which is a recording of the brush being picked up from the head after a dig. It can also be used at the end of a stir pattern, for example when a verse using stirs ends, and a hook which uses snare hits begins.

The hi-hat has a pedal return mechanical noise, which can be used after a foot chik.

SFORZANDO AND KONTAKT DIFFERENCES

Both the Sforzando and Kontakt versions use the same samples, and are similar, but they are not exactly the same. The main difference in sound is the room sound - the Sforzando version uses Ambience controls to control the volume of two sets of rendered wet samples, while the Kontakt version has one convolution reverb with selectable impulse responses.

The Kontakt version has multiple outputs, built-in effects, and color-coded keys in the keyboard view.

There are also a few minor differences. In Sforzando, the sympathetic snare buzz has Offset and Attack controls in addition to a volume control. Kontakt has separate top mic and bottom mic volume controls for each snare articulation, while Sforzando has one top mic and one bottom mic control only.

In Sforzando, the snare stir/flutter mute time is adjustable via the Release parameter, and the start point from which those samples are played is randomized. Kontakt has continuous adjustment of the curve shape for the stir and flutter envelope attack and decay, while Sforzando has a selection of three fixed curve shapes.

The ride cymbal also has a Buildup control in Sforzando, while in Kontakt the group polyphony for the ride is fixed.

The hi-hat has some differences which are more complex to explain. In Sforzando, the hi-hat's Tighten control affects only the foot chik, tightly closed and closed articulations. In Kontakt, the hi-hat's Deaden control affects all. The hi-hat muting rules are also different. In Sforzando, more closed hi-hat articulations mute more open hi-hat articulations but not the other way around. The splash hi-hat articulation mutes itself and only itself. That means that splash mutes splash, and does not mute any other articulation. Open hi-hat mutes splash only. Half-open mutes splash and open, and so on, until the foot chik, which mutes everything except itself.

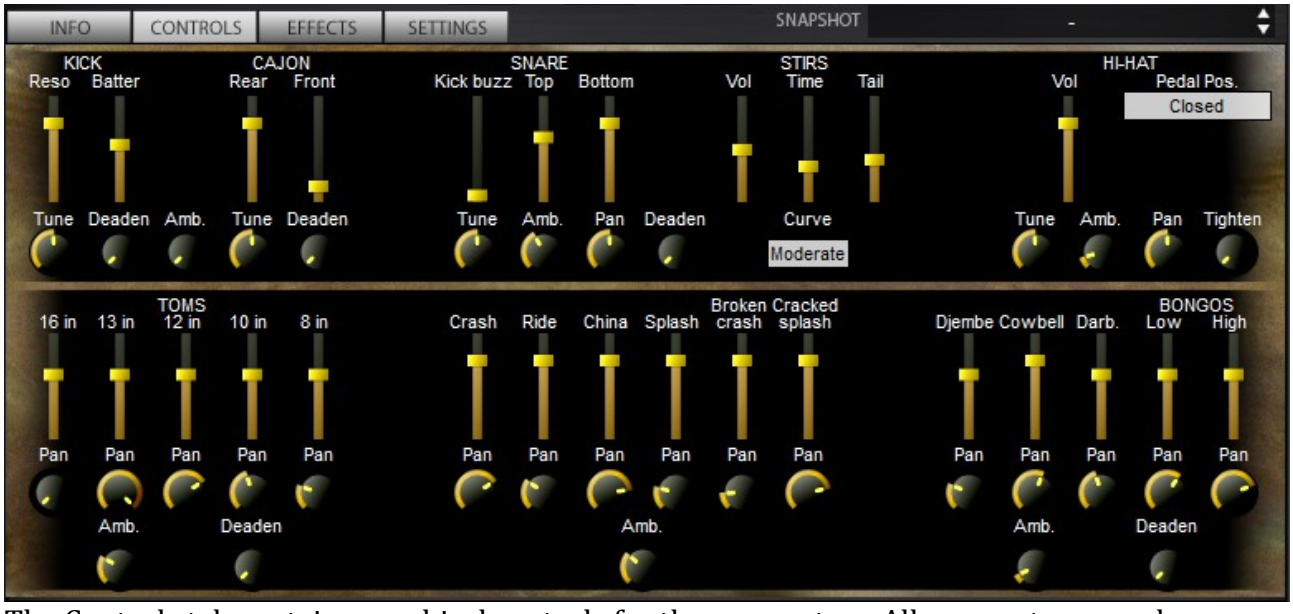
In Kontakt, any hi-hat articulation simply mutes any hi-hat articulation currently playing.

SFORZANDO INSTRUMENT BANK

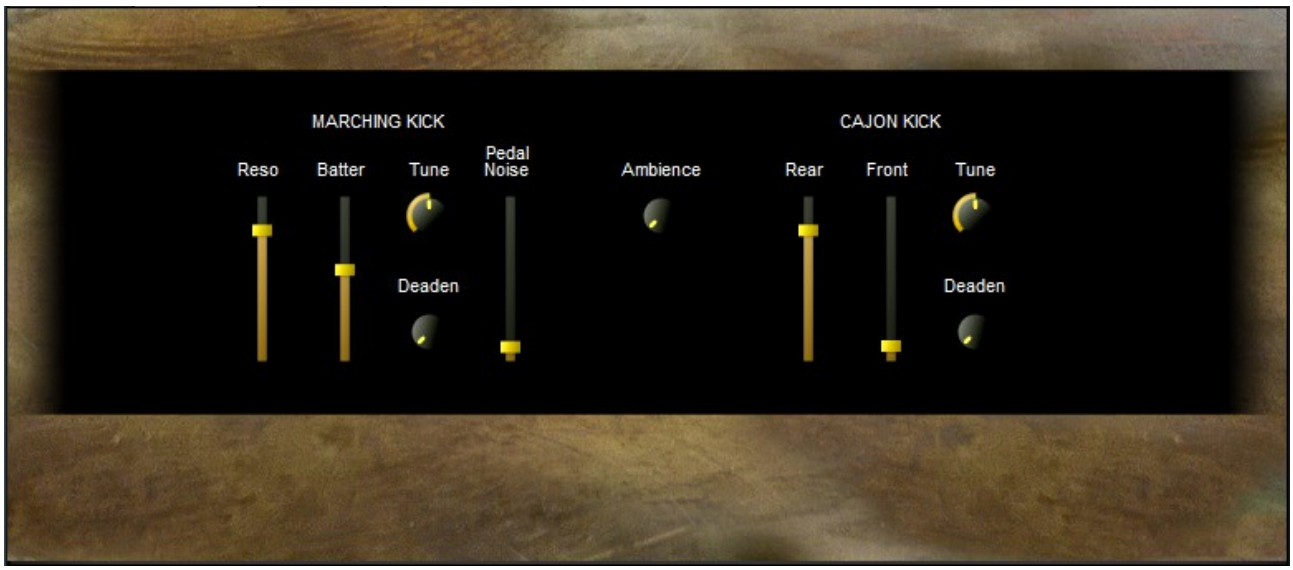
The Swirly Drums bank for Sforzando consists of two kit instruments - full and basic - and six bus instruments. The full kit contains all kit pieces. The basic kit has the marching kick, snare, hi-hat, crash and ride cymbals, and 16", 12" and 10" toms.

The kick bus instrument contains both the marching kick and cajon kick. The snare bus instrument contains only the snare, the hi-hat bus only the hi-hat, the tom bus all five toms, the cymbal bus all six cymbals, and finally the percussion bus contaisn the cowbell, djembe, bongos and darbouka. 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.

CONTROLS



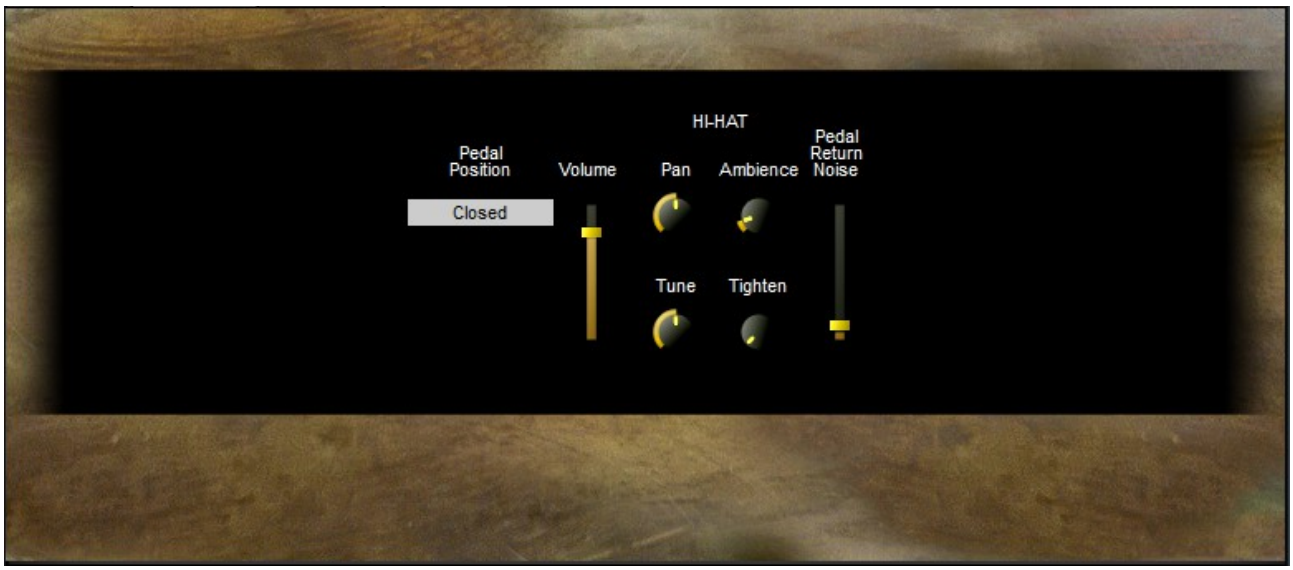
The Controls tab contains graphical controls for the parameters. All parameters are also accessible as MIDI CC. In the full and default kit instruments, not all parameters are visible in the GUI tab, but in the bus instruments every parameter relevant to the particular kit pieces is on the GUI.



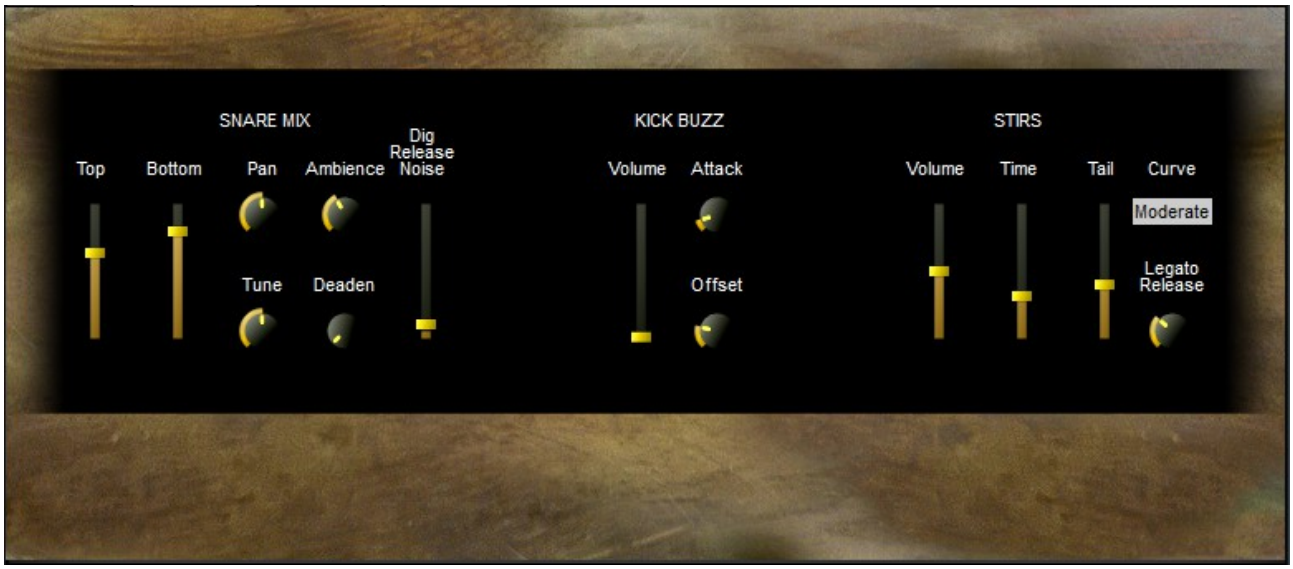
The functionality of the Volume, Tune and Pan controls is fairly standard. The Tune controls' range is from one octave down at 0% to one octave up at 100%. The kicks and snare were miked from both sides, and thus have two volume controls each. There are also separate volume controls for the sympathetic snare buzz triggered by the key note, and the kick pedal, snare dig release and hi-hat pedal return noises.

The Ambience controls add room sound - a small, tight room up to 50%, and a blend of that room and a larger studio space above 50%.

The Deaden controls for the kicks, snare, toms and percussion and the Tighten control for the hi-hat apply envelopes which shorten the sound. They have no effect at 0%, and at 100% leave only a short glitch. Again, 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. The difference between Deaden and Tighten is that Deaden affects all articulations on a kit piece, while Tighten only affects the tightly closed, closed and foot chik hi-hat sounds - like adjusting the hi-hat to be very tight when closed, but still leaving it fully open when open.



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



The snare stirs have their own additional Volume control, which acts as a multiplier of the snare top and bottom mics, and can be useful for giving the stirs, which are naturally not very loud, enough volume to be heard in busier mixes. They also have Time and Tail controls, whose purpose is to adjust the stir length to the feel needed for a particular track and tempo. Time is, roughly speaking, the attack time of the stirs' envelope, and Tail is the decay time. There is also a Release control, which affects the crossfade time when a stir or flutter is muted.

The Curve selection offers a choice of three curves for the stir and flutter attack and decay. Flat is a basic flat envelope, and the other two will have a slower 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.

The ride cymbal has a Buildup control, which emulates the fact that playing a cymbal with a brush mutes the sound slightly with each hit, and also lowers the amount of polyphony voices used by busy ride patterns. At 0%, previous hits are muted completely, which is obviously not realistic.

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, which means a complete kit of bus instruments would consist of a separate snapshot for each bus instrument.

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), and Settings can be used for monitoring adjusting RAM usage and polyphony, though in general, the default settings appear to work well for these drums.
Increasing the maximum engine RAM may be needed in projects which use many instances of Sforzando and other ARIA engine products which combine to use a large amount of RAM.

KEYMAP EDITING

Editng the keymap for the Sforzando instrument requires using a text editor to make changes to some of the files. The Programs/keymaps folder contains the keymap configuration with the MIDI note numbers for every articulation, plus MIDI CC ranges for the hi-hat. To change the user keymap, edit all the SFZ files in this folder using a text editor. The kit pieces in the keymap_basic.sfz file will have to be changed in both that file and the other files in which they occur - that means making the same change twice. Note that the main kick note is also found in the snare keymap, as the kick will trigger the sympathetic buzz in the snare bus instrument,

so if you need to move the kick note, it will have to be changed three times.

Sounds can be moved to other notes, and the hi-hat can also be reconfigured. Some electronic drum kits will have pedals which use a MIDI CC value of 0 for fully open, and 127 for fully closed, while the default configuration is 127 for fully open and 0 for fully closed. This can be swapped here, and the hi-hat could also be set up to use a different MIDI note for each articulation and ignore the CC data. However, changing the way the hi-hat works will mean the hi-hat positions will no longer be displayed correctly in the GUI, so the full kit, basic kit and hi-hat bus XML files in the GUI folder will also need to be edited to change the order of the labels there. If the hi-hat is remapped to use a different note for each articulation, then the pedal position control in the GUI becomes meaningless.

Sounds which are not needed 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 if they are not to be used, for example, when using these drums with an electronic kit which does not have enough elements to provide a separate note for every articulation.

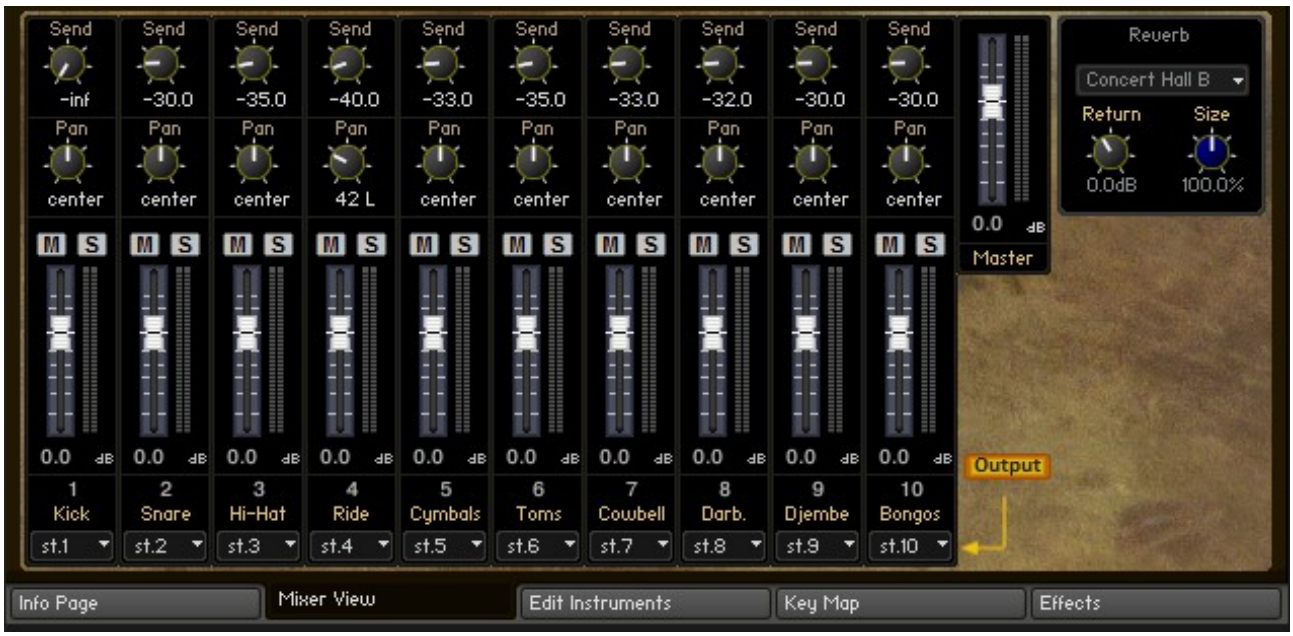
Changing the MIDI CC numbers is not recommended, as they are set in every bus XML plus in the GUI configuration, so changing them in the SFZ files would mean the GUI no longer uses the correct CCs.

The Programs/keymaps/default folder contains a backup copy of the default keymap files and the GUI/default folder contains a backup copy of the default XMLs.

KONTAKT INSTRUMENT

The Kontakt version of Swirly Drums includes one instrument, which contains all the kit pieces. As Kontakt supports multiple outputs, there is no need for bus instruments. The instrument's controls are divided across several tabs.

MIXER VIEW



The Mixer View tab contains volume and pan controls for each kit piece group, as well send controls for the convolution reverb, which is also configurable from this tab – there are five available impulses so concert hall, studio and plate reverb sounds are all options.

Both kicks share a common mixer channel, as do all the toms, and all the cymbals except the ride. The ride gets its own mixer channel, as do the snare, hi-hat, and each of the percussion instruments. Mixer channels can also be rerouted to different outputs here, for example to send the cymbals, ride and hi-hat to the same mixer channel in the DAW, but it is not possible to, for example, route the floor tom to one mixer channel and rack tom to another from this view.

Many of the instruments have panning set in the Edit Instruments tab, which means that using the pan knobs in the mixer to move them around may not work too well. The toms, cymbals (except the ride) and percussions are generally best panned from the Edit Instruments tab. The kicks, snare, hi-hat and ride don't have pan controls under Edit Instruments and should be panned from the Mixer tab.

EDIT INSTRUMENTS

The Edit Instruments view contains a drop-down list for instrument groups. Each instrument group has its own controls for volumes, panning, tuning, and more specific controls such as the snare stir Time and Tail.

The kicks were miked from both sides, so they have two volume controls each. Each also has a separate tune control, and a Deaden control. Deaden applies an envelope which shortens the sound. It has no effect at 0%, so the entire sample is played with no envelope applied, and at 100% leave only a short glitch. The kick pedal noise control is a volume control for the kick pedal noise described in the Performance Noises section earlier in this manual.

The snare has separate top and bottom volume controls for each articulation. The stirs also have Time and Tail controls, whose purpose is to adjust the stir length to the feel needed for a particular track and tempo. These controls affect both stirs and flutters. Time is, roughly speaking, the attack time of the stirs' envelope, and Tail is the decay time. The Curve control affects the shape of the stirs' and flutters' attack and decay, with 0 being flat, and values lower than that giving a more pronounced peak in the middle of the stir. Values around -60 to -70 seem closest to how a drummer would typically play on more uptempo tracks.

The volume controls for the sympathetic snare buzz (triggered by the marching kick note) and the dig release noise (described in the Performance Noises section) are also here. The Output Vol control affects the Snare Edge only.

The Cymbals here include the hi-hat, with a volume control for the hi-hat pedal return noise, a Deaden control for the hi-hat which works similarly to the kick and snare Deadens, and buttons for selecting the degree of hi-hat openness for MIDI note 46. The buttons can also be used to monitor the current hi-hat pedal position if using an external controller, such as the pedal on an electronic drum kit – as the controller moves between positions, the correct light will come on.

Because the ride cymbal has its own mixer channel with volume and pan controls, adding those controls here would be redundant. So, the only ride control in the Edit Instruments tab is Tune.

The toms share a common Deaden control which affects them all, and all the percussion instruments have a common Deaden as well.

KEY MAP

The Key Map editing view allows each articulation's note to be changed as desired. The notes can be changed in two ways. One is by clicking on the note name or note number and moving the mouse. The other is by clicking the Set Midi button for the articulation and then sending a MIDI note to the instrument. The latter method is especially useful with electronic drum kits, but can be used with MIDI keyboard controllers as well. The way the hi-hat responds to CC4 cannot be edited from here, and changing that requires modifying the Kontakt scripts.

Key map presets can be saved and recalled from the GUI – especially useful for electronic

drum kit users who need to assign different sounds to different triggers in different songs. The preset menu also allows all keys to be cleared, which leaves no keys mapped and can be useful for starting a new mapping from scratch.

EFFECTS

The Effects tab contains EQ, transient control, compression and tape saturation effects for each mixer channel. By default, all effects are off when loaded, so they do not use any CPU. To turn each effect on, select the proper mixer channel's effects, and use the button in the upper left corner of a particular effect to enable it – when enabled, that effect's light will turn green.

It's possible to load and save presets for effects settings. Although each mixer channel has its own separate effects, it is possible to load the same preset into all mixer channels. In order to actually process multiple kit pieces through one instance of the same effect (such as compress all the percussion together), send them to the same mixer channel in your DAW and use the needed effects there.

CREDITS AND ACKNOWLEDGMENTS

Recorded by Drogomir Smolken and Adam Sobolewski. Editing and Sforzando instrument by Drogomir Smolken. Kontakt instrument by Tod Stillwell. Graphics by Ania Adamczyk.

This would not have been possible without the Karoryfer Lecolds team, and several other people across the world. We thank: Angelika Pastuszka and Artur Rębisz for letting us record their toms and cymbals. Plogue Art et Technologie Inc. for support and Sforzando. Peter Jones for the hi-hat muting SFZ and testing. Michael Murdoch for testing and demo. Joe Stevens for testing. Mike Leon for walkthrough feedback. And everybody we borrowed microphones from.

APPENDIX

DEFAULT KEYMAP

The default keymap is the same in Sforzando and Kontakt. It mostly follows the General MIDI specification up to the ride cymbal, then changes. As General MIDI does not have any place for stirs and other brush techniques or performance noises, we tried to arrange the sounds in a user-friendly way. The ride cymbal is followed by the other cymbals and hi-hat splash articulation. Then come the stirs and flutters, then the percussion, and finally the performance noises.

35	cajon kick
36	marching kick
38	snare center hit
39	snare dig
40	snare edge hit
41	16" tom
42	tightly closed hi-hat
43	13" tom
44	hi-hat foot chik
45	12" tom
46	variable pedal position hi-hat
47	10" tom
48	8" tom
49	crash cymbal
51	ride cymbal
53	China crash cymbal
54	hi-hat foot splash
55	splash cymbal
57	broken crash cymbal
59	cracked splash cymbal
60	long snare stir
61	long snare flutter
62	snare stir or flutter mute
63	short snare flutter
64	short snare stir
65	djembe
66	cowbell
69	low bongo
70	darbouka
71	high bongo
72	kick pedal noise
74	snare dig release noise
78	hi-hat pedal return noise

MIDI CC ASSIGNMENTS

SFORZANDO

In Sforzando, all parameters are assigned to MIDI CC by default.

4	hi-hat pedal position
14	snare stir curve shape
15	16" tom volume
16	16" tom pan
17	16" tom tuning
20	13" tom volume
21	13" tom pan
22	13" tom tune
24	12" tom volume
25	12" tom pan
26	12" tom tune
28	10" tom volume
29	10" tom pan
30	10" tom tune
32	8" tom volume
33	8" tom pan
34	8" tom tune
36	all toms deaden
37	kick pedal noise volume
38	marching kick reso head mic volume
39	marching kick batter head mic volume
40	marching kick tuning
41	marching kick deaden
42	sympathetic snare buzz volume
43	sympathetic snare buzz attack time
44	sympathetic snare buzz sample offset
45	cajon kick rear mic volume
46	cajon kick front mic volume
47	cajon kick tune
48	cajon kick deaden
49	snare dig release volume
50	snare top mic volume
51	snare bottom mic volume
52	snare pan
53	snare tune
54	snare deaden
55	snare stir time
56	snare stir tail
57	snare stir volume
58	snare stir muting crossfade time

59 ambience for both kicks
60 snare ambience
61 hi-hat ambience
62 ambience for all toms
63 ambience for all cymbals
68 ambience for all percussion
69 hi-hat pedal noise volume
70 hi-hat volume
71 hi-hat pan
72 hi-hat tuning
73 hi-hat tighten
75 crash cymbal volume
76 crash cymbal pan
77 crash cymbal tune
80 ride cymbal volume
81 ride cymbal pan
82 ride cymbal tune
83 ride cymbal buildup
85 splash cymbal volume
86 splash cymbal pan
87 splash cymbal tune
90 China crash cymbal volume
91 China crash cymbal pan
92 China crash cymbal tune
95 broken crash cymbal volume
96 broken crash cymbal pan
97 broken crash cymbal tune
100 cracked splash cymbal volume
101 cracked splash cymbal pan
102 cracked splash cymbal tune
105 cowbell volume
106 cowbell pan
107 cowbell tune
109 darbouka volume
110 darbouka pan
111 darbouka tune
113 djembe volume
114 djembe pan
115 djembe tune
117 low bongo volume
118 low bongo pan
119 low bongo tune
120 high bongo volume
121 high bongo pan
122 high bongo tune
125 percussion deaden

KONTAKT

In Kontakt, all parameters are accessible from the GUI or by browsing parameters, but a few key paramters which are most likely to need to be adjusted during a song are assigned to MIDI CC by default.

4	hi-hat pedal position
12	cajon kick deaden
13	marching kick deaden
14	snare deaden
15	hi-hat deaden
16	tom deaden
17	percussion deaden
18	snare stir time
19	snare stir tail
20	stir envelope curve