MusicMakers
VOLUME I

PRODUCT MANUAL

INTRODUCTION

For thousands of years, stringed instruments have been a source of cultural identity and rural craft. While modern machining and a variety of socio-economic conditions have largely moved production of affordable folk instruments out of the hands of hobbyists and craftsmen and into factory settings, often in developing countries, several companies have risen to provide a third option: build your own instrument! With well-designed kits and detailed instructions, even an apartment-bound hobbyist can assemble a beautiful instrument.

Musicmaker's core mission is to help people experience satisfaction in building performance quality musical instruments and learning to play them. They first opened in the Spring of 1978 as an unusual hobby store, called St. Croix Kits, offering a variety of do-it-yourself projects for making practical household items such as clothing, clocks, outdoor furniture, kitchen cutlery, and musical instruments. By 1993 they were manufacturing their own instrument kits in their current small factory in Stillwater. They now ship their products to enthusiasts around the world, and have become widely known as one of the friendliest sources of creative musical assistance for a wide variety of acoustic instruments.

DEVELOPMENT

The 10 instruments sampled include seven designed and made by the folks at Musicmakers, namely the Cheyenne Harp, Lynda Lyre, Dakota Mandola, two Monochords, Mountain Dulcimer, and the Strumbly. Three additional instruments sold on their website, two handpans and a shruti box, are also included.

In addition to the natural, typical plucked or strummed sounds of instruments, we also recorded a variety of unique articulations such as striking strings with hammered dulcimer mallets, harmonics, and more, in the style of our Artist and Nouveau Series libraries. Combined with four diverse mic arrays, the total range of tones and colors available is significant, from those suitable for popular music to more spacious, cinematic tones.

Sampling was done over the course of a week in a quiet rural home just a few miles from the Musicmakers showroom. The main/room mic array is a spaced pair of Warm Audio WA14 large diaphragm condensers, with a pair of Blue Hummingbirds (medium diaphragm condensers) and a Samar Audio VL-373A stereo ribbon mic as two close mic options, providing brighter and darker colors. A mono Royer R-121 or Shure 545SD is also used to capture the resonant body of the instrument.

Fretted instruments such as mandola, mountain dulcimer, and strumbly include a special feature whereas the particular string 'emphasized' in playing can be selected via modwheel, like was done with our strumstick library. In this way, up to four timbres can be accessed on the same keys.
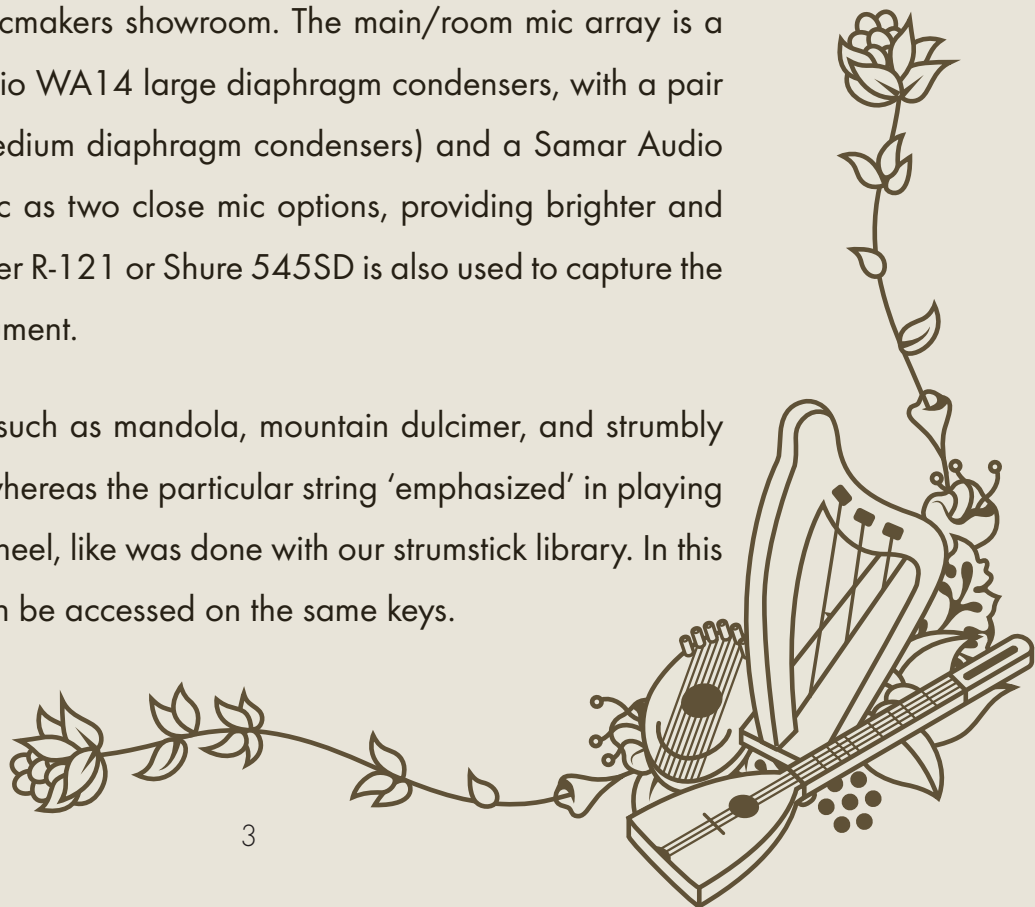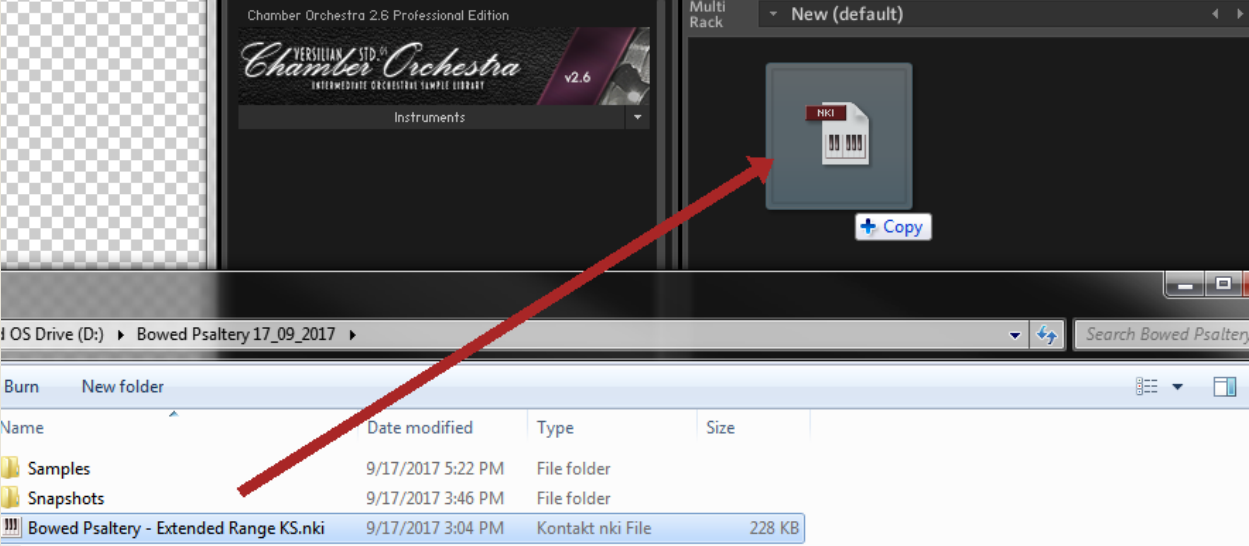
INSTALLATION

Begin installation by downloading the library after completing checkout, using [Pulse Downloader](). Pulse is a special application designed specifically to distribute, verify, and update sample libraries and is used widely in the industry. Click 'Add a Product' and enter the code given at checkout.

Pulse will prompt you to select an install location— this could be on an external hard drive, an internal SSD, or your main hard drive.

To use the library, drag and drop any of the .nki (Kontakt instruments) into an instance of Kontakt (either standalone or plug-in), as shown below.

MANAGING YOUR INSTALLATION

P ulse Downloader not only manages the download process, it also allows you to maintain and update your installation in the event updates are provided for the library.

Once you have installed Musicmakers Vol. I, it will appear in your Pulse Library. You can click 'Open' to jump to the files, or use the '...' to reinstall:
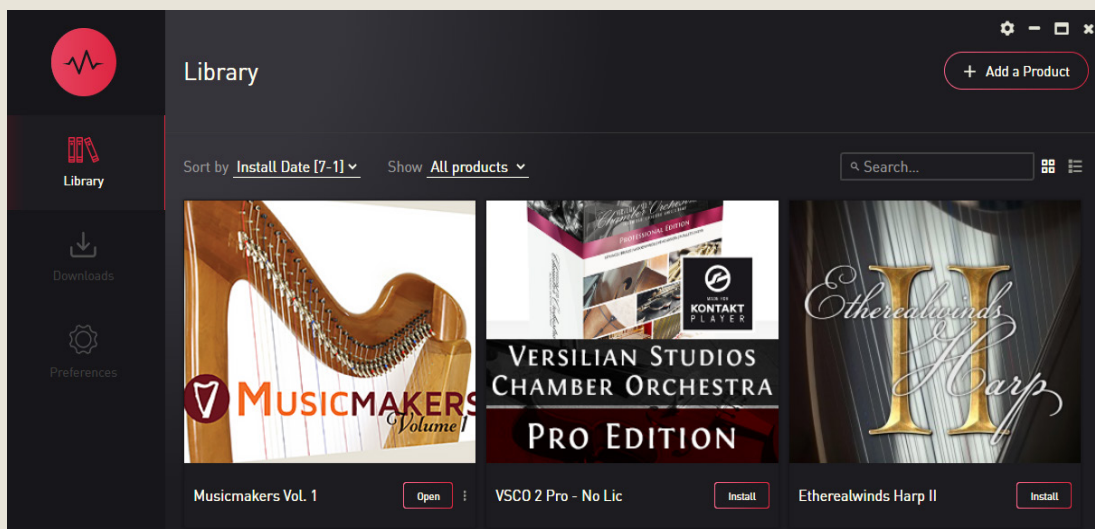
If an update is available, Pulse will prompt you to install it. Consider checking back every few months in case an update is provided. If you experience problems with an update or simply wish to learn more about what was changed, select the product and you will be able to see patch notes and select an earlier version to downgrade, as shown here on our internal test branch:
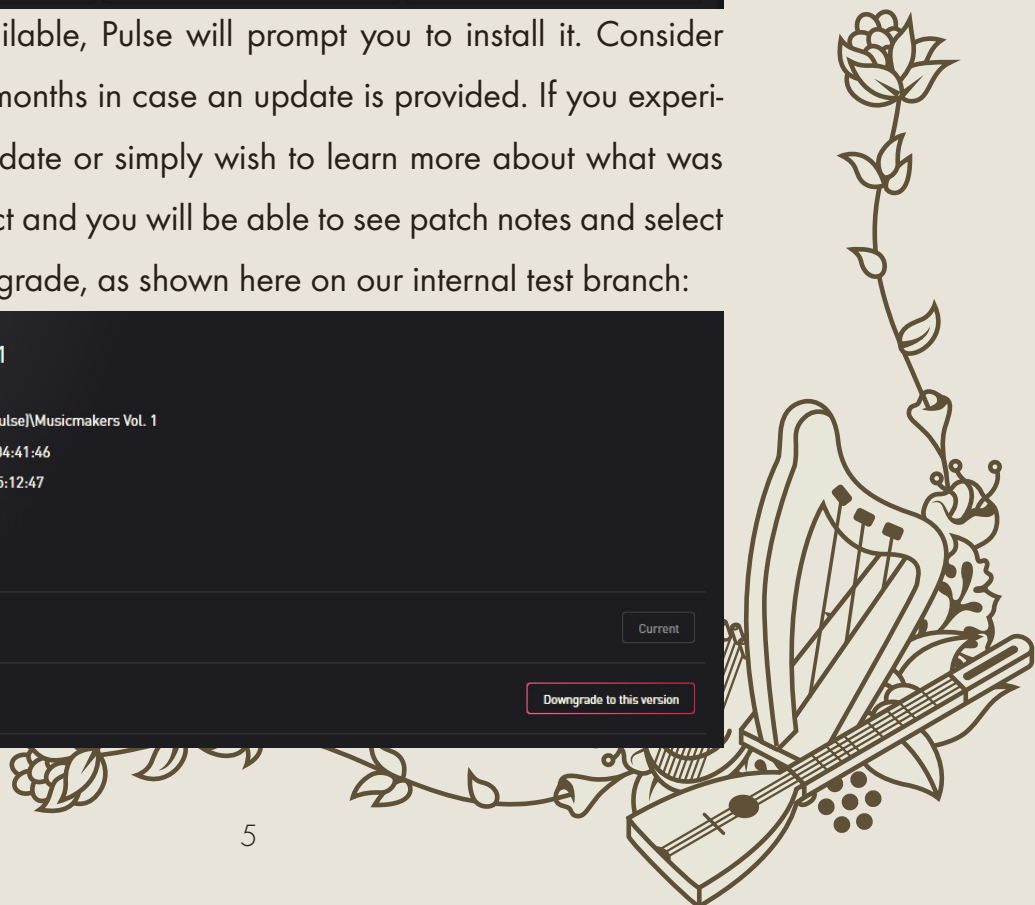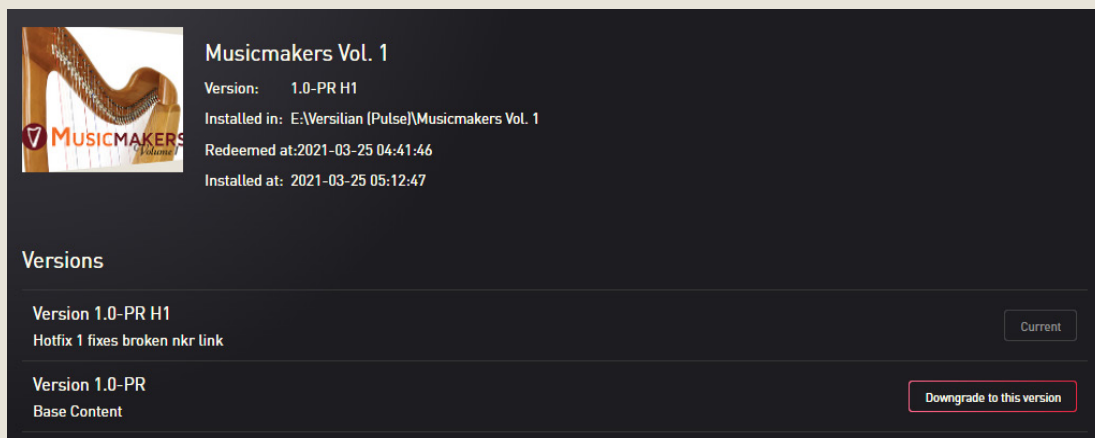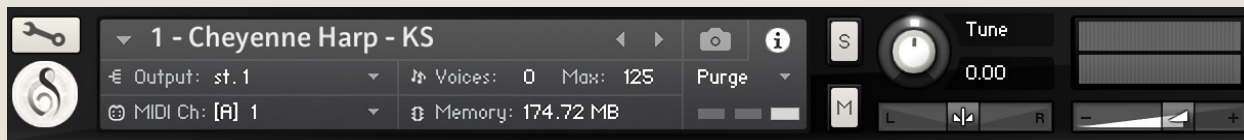
OPERATION

O nce loaded in Kontakt, the GUI will become available to you. This convenient window will provide nearly everything you need to control and shape the sound of the instrument from swapping articulations to controlling the stereo image to help it fit in your mix. In this section of the manual, I'll walk you through each part of the GUI and typical settings.

Starting with the top of the instrument, we have the default Kontakt header. This area provides basic instrument settings and allows you to shrink or expand the GUI as needed.

On the left is the wrench icon, which allows access "under the hood" of the instrument. This is best for veteran Kontakt users only, but is worth exploring if you're new to Kontakt as well.

The central gray box displays general information and settings for the instrument. You can swap this display over to show the snapshots menu simply by pressing the camera icon to the right, and vice versa by pressing the 'i'.

Output will control where the audio data goes to. Typically this should be left untouched unless working with a surround mix or bussing specific instruments to different reverb sends or the like.

MIDI Ch. controls what input MIDI channel will send signals to this particular instrument, allowing you to set up multi-timbral sets of several different instruments in a single instance.

Voices displays how many voices are active and the maximum available. You may experience some memory/CPU savings by reducing the max number. When Kontakt runs out of voices, it will stop the oldest voices.

Memory displays how much memory is in use by this instance. You can reduce this by unloading mic positions, articulations, or purging unused files to the right-hand side.

HIGH P.
2.6 Hz

LOW P.
26.3k Hz

PRE DELAY
60.7 ms

ROOM
-18.3 dB

R. SIZE
100.0 %

Maker: Musicmakers
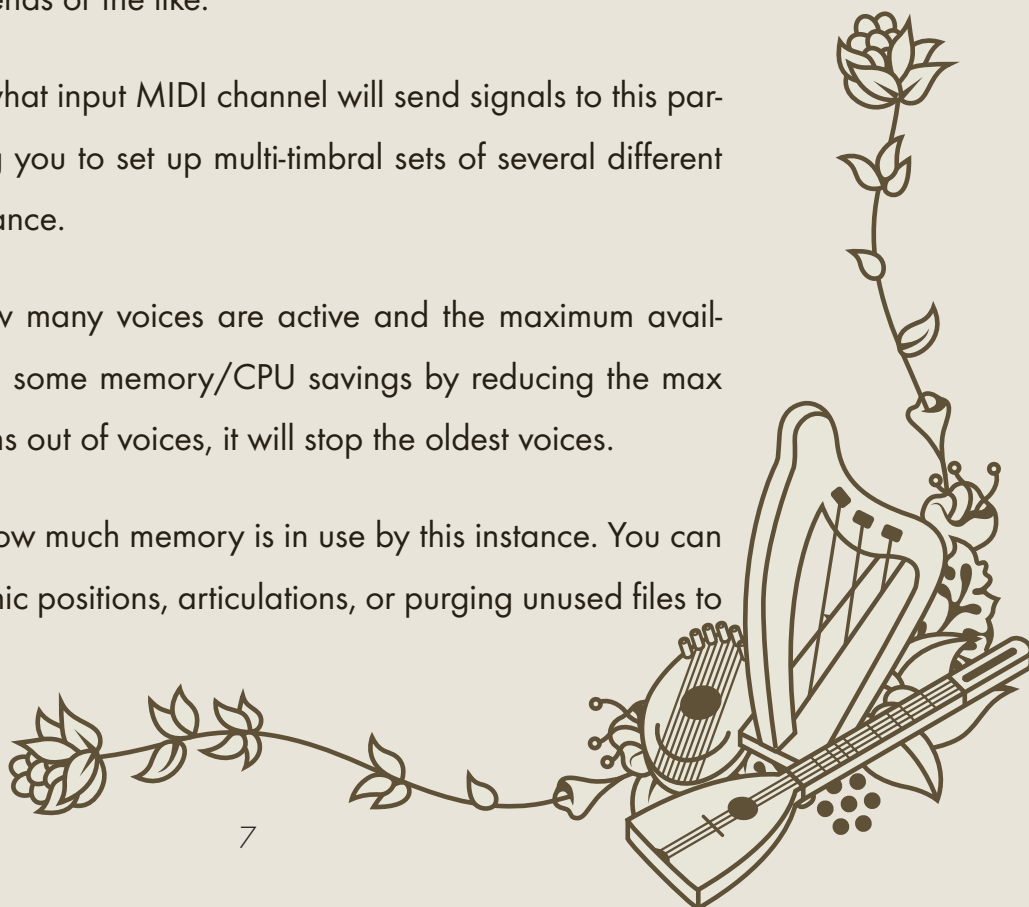
The central part of the GUI features a simple highpass/lowpass filter combo (for removing rumble/hiss or altering tone color) to the left, which can be bypassed with the button beneath.

On the right are the controls for the convolution reverb, which provides a range of excellent room and hall sounds. The pre-delay controls when the sound of the instrument reaches the mics after bouncing off the walls. This is similar to placing the mics farther or closer to the sound source (it takes about 2.9 ms for sound to travel one meter, or 0.9 ms for sound to travel one foot, so place your pre-delay accordingly to fit your virtual placement.

The 'Room' is a measure of how much room sound (i.e. reverb) is mixed back into the signal. This is typically best between -15 and -5 dB. Below that and the reverb will not sound much, and higher may result in a muddy tone.

Finally, the 'R. Size' (room size) will control how large the space is. At 50%, it is analogous to a medium rehearsal space. At 100% a full concert hall, and beyond that it enters surreal levels of size.

In the bottom section, to the left are the controls for the available mic positions. From top to bottom there are volume sliders (vertical), a disable/enable toggle (to save memory), and a stereo pan slider.

To the right are horizontal controls for stereo width and stereo pan. These use delay and other special processes to truly perceptually move the instrument around the virtual soundscape as opposed to traditional volume-based pan found in your DAW or mixer, providing a much more realistic result, especially when used in subtle combination with volume-based pan.

To the far right are 'quick control' features, allowing access to the most important parameters for sound shaping. Attack may be used to soften the attack, while mech vol increases or decreases separately sampled key and pedal sounds. Rel[ease] vol[ume] controls how strong the release tails sound when keys are released.

Note that 'Release Volume' is uniquely set for *each articulation*, and will only appear when an articulation with release samples is selected.
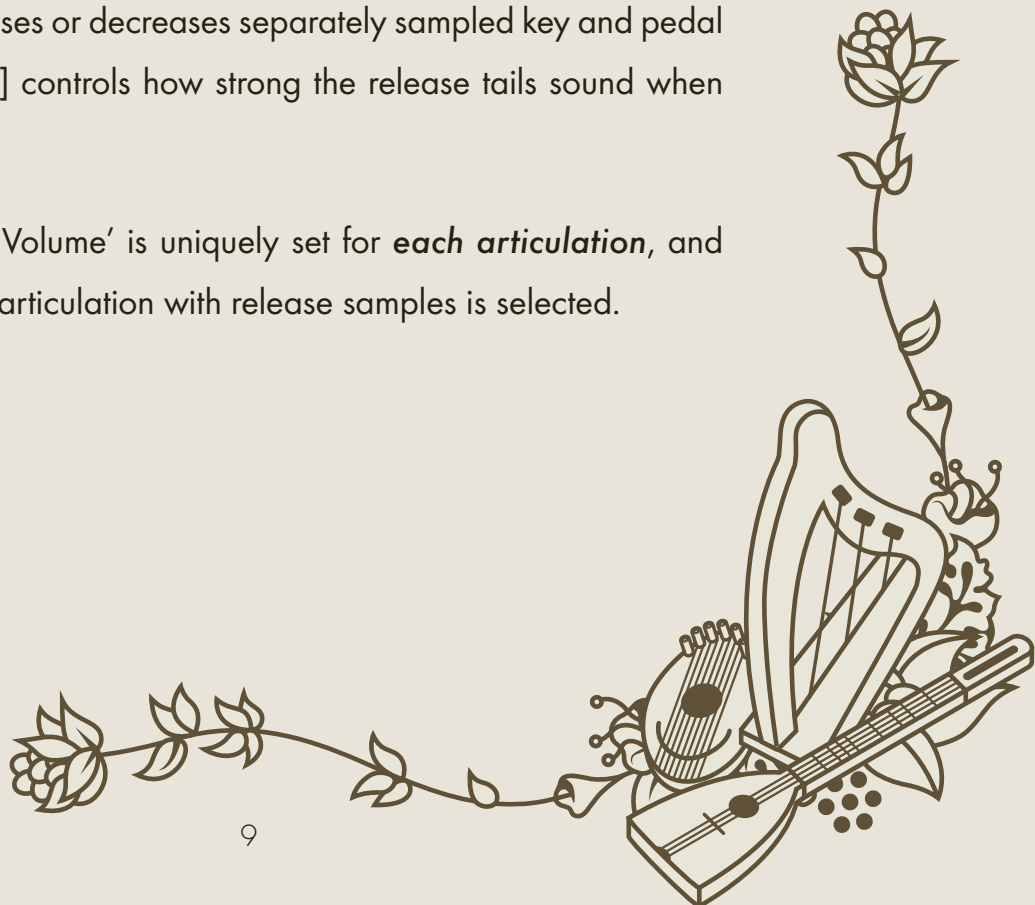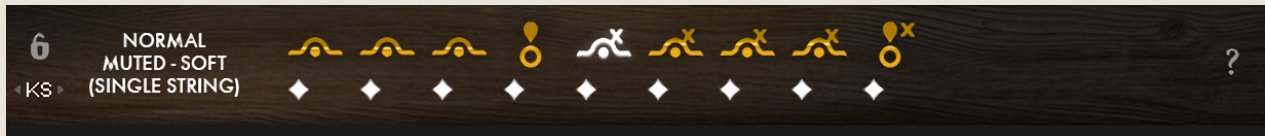
At the bottom of the interface is the articulations panel. This panel shows all of the available articulations in the instrument, and allows them to be selected or purged (to reduce RAM consumption).

Starting at the left is the 'Lock Selected' button. Toggling this will prevent you from changing articulations, either via the mapped Keyswitches, or via clicking the articulation buttons. You should engage this if you like working only with a single articulation per instance and do not wish to accidentally toggle other articulations.

Beneath this is the keyswitch positioning slider. Click and drag on this text left or right to move the keyswitches across your keyboard to make them easier to play on a smaller keyboard or move them to the other side of the instrument's range.

To the right is the selected articulation name. **If a certain string is selected via Modwheel (CC1)**, such as is possible on mandola, strumstick, and mt. dulcimer, it will also show up here. In this example, the selected articulation on the harp is 'Normal' pluck, with 'soft' mute (only the single string is muted, not all strings). This provides a lighter muted sound which is more that used when rearticulating a string rather than a 'sans viber' direction in the music.

Along the bottom are icons for each possible articulation. The currently selected articulation is shown in white, while the other available articulations are gold. Articulations can be selected either by clicking on the symbol in the interface, or via the matching keyswitch, which is shown in green at the bottom of the keyboard in Kontakt (press F2).

Beneath these articulations are white diamonds showing which articulations are loaded into memory. By default, all articulations in all patches are loaded, but if you wish to save memory, click the diamond to purge the unnecessary samples.

To the far right is a question mark icon which will bring up information on the specific instrument sampled, including its range, string count, and materials, as well as photos from the Musicmakers website (harpkit.com). You can exit this view and return to the full interface by pressing the 'X' in the top right corner.

CHEYENNE HARP

Strings:
36 strings

Range:
C2 to C7

Soundboard:
Aircraft Birch

Body:
Solid Cherry

Neck and Pillar:
Solid Cherry

PATCHES & ARTICULATIONS

Within the instruments folder, you will find several .nki files. Each file allows access to a different set of samples or sound generated from those samples.


```
1 - Big Hapi - Chromatic - KS.nki
1 - Big Hapi - Traditional - KS.nki
1 - Cheyenne Harp - KS.nki
1 - Lynda Lyre - KS.nki
1 - Mandola - Combined - KS.nki
1 - Mandola - Plucked - KS.nki
1 - Mandola - Strummed - KS.nki
1 - Med Hapi - Chromatic - KS.nki
1 - Med Hapi - Traditional - KS.nki
1 - Monochord Mid C - KS.nki
1 - Monochord Open C Chord - KS.nki
1 - Mountain Dulcimer - Combined - KS.nki
1 - Shruti-Box - KS.nki
1 - Strumbly - Combined - KS.nki
1 - Strumbly - Dulcitone - KS.nki
1 - Strumbly - Fingered - KS.nki
1 - Strumbly - Harmonics - KS.nki
1 - Strumbly - Plucked - KS.nki
1 - Strumbly - Ricochet - KS.nki
```

'**KS**' refers to Keyswitches, or keys (usually at the bottom of the keyboard) which can be used to switch articulations in real time or by placing MIDI notes in that range in your sequence. All patches use this method for swapping between articulations.

'**Combined**' patches provide all articulations for the instrument in question, using modwheel to determine the string used, while the individual patches ('Dulcitone', 'Fingered', 'Harmonics', etc.) provides that specific articulation with separate keyswitches to determine which string is used, while also reducing the amount of RAM necessary. Choose whichever option makes more sense for your workflow.

'**Chromatic**' and '**Traditional**' refer to the mapping style of the Hapi drums. 'Chromatic' takes all the available samples (generally pentatonic) and stretches them out to fill in the gaps in the range, allowing playing in any key. 'Traditional' preserves the natural tuning and pitches, instead mapping notes to convenient keys on the keyboard rather than their actual pitches.

Note that key velocity is used for the vast majority of patches to determine dynamics, while modwheel is used to select which string is used on fretted instruments. However, for sustaining sounds such as monochord continuous strums or shruti-box, modwheel is used for dynamics instead.
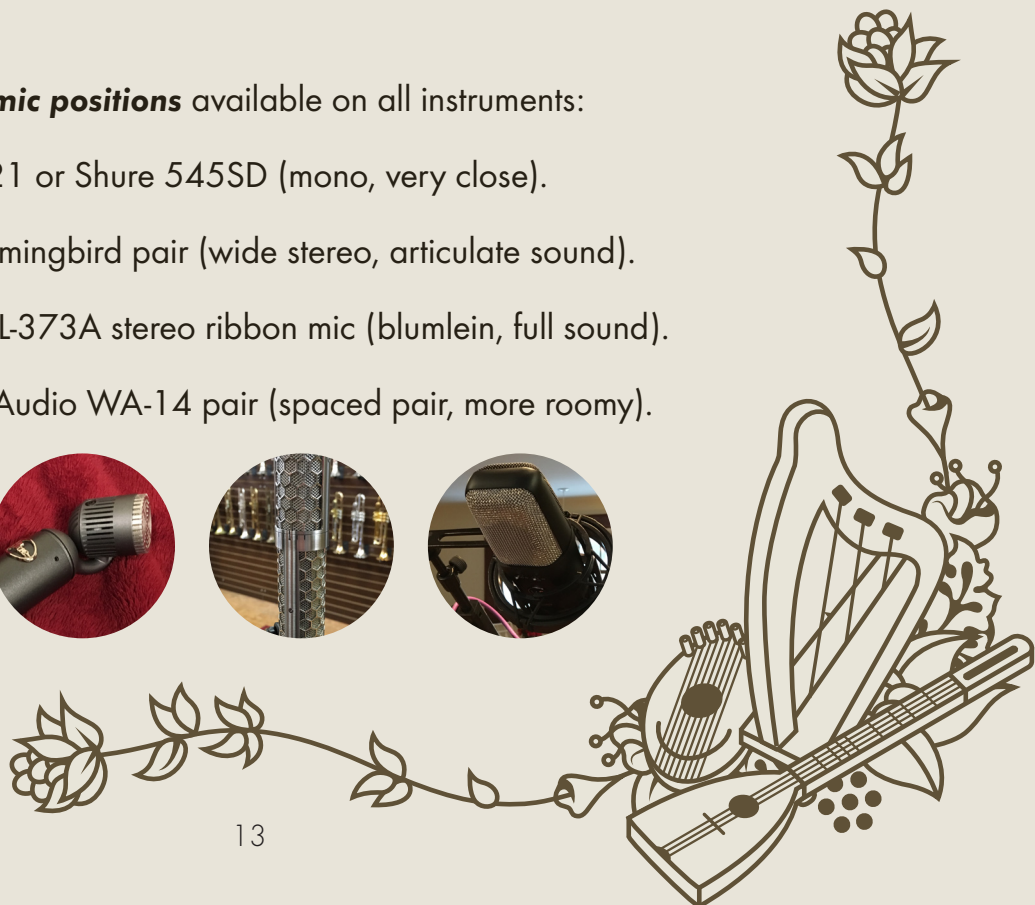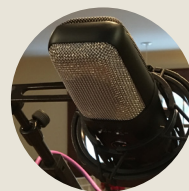
There are four *mic positions* available on all instruments:

R: Royer R121 or Shure 545SD (mono, very close).

H: Blue Hummingbird pair (wide stereo, articulate sound).

VL: Samar VL-373A stereo ribbon mic (blumlein, full sound).

WA: Warm Audio WA-14 pair (spaced pair, more roomy).

Cheyenne Harp
by Musicmakers

Instrument Family
Lever Harp

The **Cheyenne Harp** is Musicmakers' largest and finest harp, with an impressive 5-octave range and gorgeous tone.

"People often think this harp has an amplifier in it! But no, the acoustics of this size sound chamber just happen to be perfect for projecting great sound."

Range	Soundboard	Body, Neck, & Pillar
C2 - C7	*Aircraft Birch*	*Solid Cherry*

Articulations
'l.v.' = "let ring"

Normal (l.v.)	Thumb (l.v.)	Prés de la Table (l.v.)	Harmonics (l.v.)	Normal Muted-Soft*	Normal Muted-Hard*	Thumb Muted	Prés de la Table Muted	Harmonics Muted

14

*'Soft' muted: only the string played is dampened;
'Hard' muted: all strings are dampened at once.

Mt. Dulcimer
by Musicmakers

Instrument Family
Zither

Strings
4
1+1+2

The **Mountain Dulcimer** hails from the Appalachian mountains in the United States, where it has been used for centuries in folk contexts.

"Musicmaker's Mt. Dulcimers are inspired by the folk traditions of Appalachia. Sitting down to play one of these folk instruments takes you back to a simpler time. Sit on your front porch and regale the neighbors with sweet music."

Range
D 3 - C 7

Soundboard
Solid Mahogany

Body, Fretboard, Peghead
Cherry

Articulations

Plucked
Select String via Modwheel

Plucked
String 1

Plucked
String 2
Focus

Plucked
String 3

Lynda Lyre
by Musicmakers

Instrument Family

Lyre

Strings

22
(Diatonic)

The **Lynda Lyre** takes the best aspects of modern harp design and ports them back to the form-factor of the ancient lyre.

"Lyres were one of the first stringed musical instruments and have been used by musicians and healers continually for centuries. It was the most well know musical instument in Ancient Greece and continues to have a broad appeal. The Musicmakers Lyre is a modern take on this ancient musical instrument."

Range	Soundboard	Strings	Frame
C 3 - C 6	*Solid Spruce*	*Wire*	*Solid Cherry*

Articulations
'l.v.' = "let ring"

Normal (l.v.)

Normal
Muted-Hard*

*'Hard' muted: all strings are dampened at once.

Dakota Mandola
by Musicmakers

Instrument Family
Mandolin

The **Mandola**, or Tenor Mandolin, is tuned and played similarly to the Mandolin, just down a 5th, providing a richer, more euphonic tone.

"The Musicmakers Mandola is truly a one-of-a-kind instrument. The unique shape is modern, eye catching, and a showcase for excellent construction. The maple back and sides are accentuated with walnut binding and corner blocks. This design is echoed in the maple and walnut laminated neck. The peghead showcases a walnut veneer."

Range	Soundboard	Sides & Back
C3 - C7	*Solid Spruce*	*Maple*

Articulations

Plucked
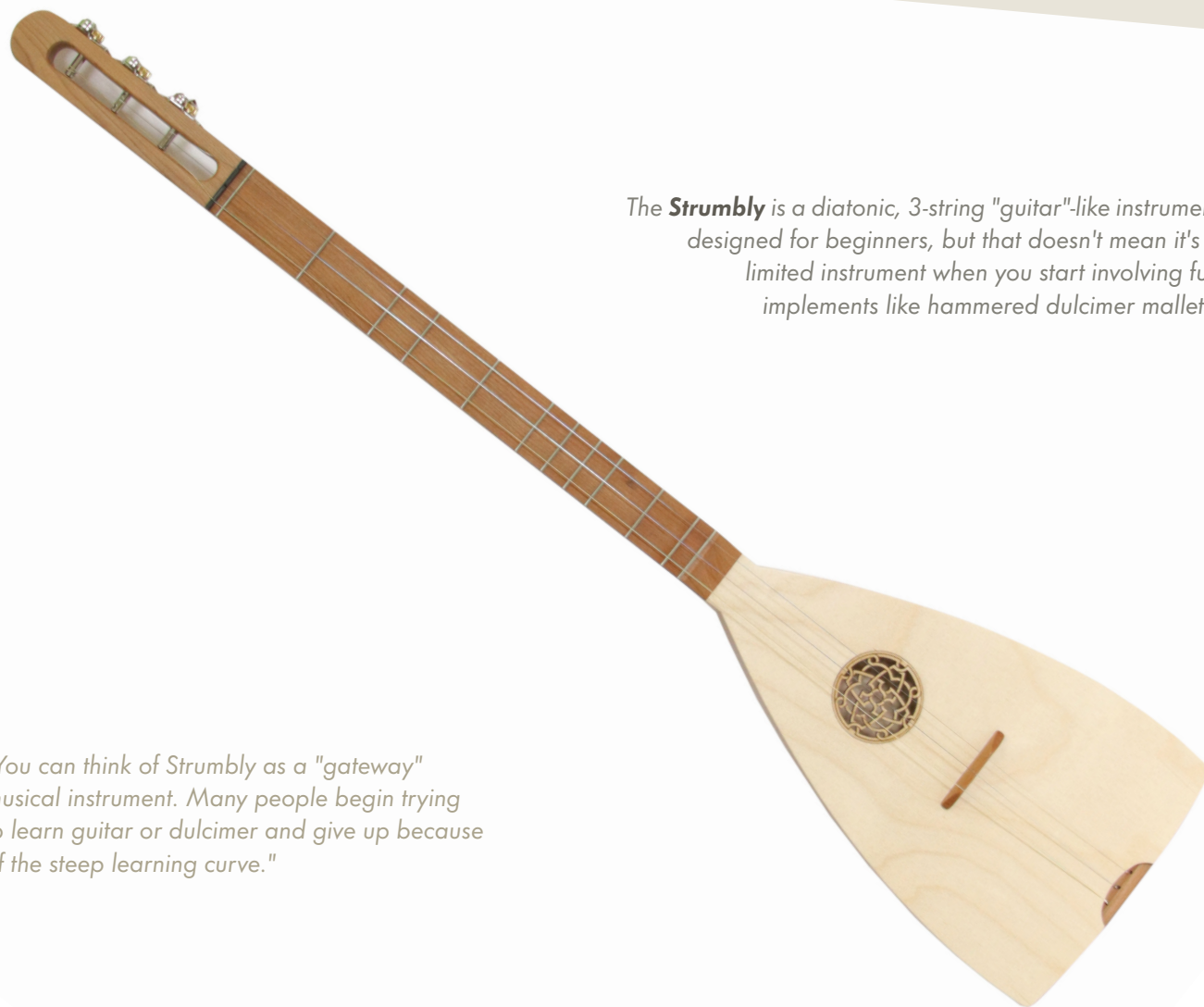Select String via Modwheel

Plucked
Muted

Strummed

Strummed
Muted

Strumbly
by Musicmakers

The **Strumbly** is a diatonic, 3-string "guitar"-like instrument designed for beginners, but that doesn't mean it's a limited instrument when you start involving fun implements like hammered dulcimer mallets!

"You can think of Strumbly as a "gateway" musical instrument. Many people begin trying to learn guitar or dulcimer and give up because of the steep learning curve."

Range	Soundboard	Frame & Neck
D3 - C6	*Baltic Birch*	*Cherry*

Articulations
'l.v.' = "let ring"

Fingered (l.v.)	Fingered Muted	Picked (l.v.)	Picked Muted	Picked Vib. (l.v.)	Picked Vib. Muted	Ricochet (l.v.)	Ricochet Muted	Dulcitone (l.v.)	Dulcitone Muted	Harmonics (l.v.)	Harmonics Muted

"Big Hapi"
by Hapi - https://hapidrum.co/

Instrument Family

Handpan

Notes

8
(D Minor)

Built by Grahm Doe in Oakhurst, CA, Hapi **handpans** *are among the finest.*

"The Handpan is simply addicting.
The notes are full, rich, and filled with nicely tuned harmonics.
Made from heat treated steel. Hand worked, and carefully tuned with a strobe
tuner. This handpan is made with thousands upon thousands of precision hammer blows."

Range	Scale	Material
D3 - A4	**D3, A3, C4, D4, E4, F4, G4, A4**	*Steel*

Articulations

Finger	Mallet	Middle (dulcimer mallet)	Hand Muted (stopped)

"Medium Hapi"

by Hapi - https://hapidrum.co/

*The Hapi **"Mini Drum"** is an affordable handpan designed to safely allow the use of special soft mallets, making the instrument easier to play.*

"The HAPI Mini drum is the perfect size for a portable drum and has a sleek design and can be carried with one hand. It has a soothing, well balanced, and lovely sound. The eight note tongue layout adds harmonic tones to each note when played. Play percussive and groovy beats if you are feeling energetic or play something soft and slow if you feel like relaxing. The pure tones of the HAPI Drum are ideal for music therapy."

Range
A3 - D5

Scale
A3, C4, D4, E4, G4, A4, C5, D5

Material
Steel

Articulations

Soft Mallet | Soft Mallet (flam) **(ricochet)** | Medium Mallet | Hard Mallet **(dulcimer mallet)**

Monochords
by Musicmakers

Musicmakers' **Monochord** is a large zither where most strings are tuned to the same note; play a simple glissando and it swells to life!

"The monochord delivers a sound that can fill a room without being overpowering. Music therpists, sound healers, and mediation leaders love the Monochord. The repetive nature of the instrument and the enveloping soundscape it creates are perfect for establishing a calm, relaxing, stress free envirmonment."

Range	Scale	Sides & Back
C2 - C4	**C3, C4 or C2, G2, C3, G3, C4** "Mid C" "Open C Chord"	*Cherry*

Articulations

Individual Strings	Ind. Strings	Continuous	Continuous	Tuned Variants	Effects
Center of String Modwheel	Edge of String	Center of String	Edge of String	For each to the left	Open C Chord Only

TROUBLESHOOTING

I f you are experiencing issues with the library, there are a few steps you can try to resolve the issues before contacting us. Below is a list of common possible problems and 'home remedies' that will work to fix them.

1. Samples missing dialogue.

If you see this window, it means that the samples were moved or are missing from their original location. If you can find the samples, move them into the Musicmakers Vol. I folder. If you still get the dialogue, do a batch re-save: select the floppy disk icon at the top of the Kontakt window towards the right and select 'Batch Re-save'. Navigate to the 'Musicmakers Vol. I' folder and select it. When the dialogue pops up, click 'Search for folder' and select the samples folder. After the batch re-save is complete, you should not experience any further samples missing dialogues.

2. Instrument uses up too much memory or CPU.

Use the circles beneath the articulations to purge any you doubt you will typically need, and turn off any effects you don't use (filter/reverb). Save this patch (under the floppy disk/save icon at the top of the Kontakt window itself) so that way it will load this way

by default. Note that snapshots include which articulations and mic positions are selected and enabled/disabled.

3. Instrument is only available in "DEMO" mode.

This is caused by trying to run the instruments in Kontakt Player. Unfortunately there's nothing we can do about this- making libraries for Kontakt Player requires a licensing agreement with Native Instruments, which is not economical for specialty products like this.

However, Kontakt is on sale often around December/January for $200 USD, and honestly that's not a bad price to pay for the "gateway drug" to literally thousands of free and commercial sample libraries. Regardless, we would be happy to offer you a refund if you are experiencing this issue and aren't interested in upgrading to the full Kontakt.

4. Instrument takes a long time to load.

On Windows 10 devices or devices with 'realtime protection' anti-malware systems, such systems will attempt to scan the literally thousands of samples that Kontakt needs to load before letting Kontakt load them. It is strongly advised that you at least temporarily disable such 'realtime protection' systems while loading libraries, or exempt your samples drive from the scan.

5. Instrument won't respond to MIDI input.

Make sure your DAW or standalone Kontakt is receiving MIDI from your device, then ensure that the MIDI Ch. is set to match.

If you have any other issues, drop us a line at contact@versilstudios.net.
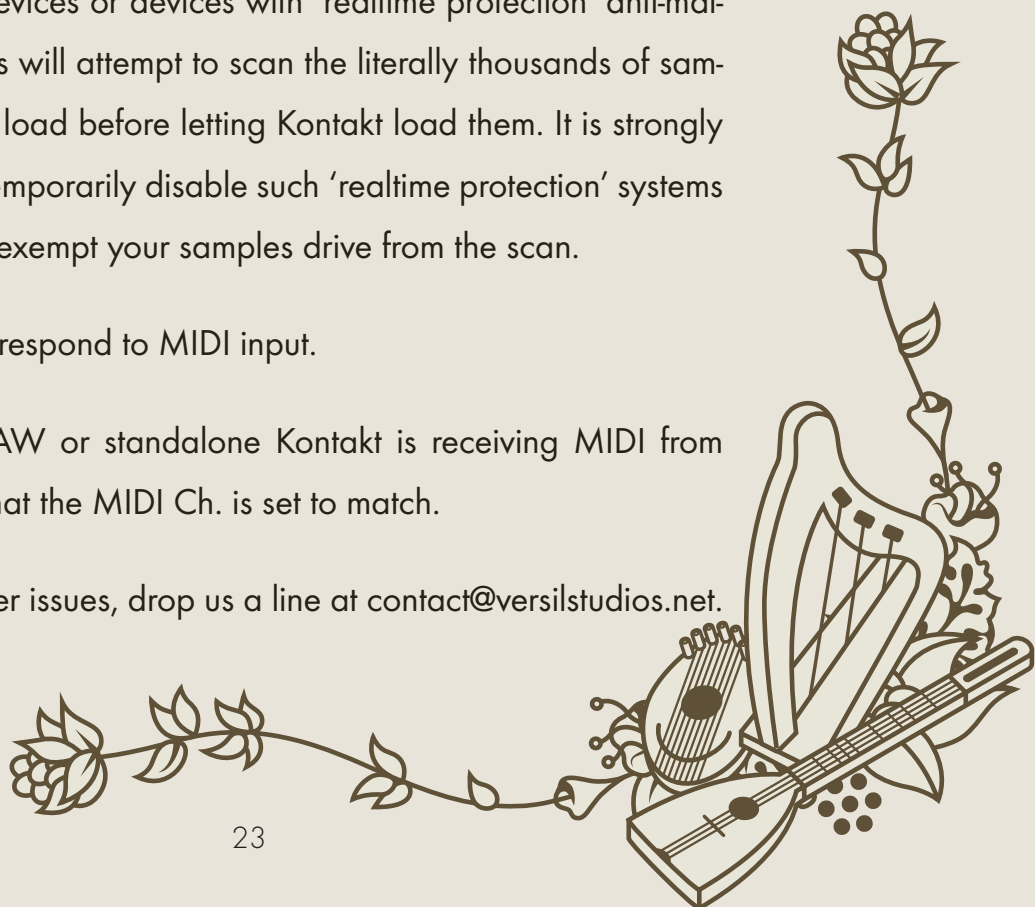
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