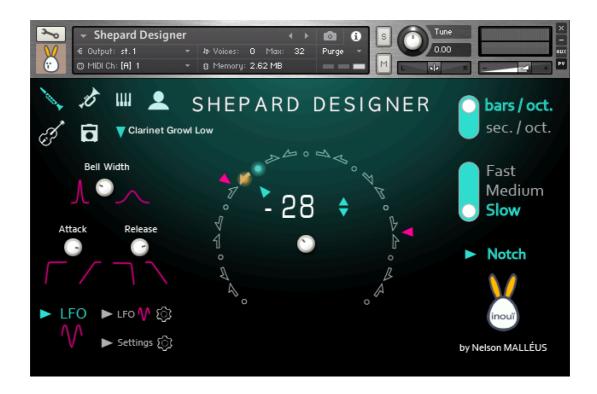
Shepard Designer



Produced by Nelson MALLÉUS



The Shepard tone is a famous auditory illusion faking an infinite rise or fall.

Shepard Designer allows you to instantly and incredibly easily create this effect. The instrument comes with 144 varied exclusive instrumental sources, and it even works with your own sounds!

Two main knobs allow you to change in real time:

- the slope direction and speed
- an amplitude bell to go from the most precise sound to the largest effect

Most demanding users will find advanced settings to achieve all they need for their productions. Whether you need to create a mockup with no time or need to put the finishing touch before sending the final mix, *Shepard Designer* is the tool of the trade.

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Technical informations

- Monophonic synthesis based on 9 layers of samples
- 144 varied instrumental sources with different techniques¹ (48kHz / 24bits)
- Ability to import your own sound sources
- Change the slope direction and speed in real time
- Automate the slope through MIDI or using the built-in LFO
- Synchronize the slope speed to the second or with your DAW tempo
- Improve the tone and the illusion with the Bell Width
- Attack and Release time from a classic ADSR enveloppe
- Advanced settings for specific cases and CPU consumption
- Requires the full version of Kontakt 5.8.1 or higher

Credits

Producer: Nelson MALLÉUS

Instrumentalists: Camille-Raphaël BÉRARD, Lucile FAUBEL, Quentin FOUQUET, Pedro LEITE-TEIXEIRA, Nelson MALLÉUS, Samuel MAROT-SAFERIS, Paulo NAVARRO, Altaïr SOMMEREAU

Audio engineer: Nelson MALLÉUS Sample editor: Nelson MALLÉUS Sound design: Nelson MALLÉUS Script programer: Nelson MALLÉUS

Design: Nelson MALLÉUS

Sound advisor: Antoine PRADALET Design advisor: Dania MALLÉUS

Math advisors: Arnaud GARNIER, Lucas MALLÉUS

Production intern: Altaïr SOMMEREAU

Recorded at Studio La Majeur - 18 rue Saint-Bernard - 75011 PARIS

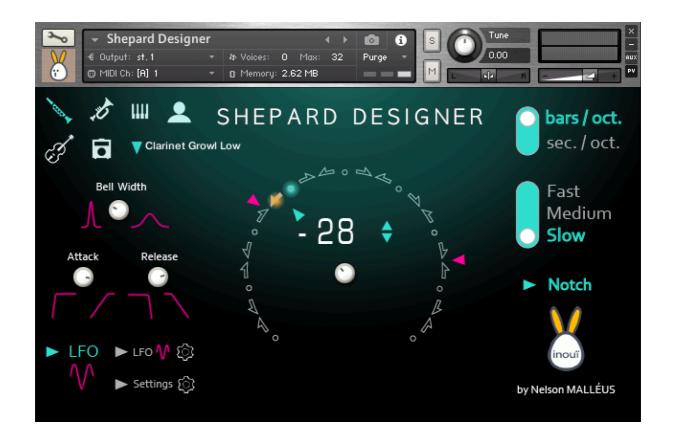
Between 23/02/2017 and 04/07/2019

Beta-team: Hadrien BONARDO, Jérôme LEMONNIER

Special thanks to Jérôme LEMONNIER

¹ You will find the complete list in appendix at the end of this manual

Interface and controls



The interface is made up of 3 zones:

- The main settings on the left
- The speed knob in the middle
- The speed knob settings on the right

You can also access to 2 other views:

- The LFO Settings
- The Settings

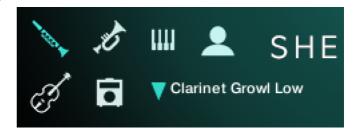


Main settings

Source selection

To choose a sound source, click on one of the 6 family icons:

- woodwinds
- brass
- plucked strings and keys
- personal sound sources
- strings
- amplified instruments



Then click the menu to get all the choices in the family.

Bell Width, Attack and Release

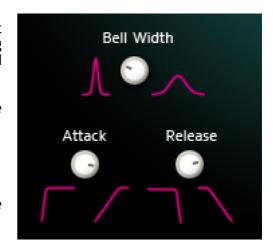
The *Bell Width* of a Shepard tone allows to set the relative level of sound while they are moving through the specter: stronger when close to the played note, and weaker going up or down.

The smaller the *Bell Width* is, the weaker the sounds with low or high fundamental frequencies are:

- the source tone is very precise
- the feeling of the played octave is real
- the Shepard tone illusion is easily revealed

The bigger the *Bell Width* is, the stronger the sounds with low or high fundamental frequencies are:

- the source tone is less precise
- the feeling of the played octave disappears
- the Shepard tone illusion works very well



Play with the *Bell Width* knob to get the most suitable sound for your creation... and feel free to automate it with MIDI CC11!

Attack and Release come from a classic ADSR enveloppe. We did not keep Decay and Sustain because they were not relevant with Shepard tone.

LFO and settings

The *LFO* button allows you to enable a LFO on the speed knob.

LFO Settings and Settings open their respecting views for advanced settings.



The speed knob

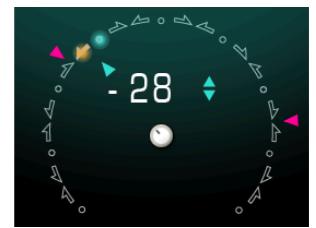
The speed knob allows you to set the slope speed and direction:

- it is null on the middle position
- it falls faster as it is moved on the left
- it rises faster as it is moved on the right

You can move this knob using your mouse or MIDI CC1. You can also set finely the speed using the two blue triangles. These triangles will be especially useful when you come close to the middle with low speeds.

The speed knob gives you further information:

- the slope direction
- the slope speed in bars per octave or seconds per octave
 - a « » is before the value if it falls
- a \ll + \gg is after the value if the showed slope value is a little bit higher than the precise slope value.
- the two pink triangles show the LFO limits if it is enabled.



The speed knob parameters

The speed unit

You can choose the slope unit within two:

- bars/oct.
- sec./oct.

bars/oct. will get bar and tempo informations from your DAW or from Kontakt if you use it as standalone, while sec/oct. will always be independent. If you use Shepard



Designer in *bars/oct.*, you can choose if the sound follows the bars and tempo changes after the note is launched in *Settings*.

The offered units are not that easy to conceptualize: for the higher values (negative as positive), the pitch variation is the slowest... up to the infinite where there is absolutely no variation!

Despite this counterintuitive point, these unit offer valuable advantages:

- the possibility to measure the time required to move from an octave to another in common units for musicians: bars or seconds
- therefore the possibility to easily set the tone variation on measured compositions
- the possibility to continuously come from an ascending slope to a descending one going through infinite and vice versa

The speed factor

You can choose between three speed factors for each unit: Fast, Medium and Slow. They allow you to access a large speed range and with a great precision while setting the speed knob.

Here are the speed limits for each unit-factor combination:



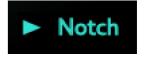
Unit	Factor	Min. neg.	Max. neg.	Max. pos.	Min. pos.
bars/oct.	Fast	-1	-16	16	1
bars/oct.	Medium	-2	-32	32	2
bars/oct.	Slow	-4	-61	61	4
sec./oct.	Fast	-3	-46	46	3
sec./oct.	Medium	-6	-92	92	6
sec./oct.	Slow	-12	-180	180	12

bars/oct. allows you to vary the speed from one octave per bar with Fast factor up to one octave per 61 bars with Slow factor. If those positions are not extreme enough for you, you can reduce or increase them by editing your bars settings (tempo or beats per bar).

sec./oct. allows you to vary the speed from an octave per 3 seconds with *Fast* factor up to one octave per 180 seconds, so an octave per 3 minutes with *Slow* factor!

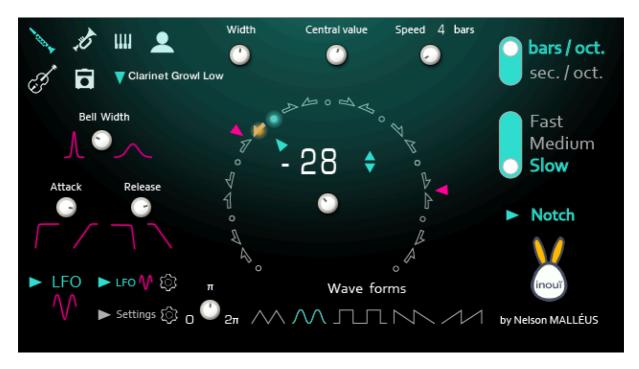
Notch

You can set a notch to reach only integer values of bars or seconds with the speed knob. It will be especially useful while using *Shepard Designer* in a measured tonal context.



LFO settings

The *Shepard Designer* built-in LFO affects the speed knob. If you want to apply LFO to other parameters, you may use your DAW LFO.

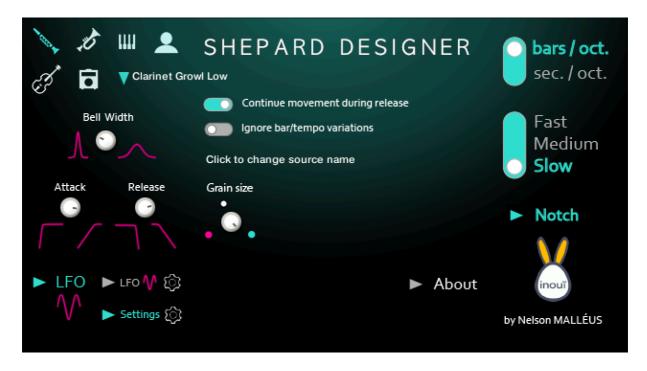


Once LFO is settled up, two pink markers show up around the speed knob to show the LFO limits. To move them, play with the *Width* and the *Central value* knobs.

You can change the LFO speed with the *Speed* knob: it gives you the LFO period in bars or in seconds in accordance with the unit choice you made for the main *Speed Knob*.

On the bottom, you can choose between 5 waveforms for the LFO movement. The $0-\pi-2\pi$ knob allows you to choose at which position in the waveform you want to start when you play a note.

Advanced settings



Continue movement during release lets the pitch continue to evolve while the sound disappears. If it is not activated, the pitch stops moving when you release the key. If this option is activated, you will have to wait for the sound to completely disappear before you can play a new note.

Ignore bar/tempo variations only matters if you chose the bars/oct. unit. It allows you to avoid that the bars and tempo variations that come after the beginning of the note affect the speed variation.

It can be useful to unset this option in some specific cases:

- if you want the slope to follow the tempo for specific stress or relaxation effects.
- if you play with the tonal aspect of the Shepard tone in a piece with bars or tempo variations and where some tonal meeting points matter between bars beginning and octaves

Processing quality allows you to increase the processing quality for the most demanding, or to reduce it to relieve CPU. In most cases, the default setting quality will be enough without being too demanding for the CPU.

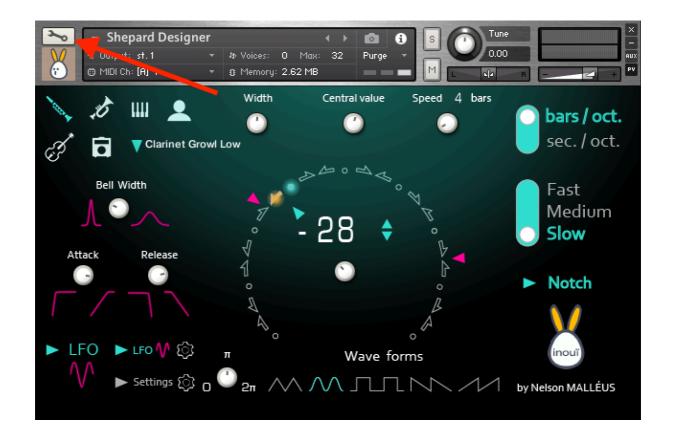
Appendix

Import your own sources

Shepard Designer allows you to import your own sources!

If you use to go in the depths of *Kontakt*, it will be a walk in the park for you. If you do not, you can follow this step by step guide...

First of all, open the *Edit* mode by clicking on the tool in the upper left corner.



Welcome into the *Kontakt* editor, do not worry, it is not as complicated as it looks like.

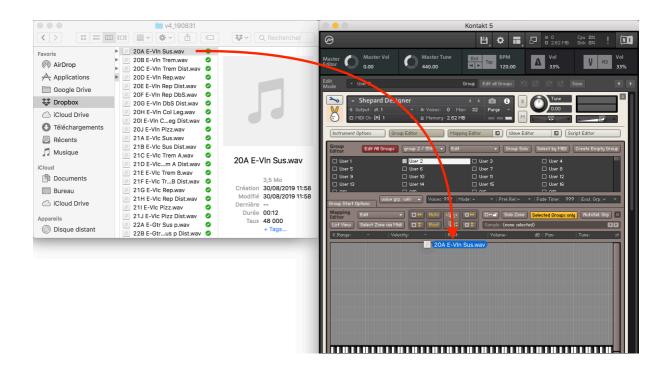
Be sure that *Group Editor* and *Mapping Editor* are dark. If they are not, please click them.



Pick one of the 16 first *Groups*, here, for exemple, number 2.



Click and drop the .wav audio file from the *Finder* for the *macOS* users or from the *Explorer* for the *Windows* users.



Be sure that *K.Range* goes from C-2 to G8 (if it does not, click the values and replace them using the keyboard).

For *Root*, replace it the same way with C4. If you know the pitch of your sound source, you can set another value.



Click the icon on the right of Wave Editor to open the editor in a new window.

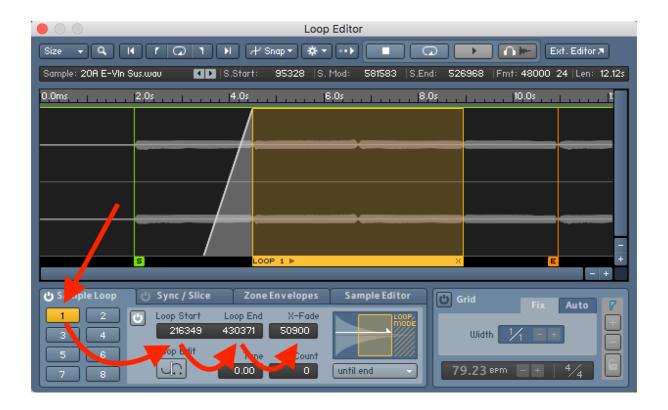


If the beginning or the end of your sound is not useful, move the S and E cursors to mark out the zone *Shepard Designer* will have to process.



The effect needs to last long, so you must loop your sound, event if it is already long. Click on 1, the move the *Loop Start* and the *Loop End*.

Increase X-Fade to design a discreet loop.



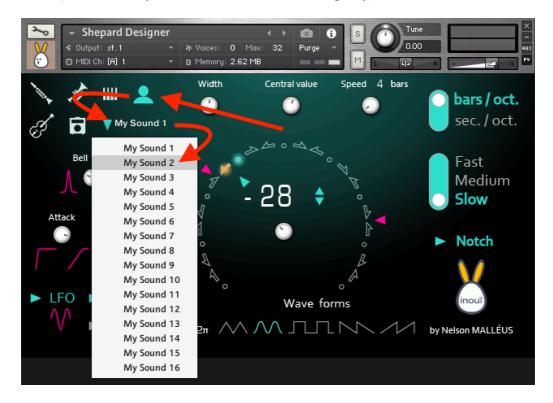
If your sound was properly edited before you import it, you may not have to move the S and E cursors.

Depending of the sound kind, the best *X-Fade* can be very different. If you are not happy with how your loop sounds, feel free to tweak this setting.

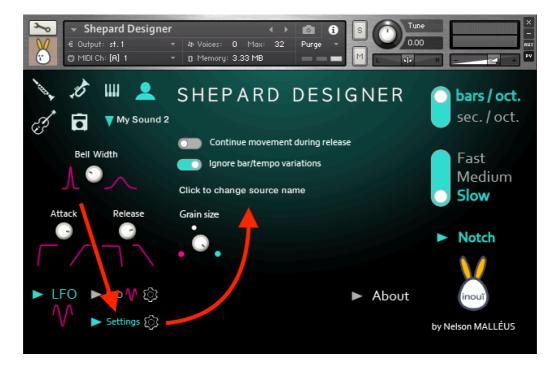
For simple sounds starting with a strong transient (piano note, guitar...), increase the value of *Loop Start* to avoid hearing this transient at each loop.

Quite the opposite, if you have on a continuous or maintained sound, for example a violin tremolo, you can leave *Loop Start* very close to the beginning.

You can now load your sound by clicking on the *User* icon, then picking *My Sound 2* in the menu (because we put the sound in the second group).



If you're happy with your sound, you can give it the name of your choice by going to *Settings* and clicking *Click to change source name*. Your sound must of course have been selected beforehand in the menu.



Are you satisfied with the result? If you are, we are delighted! Do not forget to click on the tool on the upper left corner, do Cmd+S or Ctrl+S depending on your operating system to find your settings the next time!

Sounds list

Woodwinds

Name	Instrument	Technique	More
Sop Recorder Sus Low	Soprano recorder	Sustain	Low note
Sop Recorder Sus High	Soprano recorder	Sustain	High note
Sop Recorder Rep Low	Soprano recorder	Repetitions	Low note
Sop Recorder Rep High	Soprano recorder	Repetitions	High note
Sop Recorder Flat Low	Soprano recorder	Flatterzunge	Low note
Sop Recorder Flat High	Soprano recorder	Flatterzunge	High note
Ten Recorder Sus Low	Tenor recorder	Sustain	Low note
Ten Recorder Sus High	Tenor recorder	Sustain	High note
Ten Recorder Rep Low	Tenor recorder	Repetitions	Low note
Ten Recorder Rep High	Tenor recorder	Repetitions	High note
Ten Recorder Flat Low	Tenor recorder	Flatterzunge	Low note
Ten Recorder Flat High	Tenor recorder	Flatterzunge	High note
Flute Sus Low	Flute	Sustain	Low note
Flute Sus p High	Flute	Sustain	High piano note
Flute Sus f High	Flute	Sustain	High forte note
Flute Rep Low	Flute	Repetitions	Low note
Flute Rep p High	Flute	Repetitions	High piano note
Flute Rep f High	Flute	Repetitions	High forte note
Flute Flat Low	Flute	Flatterzunge	Low note
Flute Flat High	Flute	Flatterzunge	High note
Flute Keys	Flute	Key noise	e fast and regular
Clarinet Sus Low	Clarinet	Sustain	Low note
Clarinet Sus High	Clarinet	Sustain	High note
Clarinet Rep p Low	Clarinet	Repetitions	Low piano note
Clarinet Rep f Low	Clarinet	Repetitions	Low forte note
Clarinet Rep High	Clarinet	Repetitions	High note

Clarinet Flat Low	Clarinet	Flatterzunge	Low note
Clarinet Flat High	Clarinet	Flatterzunge	High note
Clarinet Growl Low	Clarinet	Growl	Low note

Brass

The saxophone has been placed in the brass section to balance the menus, even if it is a woodwind.

Name	Instrument	Technique	More
Alt Sax Sus Low	Alto saxophone	Sustain	Low note
Alt Sax Sus High	Alto saxophone	Sustain	High note
Alt Sax Rep Low	Alto saxophone	Repetitions	Low note
Alt Sax Rep p High	Alto saxophone	Repetitions	High piano note
Alt Sax Rep f High	Alto saxophone	Repetitions	High forte note
Alt Sax Flat Low	Alto saxophone	Flatterzunge	Low note
Alt Sax Flat High	Alto saxophone	Flatterzunge	High note
Alt Sax Growl Low	Alto saxophone	Growl	Low note
Alt Sax Growl High	Alto saxophone	Growl	High note
Flugelhorn Sus	Flugelhorn	Sustain	Low note
Flugelhorn Rep	Flugelhorn	Repetitions	Low note
Flugelhorn Flat	Flugelhorn	Flatterzunge	Low note
Trumpet Sus p Low	Trumpet	Sustain	Low piano note
Trumpet Sus f Low	Trumpet	Sustain	Low forte note
Trumpet Sus p High	Trumpet	Sustain	High piano note
Trumpet Sus f High	Trumpet	Sustain	High forte note
Trumpet Rep Low	Trumpet	Repetitions	Low note
Trumpet Flat Low	Trumpet	Flatterzunge	Low note
Trumpet Growl Low	Trumpet	Growl	Low note
Trombone Sus Low	Trombone	Sustain	Low note
Trombone Sus High	Trombone	Sustain	High note
Trombone Rep Low	Trombone	Repetitions	Low note

Trombone Flat Low	Trombone	Flatterzunge	Low note

Plucked strings and keys

Name	Instrument	Technique	More
Ac Gtr Sus Low	Acoustic guitar	Sustain	Low note
Ac Gtr Trem p Low	Acoustic guitar	Tremolo	Low piano note
Ac Gtr Trem f Low	Acoustic guitar	Tremolo	Low forte note
Ac Gtr Trem p High	Acoustic guitar	Tremolo	High piano note
Ac Gtr Trem f High	Acoustic guitar	Tremolo	Forte High note
Ac Gtr Trem Emaj Granular	Acoustic guitar	Tremolo major chord	Granularized
Ac Gtr Trem Amin Granular	Acoustic guitar	Tremolo minor chord	Granularized
Ac Gtr Trem E°7 Granular	Acoustic guitar	Tremolo dim seventh chord	Granularized
Oud Trem Low	Oud	Tremolo	Low note
Oud Trem High	Oud	Tremolo	High note
Oud Rep High	Oud	Repetitions	High note
Piano Sus Low	Piano	Sustain	Low note
Piano Sus Med	Piano	Sustain	Medium note
Piano Sus High	Piano	Sustain	High note
Piano Oct Trem Low	Piano	Octave tremolo	Low note
Bando Sus	Bandoneon	Sustain	Medium note
Bando Bisb	Bandoneon	Bisbigliando	Medium note
Bando Rep	Bandoneon	Repetitions	Medium note
Sine Wave	Synthesizer		Sustain
Triangle Wave	Synthesizer		Sustain
Square Wave	Synthesizer		Sustain
Saw Wave	Synthesizer		Sustain
Pulse	Synthesizer	Fast D	irac repetitions

Strings - soloists only

Name	Instrument	Technique	More
Violin Sus p Low	Violin	Sustain	Low piano note
Violin Sus f Low	Violin	Sustain	Low forte note
Violin Sus High	Violin	Sustain	High note
Violin Rep Low	Violin	Repetitions	Low note
Violin Rep p High	Violin	Repetitions	High piano note
Violin Rep f High	Violin	Repetitions	High forte note
Violin Trem p Low	Violin	Tremolo	Low piano note
Violin Trem f Low	Violin	Tremolo	Low forte note
Violin Trem p High	Violin	Tremolo	High piano note
Violin Pizz Low	Violin	Repetition	ns on low pizzicato
Violin Hrm	Violin	Harr	monic sustain
Viola Sus p	Viola	Sustain	Piano
Viola Sus f	Viola	Sustain	Forte
Viola Rep a	Viola	Repetitions	Leggiero
Viola Rep b	Viola	Repetitions	Marcato
Viola Trem p	Viola	Tremolo	Piano
Viol Trem f	Viola	Tremolo	Forte
Viola Pizz	Viola	Repetit	ions on pizzicato
Viola Hrm	Viola	Harr	monic sustain
Cello Sus p Low	Violoncello	Sustain	Low piano note
Cello Sus f Low	Violoncello	Sustain	Low forte note
Cello Sus	Violoncello	Sustain	Medium note
Cello Rep Low	Violoncello	Repetitions	Low note
Cello Rep	Violoncello	Repetitions	Medium note
Cello Rep High	Violoncello	Repetitions	High note
Cello Trem Slow	Violoncello	Tremolo	Slow
Cello Trem Med	Violoncello	Tremolo	Medium speed
Cello Trem Fast	Violoncello	Tremolo	Fast

Cello Pizz	Violoncello	Repetitions on pizzicato	
Cello Sul Pont A	Violoncello	Sul Ponticello	Stable
Cello Sul Pont B	Violoncello	Sul Ponticello	Unstable
Cello Flaut	Violoncello	Flautando	Medium note
Contrabass Sus p	Contrabass	Sustain	Piano
Contrabass Sus f	Contrabass	Sustain	Forte
Contrabass Rep	Contrabass	Repetitions	Mezzo-forte
Contrabass Trem m	Contrabass	Tremolo	Simple
Contrabass Trem st	Contrabass	Tremolo	Two recording simultaneously playing, one on the left, the other on the right
Contrabass Pizz	Contrabass	Repetitions on pizzicato	

Amplified instruments

Name	Instrument	Technique	More
E-Violin Sus	Electric violin	Sustain	
E-Violin Trem	Electric violin	Tremolo	
E-Violin Trem Dist	Electric violin	Tremolo	With saturation
E-Violin Rep	Electric violin	Repetitions	
E-Violin Rep Dist	Electric violin	Repetitions	With saturation
E-Violin Rep 5th	Electric violin	Repetitions	Quint double stop
E-Violin Rep 5th Dist	Electric violin	Repetitions	Quint double stop with saturation
E-Violin Col Legno	Electric violin	Col legno	Repetitions
E-Violin Col Legno Dist	Electric violin	Col legno	Repetitions with saturation
E-Violin Pizz	Electric violin	Pizzicato	Repetitions
E-Cello Sus	Electric Cello	Sustain	
E-Cello Sus Dist	Electric Cello	Sustain	With saturation
E-Cello Trem Low	Electric Cello	Tremolo	Low note
E-Cello Trem Low Dist	Electric Cello	Tremolo	Low note with saturation
E-Cello Trem High	Electric Cello	Tremolo	High note
E-Cello Trem High Dist	Electric Cello	Tremolo	High note with saturation

E-Cello Rep	Electric Cello	Repetitions	
E-Cello Rep Dist	Electric Cello	Repetitions	With saturation
E-Cello Pizz	Electric Cello	Pizzicato	Repetitions
E-Cello Pizz Dist	Electric Cello	Pizzicato	Repetitions with saturation
E-Guitar Sus p	Electric Guitar	Sustain	Piano
E-Guitar Sus p Dist	Electric Guitar	Sustain	Piano with saturation
E-Guitar Sus f	Electric Guitar	Sustain	Forte
E-Guitar Sus f Dist	Electric Guitar	Sustain	Forte with saturation
E-Guitar Trem p Low	Electric Guitar	Tremolo	Low piano note
E-Guitar Trem p Low Dist	Electric Guitar	Tremolo	Low piano note with saturation
E-Guitar Trem f Low	Electric Guitar	Tremolo	Low forte note
E-Guitar Trem f Low Dist	Electric Guitar	Tremolo	Low forte note with saturation
E-Guitar Trem High	Electric Guitar	Tremolo	High note
E-Guitar Trem High Dist	Electric Guitar	Tremolo	High note with saturation

Pre-mapped MIDI Control Codes

MIDI CC	Parameter
CC 001	Speed knob
CC 011	Bell Width
CC 073	Attack
CC 069	Release
CC 080	Notch on/off
CC 081	LFO on/off
CC 092	LFO Width
CC 093	LFO Central value
CC 094	LFO Speed
CC 095	LFO Phase

Some tips for use

- (1) The speed knob is obviously the most attractive, but do not forget to play with the *Bell width*!
- (2) Launch two instances of *Shepard Designer* with different speed or direction settings to create impressive textures very quickly!
- (3) To mix different sound sources, set one instance of *Shepard Designer*, then duplicate it and change the sound source only.
- (4) All parameters can be linked to MIDI CC, use it to take the best advantage of *Shepard Designer* and adapt it to fit in your creations.
- (5) Add some effects after *Shepard Designer* like delays, reverberations, distorsions and other modulation effects to create the sound you need!
- (6) Thanks to *bars/oct.*, you can use *Shepard Designer* as a tonal instrument to create unheard stress/relaxation effects!

inouï samples was created to offer composers, producers and sound-designers unheard sounds with strong musical potential. Whether the object of novelty is about the instrument, the sound pickup, how sound is processed or several of these parameters, each of the virtual instruments produced by *inouï* samples is designed to fit naturally into your compositions.

All the experiments of acoustics, physical and digital lutherie are made with the objective to best serve the artistic creations and to allow them to go always further.

Licence agreement

Any owner and user of Shepard Designer agrees to abide by the following rules. If you do not agree with one or more points, you may not download or use the software or samples of Shepard Designer.

Out of the piano sound designed using *Very Close Piano 2*, *Nelson MALLÉUS EIRL* guarantees that all *Shepard Designer* samples have been recorded specially for this project. Any resemblance to another record would be a pure coincidence.

Shepard Designer can only be used commercially as part of a musical composition. Therefore, it is forbidden to distribute or give up - for free or with charges - all or part of this software or samples. It may not be resold, loaned, rented, downloaded to a server, transmitted to another user or used for the development of a competing product. It is forbidden to use samples outside Shepard Designer software or to integrate them into another sample player.

Shepard Designer requires the use of Kontakt 5 in its latest update. Nelson MALLÉUS EIRL can not be held liable in the event that Native Instrument GmbH no longer carries out any further development of Kontakt or any problems arising from Kontakt. Kontakt is a registered trademark of Native Instrument GmbH.

If using Shepard Designer without any other instrument or only with synthesizers, it must be specified "Recorded by Nelson MALLÉUS" on all media presenting the technical team (film credits, disc cover, website ...)

In case of any dispute the French text shall prevail over the other langage texts.

Conditions générales d'utilisation

Tout possesseur et tout utilisateur de Shepard Designer s'engage à respecter le règlement suivant. Si vous n'êtes pas d'accord avec un ou plusieurs points, vous ne pouvez pas télécharger ou utiliser le logiciel ni les échantillons de Shepard Designer.

En dehors des sons de pianos créés avec *Very Close Piano 2*, Nelson *MALLÉUS EIRL* garantit que tous les échantillons de *Shepard Designer* ont été enregistrés spécifiquement pour ce projet. Toute ressemblance avec un autre enregistrement serait une pure coïncidence.

Shepard Designer ne peut être utilisé de façon commerciale que dans le cadre d'une composition musicale. Par conséquent, il est interdit de distribuer ou de céder - à titre gratuit ou payant - toute ou partie de ce logiciel ou des échantillons. Il est interdit de le revendre, de le prêter, de le louer, de le télécharger sur un serveur, de le transmettre à un autre utilisateur ou de s'en servir pour le développement d'un produit concurrent. Il est interdit d'utiliser les échantillons hors du logiciel Shepard Designer ou de les intégrer dans un autre lecteur d'échantillons.

Shepard Designer nécessite l'utilisation de Kontakt 5 dans sa dernière mise à jour. Nelson MALLÉUS EIRL ne peut être tenu pour responsable au cas où Native Instrument GmbH ne poursuit plus de développement de Kontakt, ni de tous les problèmes pouvant découler de Kontakt. Kontakt est une marque déposée de Native Instrument GmbH.

En cas d'utilisation de *Shepard Designer* sans autre instrument ou uniquement avec des synthétiseurs, il doit être précisé « Enregistré par Nelson MALLÉUS » sur tous les supports présentant l'équipe technique (générique de film, jaquette de disque, site internet...)

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