



# Wavelore Instruments Pedal Steel Guitar

*Kontakt Free Trial Edition*

## User Guide



Welcome!

This help file contains an overview of the Free Trial of the Kontakt Edition of the Wavelore Pedal Steel Guitar. Not all features explained herein are included in the trial version: There are no amplifier controls, as only one amp/mic model is included, and the primary/secondary string selection control has been omitted, as the trial version only uses strings 4, 5, 6, and 8. Further, this version only uses positions open through five on the guitar neck. Also, and most importantly, the instrument will cease to function after twenty minutes of use. To use it more than that, you'll need to click the "reset" button, which will appear in the instrument's performance view upon time-out. The relevant sections of this manual will explain what the omitted features will allow you to do with the full instrument, should you choose to order a copy. For more information, please visit us at [www.wavelore.com](http://www.wavelore.com)

Enjoy!

## Table of Contents

<b>1) Really Quick Start.....</b>	<b>3</b>
<b>2) Quick Start.....</b>	<b>5</b>
<b>2.1) Controllers and the Keyboard Layout.....</b>	<b>5</b>
<b>3) More About Expression.....</b>	<b>7</b>
<b>3.1) Position Playing.....</b>	<b>7</b>
<b>3.2) Harmonic Vocabulary Tutorials.....</b>	<b>8</b>
<b>3.3) About the Voice Guide.....</b>	<b>11</b>
<b>3.4) Position Playing, Continued.....</b>	<b>12</b>
<b>3.5) Important Expressive Controls.....</b>	<b>13</b>
<b>3.5.1) The Mod-Wheel.....</b>	<b>13</b>
<b>3.5.2) The Expression Pedal.....</b>	<b>13</b>
<b>3.5.3) Portamento Time (CC#5).....</b>	<b>14</b>
<b>4) Editing the Instrument's Setup.....</b>	<b>15</b>
<b>4.1) About the Pitch/Volume Page.....</b>	<b>15</b>
<b>4.2) About the Vibrato/Damping Page.....</b>	<b>17</b>
<b>4.3) About the Amplifier Page.....</b>	<b>18</b>
<b>4.4) Saving your Changes.....</b>	<b>18</b>
<b>5) Where to Get More Help.....</b>	<b>19</b>
<b>Appendix A: The Pedal Steel Guitar Neck.....</b>	<b>20</b>
<b>Appendix B: Credits.....</b>	<b>22</b>

# 1) Really Quick Start

1) Load the instrument into Kontakt: Kontakt 2 users will want to use the file "Wavelore\_Pedal\_Steel\_Guitar\_K2.nki", whereas Kontakt 3 users will want to use the file "Wavelore\_Pedal\_Steel\_Guitar\_K3.nki".

2) Assign the following MIDI control sources on your controller:

**#1** (mod wheel) - vibrato, release sample control.

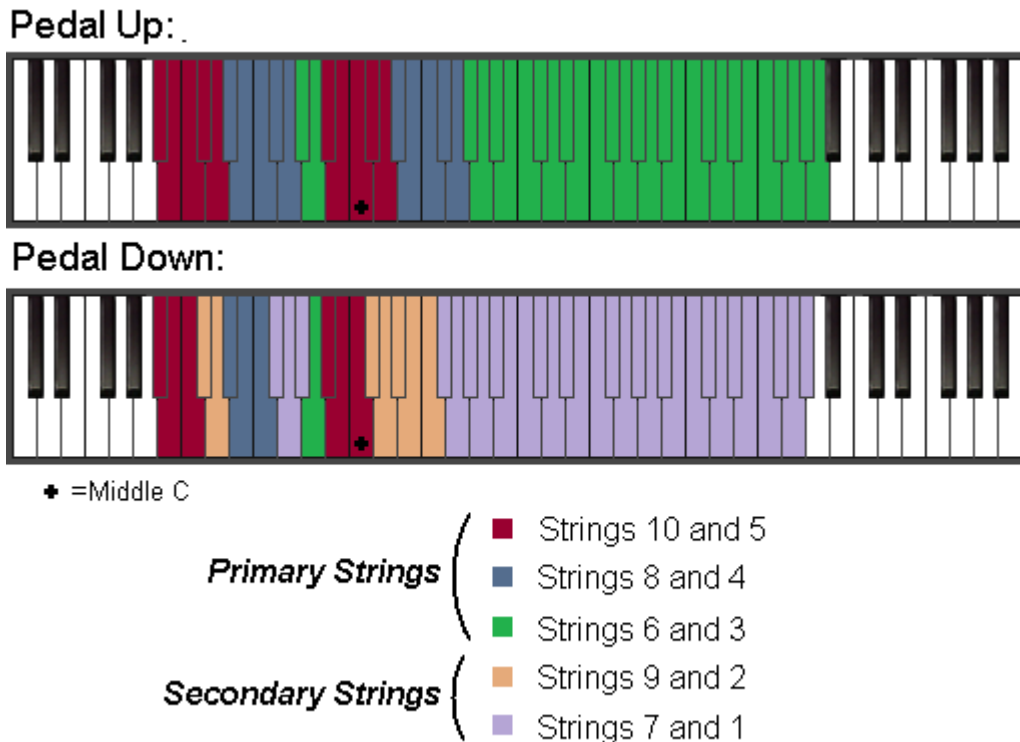
**#4** (must be continuous) - neck position.

**#5** (must be continuous) - portamento speed.

**#11** (expression pedal) - real-time volume control

3) Play the keyboard. You'll quickly get a sense that playing legato between certain pitches will produce sliding notes, where other notes do not slide at all. To find the exact points where one "bendable" area ends and another begins, play a connected chromatic scale all the way from Bb2 to G#4. From G#4 to A6 are all one area.

Here is a color-coded diagram of what is going on:



Notice in the legend that each colored range represents one string. Just like a real guitar, you can only play one note on a given string at a time. Any notes played together within the same colored range of keys will slide from one note to the next. Any notes played in different colored key ranges will sound together. This keyboard arrangement is influenced strongly by the pitches of the open strings and the pitches that those notes can be bent up or down to on a real pedal steel.

Notice also that there is a different diagram for the keyboard behavior when the sustain pedal is down. Having the pedal act as a switch allows more real-time access to all ten strings worth of samples without having to omit or substitute samples.

**Don't move CC#4 yet!!! Read the Quick Start (and everything after it) first!!**

Moving CC#4 will do two things:

- 1)** Sound a voice, which tells you what neck position you're in. You can silence the voice by deactivating the button labeled "Voice Guide On". We recommend leaving it on for now, however.
- 2)** Change the current position to the one called by the voice. With each advancing position, the colors in the diagram above will advance to the right by one semitone, allowing transposition of phrases from any key to any other. It's best to learn the open position (the default behavior, shown in the diagram) first, and learn the other positions by transposing what you know from that.

## 2) Quick Start

### 2.1) Controllers and the Keyboard Layout

1) Load the instrument into Kontakt: Kontakt 2 users will want to use the file "Wavelore\_Pedal\_Steel\_Guitar\_K2.nki", whereas Kontakt 3 users will want to use the file "Wavelore\_Pedal\_Steel\_Guitar\_K3.nki".

2) Assign the following controllers on your MIDI controller. They are organized by importance, but you'll want them all eventually. Suggestions are included for whether the designated control should be a button (for toggling) or continuous:

-**CC#11** (Expression Pedal) Acts as a volume pedal.

-**CC#4** (Slider) Controls neck position. A controller-activated voice will call the position numbers as you move it.

**Important Note:** Throughout this document, we will make reference to "open position". It is the default state of the Wavelore Pedal Steel Guitar library. To proceed as smoothly as possible through this guide, it will be good practice to avoid changing the value of this controller from the default value until instructed to do so. If the controller is moved out of position, the instrument will not function as explained. That is because each "position" has a unique set of behavioral characteristics relating to chords and string bends. If the explanations and diagrams below do not match the instrument's behavior, please move CC#4 until the voice counter says, "open". A more detailed explanation of the other positions and their operation is part of the main help document.

-**CC#5** (Slider) Portamento speed control (also significantly affected by velocity).

You'll also need a mod-wheel and sustain pedal. These are the features they control:

#### **Mod-wheel:**

1) Vibrato depth. Vibrato is subtle, and can be made more subtle by moving the mod-wheel in cycles (sort of like if you used the pitch wheel for simulating vibrato, which is also possible), giving the pitch variation some inconsistency. Its behavior (depth and speed, control source) can also be edited.

2) Kind of release sample played. Mod-wheel at 0-60=strings muted with the palm, mod wheel at 70-127=strings muted with the pick, for a more noticeable "click". This is useful for adding some grit to the performance. Placement of the mod-wheel at note-off also attenuates the release samples so that you can influence how audible they are in performances or sequences. The palm damps will play at full volume with the wheel at zero, and fully attenuated with the wheel at 60. The pick damps will play at full volume with the wheel at 127, and fully attenuated with the wheel at 70. If the wheel is set between 60 and 70 at the time of a note off message, no release sample is played.

#### **Sustain Pedal:**

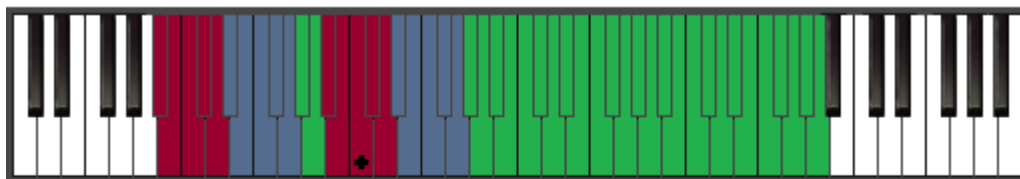
Active/inactive strings. The pedal steel guitar has ten strings, several pairs of which overlap in ways that make programming their real-time availability difficult. To help organize the chaos, we started by dividing the strings into two groups, "primary" and "secondary":

-**Primary** strings are those which make up an E Major chord when played open (without the slide). In order from lowest pitched to highest pitch, they are strings 10, 8, 6, 5, 4 and 3 (B2, E3, G#3, B3, E4, and G#4). By default these strings are available simultaneously with the pedal up.

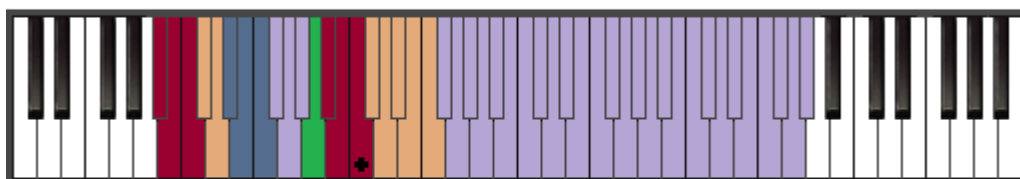
-**Secondary** strings are those which are not a part of an E Major chord, or strings 9, 7, 2 and 1 (D3, F#3, D#4 and F#4). When you engage the sustain pedal (CC#64), these strings become available where their pitches were only available on the primary strings with the pedal up. In this state there are different bending possibilities, which, when combined with the options afforded by the pedal-up state, offer a very high level of harmonic and melodic flexibility.

Here are the active key ranges per string when the instrument is in open position (default CC#4 setting):

**Pedal Up:**



**Pedal Down:**



✦ =Middle C

<b>Primary Strings</b>	{	■	Strings 10 and 5
		■	Strings 8 and 4
		■	Strings 6 and 3
<b>Secondary Strings</b>	{	■	Strings 9 and 2
		■	Strings 7 and 1

Try playing an E-major chord with the pedal up. Move the pitch wheel upward and notice how the notes of the chord bend. Playing an A-major chord and moving the wheel down will reverse this. Now try playing a close-voiced B-Major chord. Notice how one note will bend undesirably. This is because the secondary strings are what allow this voicing. Press the sustain pedal and play the chord. Moving the wheel up will bend it to a C#-minor chord. Each state allows a different group of options for harmonic and melodic motion using legato and pitch wheel movement, depending on the chords chosen and the neck position.

### 3) More About Expression

The above guides give you everything you need to get a basic grasp of how the Wavelore Pedal Steel Guitar works. All the same, there are many considerations that will be important for you to make when choosing exactly how you will play and use the instrument. Please read the following sections if you want to know more about getting the most out of your library!!

#### 3.1) Position Playing (CC#4)

We've already made mention of playing in a particular "position". The position demonstrated so far is the one that is active by default when you load the instrument, the "open" position. Open position is so-named because it's available pitches are those which are available on a real pedal steel when the slide is *not* used. When discussing stringed instruments of any kind, a string that is not stopped with the finger, or in this case, a slide, is referred to as an "open string". When open strings are used in conjunction with those notes that are close to them, the instrument is said to be played in "open position". As we move up the neck of the guitar, we advance, one semitone at a time, through positions one, two, three and so on. Positions are important on stringed instruments because different positions will have drastically different sounds. The Wavelore Pedal Steel Guitar has twenty-four positions, plus the open position, for a total of twenty five.

Each position has a peculiar arrangement of strings across the keyboard. The diagram in the Really Quick Start guide shows which notes of the keyboard are played on which strings in open position. If you have a reasonable grasp of the musical possibilities in open position, you can start transposing things you've learned so far by moving CC#4 by the same number of semitones as your transposition.

If you're still not sure what any of this is about, start by thinking of open position as the key of E. Technically, any position can play in any key, but certain chord progressions and types of movement can lend themselves well to certain positions. Start with these facts about open position:

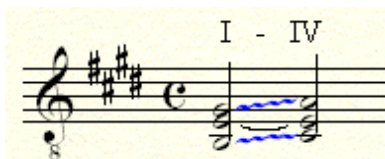
- 1) In open position, you can play any inversion of an E-Major chord.
- 2) In open position, you can play any inversion of an A-Major chord.
- 3) In open position, any inversion of an E-Major Chord can bend to an A-Major chord by moving the pitch-wheel up all the way.
- 4) In open position, any inversion of an A-Major chord can bend to an E-Major chord by moving the pitch-wheel down all the way.
- 5) Either of the above two bending tricks can be reproduced by playing legato from G# to A, and B to C#, or the reverse. Alternately, one can slide just one of these notes.
- 6) Any inversion of an E-Major chord can slide to an F#-minor chord, or vice-versa, by playing legato from E to F#, G# to A, and B to C#.
- 7) Any inversion of an E-Major chord can bend to a B7 chord, or vice-versa by playing legato from G# to A, and E to D#, keeping the common tone, B. *Note: This voicing of B7 omits the fifth, F#.*
- 8) Any inversion of an A-Major chord can bend to a B7 chord, or vice-versa, by playing legato from C# to B, and from E to D#, keeping the common tone, A. *Note: This voicing of B7 omits the fifth, F#.*
- 9) Mixing legato slides with pitch wheel movements can allow interesting harmonic variations. For example, an E Augmented triad (E, G#, C), can bend to an A Major Chord by raising the pitch wheel fully while playing legato from C to B. There are many such possibilities. Experiment!

## 3.2) Harmonic Vocabulary Tutorials

Now let's take a moment to explore some harmonic vocabulary using open position:

### **Tutorial 1: Playing in open position with the pedal up**

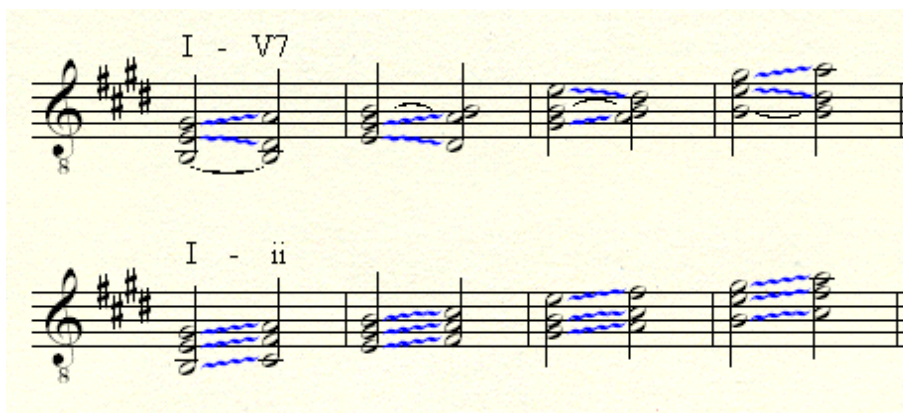
Make sure CC#4 is set to zero so the Pedal Steel is in open position. The way the strings are mapped to the keyboard allows us to play diatonic harmonies idiomatically. Let's start with a simple I-IV progression in E-Major. Play the following example, making sure to play the moving notes legato. It may help to use 2 hands. Note the octave-treble clef meaning the third space on the staff is middle C.



The G# should slide up to the A and the B should bend up to the C#. Now try it again and play the second chord as softly as you can. The notes should bend more slowly. CC#5 lets you adjust how sensitive this feature is. Try staggering the A and C# or playing one harder than the other. Try playing the example backwards. Inversions of the chord progression will also work:

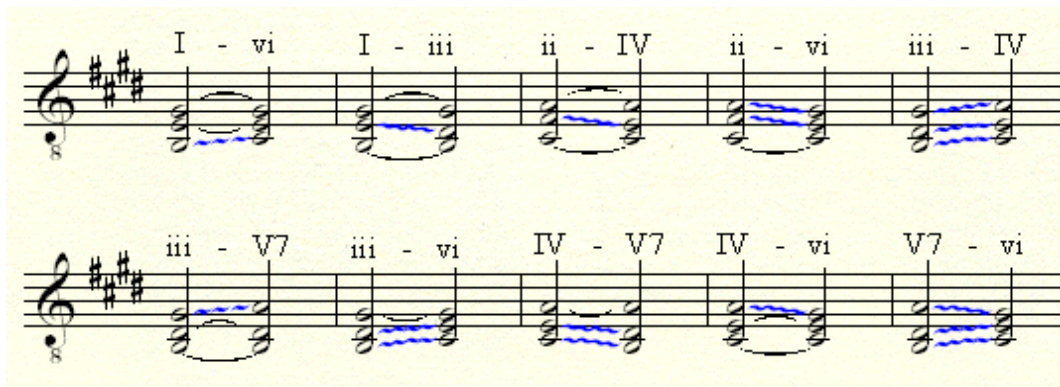


The next inversion (an octave above the original) will not work in this position because the highest open string is G#. Playing the G# and B together makes it slide between the 2 notes. To play this entire example an octave higher we'd have to set the position slider to 12. Now let's try some other chord progressions:





The idea of being able to invert any progression is a big part of being able to play idiomatically on the instrument. It's just like a slide player moving to higher strings and being able to get the same bends to work. It also works for these diatonic progressions:



Also try these secondary dominant progressions or other chromatic alterations of the progressions we've covered so far:



Apart from being able to invert these progressions we can play any of them with several wider voicings:



A few more progressions are possible this way but they create a bend of a minor third, which wouldn't usually happen on a pedal steel:



The obvious next step is to put some of these changes together to make longer progressions. There's a lot of expressive ability built in for this type of playing so you'll want to practice some of the different techniques discussed in the rest of user's guide. Try sequencing a chord progression and soloing over it in the higher register.

### **Tutorial 1b: Playing in open position with the pedal down**

Pushing the pedal brings a few more strings into the mix, thus reducing the bend range of some strings, and providing us with more harmonic possibilities. Close voicings of the V chord and vii become available, as well as all of the diatonic 7th chords. There are of course fewer possibilities for sliding between chords in this mode as the range of each string is fairly small. However, it does open up some possibilities for moving to and from the V, shown here in their lowest and highest possible voicings:



With smaller intervals being possible, we can now play close voicing of the diatonic 7th chords. In this example the first chord in each bar is the simplest voicing possible, and the second chord is the fullest voicing.



Once you have a feel for what's possible within open position, you can learn to apply those techniques to other keys by placing CC#4 in the correct position, and transposing the music accordingly. The most straight-forward example of transposing on the Wavelore Pedal Steel is transposition by an octave:

1) Move CC#4 until the voice counter says, "Twelve".

2) Play the licks or chord progressions that you know from open position, but one octave higher. You'll hear that the part sounds an octave higher, and you'll notice that all bends (legato and pitch-wheel) work in exactly the same way as in open position.

Of course, we can also transpose into other keys altogether:

1) Move CC#4 until the voice counter says, "Seven".

2) Play the licks or chord progressions you know from open position, but transpose them into the key of B Major. If you don't want to play the part differently, the chances are good that your MIDI controller has a transpose button. Set it to "+7" semitones. Consult your controller's documentation if you're not sure how to do this. Again, you'll hear the part, only this time a perfect fifth higher than if it were played in open position.

Not only do the strings bend by the same amounts as they do in open position, but the new pitches you play will actually trigger samples that are *taken from higher up the length of each string*! This is because we sampled all strings for their entire lengths and configured each position to use the samples from the appropriate range of each string. Often, there is more than one way to play a note, chord or phrase, and learning to reproduce certain licks in multiple positions can give you a wider range of choices when determining what the instrument will sound like. For example:

Play an A Major chord in open position, then move to fifth position and play it again. Same chord, different sound. The reason is that the same pitches have been played, but the actual samples played are different based on which strings would have those notes available in a given position on a real pedal steel guitar.

The above examples illustrate position control, which is not only an important part of guitar and pedal steel playing in general, but is specifically one of the features that make this virtual version of the instrument so versatile.

### 3.3) A Brief Detour: About the Voice Guide

Having twenty-five positions assigned to a single continuous controller is a simple way to make all positions accessible, but it can present some problems. The first is the question of how one can practice any degree of precision when selecting a position. The answer is the “Voice Guide”. The voice guide responds to MIDI controller messages by triggering samples of a human voice calling out numbers that correspond to the position activated by the controller’s latest value. Basically, if you want position twelve, start by moving CC#4 toward the middle of it’s range. As you approach the correct value, the voice counter will call ascending numbers until you stop. If you go too far, coming back down will also call numbers, but in descending order.

Of course, this workaround might be cumbersome in a live performance situation for two possible reasons:

- 1) Who wants to hear the voice counters over the front-of-house speakers at a live performance??
- 2) Quick changes of position can be difficult even with the aid of the position counters, since the increments between positions are so small.

Fortunately, there are solutions available to help use the instrument in a live setting:

- 1) You can route the audio produced by the voice guide to a different set of outputs, which could be useful for monitoring the voice over stage monitors or in headphones, but without sending the audio to the house speakers. Please see your Kontakt user’s manual for instructions on doing so.
- 2) Most controllers have assignable buttons that can be set to send specific values of assigned CC#’s. Many can also be set to “toggle”, so that one button can be made to send two values alternately. Combining one button configured in this way with an assigned fader can give quick access to four values (0 and 127 using quick movements of the fader toward its extremes, plus the two toggle values chosen for the button). Each additional toggle button can add two more quickly accessible values.

This technique can be strategically used for quick, reliable changes into pre-planned positions. In sequencing, one can pre-configure this automation ahead of time for playing in complex parts. Refer to your MIDI controller/sequencer documentation for instructions on how.

### 3.4) Position Playing, Continued

Once familiar with how positions allow different harmonic and melodic possibilities, it will be useful to know just how far to move CC#4 to reach a particular position. This is especially true if you are sequencing position changes using envelopes drawn into your MIDI sequencer. To help you do this kind of editing, here is a diagram illustrating the CC#4 values that will put the instrument into any desired position.

**Positions Zero (Open) through 24, MIDI CC Values**

Position	CC#4 Value Range
Open	0-0
1	1- 6
2	7- 11
3	12- 17
4	18- 23
5	24- 29
6	30- 35
7	36- 40
8	41- 45
9	46- 50
10	51- 55
11	56- 60
12	61- 66
13	67- 71
14	72- 76
15	77- 82
16	83- 88
17	89- 93
18	94- 99
19	100-105
20	106-110
21	111-116
22	117-121
23	122-126
24	127-127

### 3.5) Important Expressive Controls:

Other than using CC#4 for position control, you need to use several other controllers to get expressive performances out of the Wavelore Pedal Steel Guitar. These other controllers are your mod-wheel, expression pedal, and CC#5 (portamento time).

#### 3.5.1) *The Mod-Wheel*

This all important controller does three different things:

I) The mod-wheel controls vibrato depth. Most pedal steel playing uses a gentle roll of the slide to impart a subtle, sinusoidal variation on the pitch of a given note or chord. Play a note or chord, and slowly move your mod wheel while holding it. You will hear the pitch waver slightly. Additionally, the vibrato increases in speed as you increase the mod-wheel's value. It is possible to assign separate controls for speed and depth if you wish: please see section 4.2 on page 17 for instructions if you'd like to separate these functions.

II) The placement of the mod-wheel at the moment a note is released determines which of the two available release-sample types are used:

- Over the lower half of the mod-wheel's range (0-60), the instrument will use "palm damp" release samples. These releases use the subtle effect of the string being muted with the palm of the hand.
- Over the upper half of the mod-wheel's range (70-80), the instrument will use "pick damp" release samples. These releases use a less subtle effect of the pick stopping the string, resulting in a more noticeable "click" sound.
- While the mod-wheel is in the middle of it's range (61-69), no release sample is played.

III) The placement of the mod-wheel at the moment a note is released determines the volume of whichever release sample is played:

- Over the lower half of the mod-wheel's range, the palm damp releases will be attenuated (turned down) as the wheel approaches the center position, at which point they will be fully attenuated (inaudible). With the mod-wheel at zero, the palm damps will be as loud as possible, but still subtle.
- Over the upper half of the mod-wheel's range, the pick damps will be attenuated as the wheel approaches the center position, at which point they will be fully attenuated. With the mod-wheel at 127, the pick damps will be as loud as possible.

#### 3.5.2) *The Expression Pedal*

The expression pedal should, if assignable, be assigned to control CC#11, in which case it will function just like the volume pedal, whose use is extremely common in pedal steel playing. Pulling it all the way to the "rear" position (open), will turn the instrument down to inaudible. If you play a note in this state and move the pedal forward, the note will fade in. This controller can be used to create swelling and fading effects, and can be used along with velocity to influence the instrument's place in a mix.

#### Important: A Note on the "Zipper Effect"

The zipper effect is a common term for the tendency of MIDI control messages to sound less smooth than sources of analog control. In the case of the Wavelore Pedal Steel Guitar, it can be particularly evident when using the expression pedal. What happens is this: Unlike an analog volume pedal, the MIDI expression pedal only transmits 128 increments of data. Further, if the physical controller is moved quickly over a large range of values, the hardware will "steal" a significant amount of these increments. Imagine starting with the pedal at zero, hitting a note, and moving the pedal as quickly as you can to full value. The result could be that the volume does not progress smoothly from zero to 127, but rather jumps from zero to say, 24, then to 56, to 70, to 100, and finally to 127. Including the extremes, our smooth swell has been reduced from a nice sounding curve to a "stair case", with just six steps.

In order to avoid this problem, we recommend using the expression pedal in the same subtle manner as a real pedal steel player would use his or her volume pedal. Most of the time, they do not swell from off to full, let alone do they do

so quickly. When using the pedal to affect the attack of a note, it's usually rocked back to about 50% of it's volume, and the forward motion is much slower than our above example.

### **3.5.3) *Portamento Time* (CC#5)**

Having a controller assigned to CC#5 is important because it allows access to the extremes of slide speed. The default speed allows a considerable range to be accessed via velocity of target notes, but using CC#5 allows you to play slides that are extremely fast or slow.

## 4) Editing the Instrument's Setup

There is always a possibility that a given instrument configuration will not behave in the way you may prefer. Given the enormous number of possible opinions on how any instrument should be configured, we've done everything possible to offer the best out-of-the-box programming we can in this library, but you may still have certain reservations or differences of opinion. These differences could be about a wide variety of choices, including:

- Choice of assigned controllers: Many may want, for example, to have the instrument use different controllers for vibrato and release control, where our configuration uses the mod-wheel for both.
- Vibrato style: Our choice was one of a medium-slow, subtle vibrato. You may find a need for a more aggressive vibrato.
- Slide speed ranges: You may only want your bends and slides to vary from half a second in length to a full second, whereas our original setup offers a range from very fast to very slow. You can configure bend speed ranges and control sources in almost any variety you wish.

In addition to these variables, there are countless other ways in which the instrument could be different, and some of those ways could be better, at least for certain people or projects. This section contains instructions on some of the many ways that you can customize the sounds in the library to suit different needs or tastes.

### 4.1) About the Pitch/Volume Page



#### Concept:

In the screen-shot above, the various knobs and buttons allow you to configure the expression control (volume), bend speed control sources and range, neck position control (including voice guide on/off + volume controls), and the MIDI control for alternating the primary strings with the secondary ones.

#### Controls:

- 1) *Page menu*: This control is always visible, and allows you to view the settings displayed by default, the settings for release sample behavior, the virtual amplifier models, or the about box.
- 2) *Volume control*: Choose your MIDI continuous controller for volume pedal emulation. Alternatively, set it to 128 to activate "learn mode". While in learn mode, you can simply move the controller on your MIDI keyboard that you wish to assign as the expression control. Click "OK", or play a note on your keyboard, and your assignment is saved.
- 3) *MIDI Bend Speed Controller*: Choose your MIDI continuous controller for bend/slide speed control. Alternatively, set it to 128 to activate "learn mode". While in learn mode, you can simply move the controller on your MIDI

keyboard that you wish to assign as the speed control. Click “OK”, or play a note on your keyboard, and your assignment is saved. Once set, moving the assigned controller will change the speed of bends to the corresponding point between the minimum and maximum speeds (displayed in item # 5).

- 4) *Speed Control Source*: Allows four possible choices of how slide/bend speed is determined:
  - I) *Controller*: The controller assigned by item # 3 will determine the duration of all pitch bends.
  - II) *Velocity*: The velocity of the “target note” (the note that the original pitch will bend up or down to) sets the speed of the bend.
  - III) *Velocity + Scale*: The velocity of the “target note” (the note that the original pitch will bend up or down to) sets the speed of the bend, but the speed will be scaled by the percentage of the full speed range displayed in item #6.
  - IV) *CC+Velocity*: The MIDI controller set in item #3 will determine the CC-based speed of the bend, but the velocity of the “target note” (the note that the original pitch will bend up or down to) will offset the speed in either direction, depending on whether the target note’s velocity is less than 64 (slows the bend) or greater than 64 (speeds the bend up).
- 5) *Bend Speed Range(min and max)*: Set the fastest (min) and slowest (max) bend times, whose values then will be interpolated by your choice of control sources and/or velocity scaling when playing bends and slides.  
*Velocity → Speed Scaling Factor*: The extent to which target note velocity offsets the CC-based speed of the bend is determined by this control. Setting it to zero will prevent velocity from affecting bend speed, whereas setting it to 100 will allow the full specified range of speeds to be accessed.
- 6) *Velocity Scaling Factor*: Determines the extent to which target note velocity affects bend speeds. Lower values limit the effect of velocity, whereas higher values allow a greater portion of the overall speed range to be accessed without moving the assigned CC.
- 7) *Neck Position Control*: Choose the MIDI continuous controller that will be used to select the active neck position. Alternatively, set it to 128 to activate “learn mode”. While in learn mode, you can simply move the controller on your MIDI keyboard that you wish to assign as the neck position control. Click “OK”, or play a note on your keyboard, and your assignment is saved.
- 8) *Voice Guide On/Off*: Activates or deactivates the voice guide. If active, a voice will call the number of the active position when the neck position control is moved.
- 9) *Voice Guide Volume*: Set the volume of the voice guide to taste.
- 10) *Use Volume Control*: Adds the volume control as set in item #2 as an additional volume control for the voice guide; If set to “On”, your assigned volume CC will further attenuate voice guide samples triggered by position changes. If it is set to “Off”, the voice guide volume will only be affected by item #9.
- 11) *String Switch*: Choose your MIDI continuous controller for real-time switching between primary and secondary strings. Alternatively, set it to 128 to activate “learn mode”. While in learn mode, you can simply move the controller on your MIDI keyboard that you wish to assign as the switch control. Click “OK”, or play a note on your keyboard, and your assignment is saved. Once set, moving the assigned controller to a zero value will activate only the primary strings, whereas moving it to a value of 127 will activate a combination of the primary and secondary strings. See section 2 for more information on primary and secondary strings: explanation on p.5 and diagram on p.6



## 4.2) About the Vibrato/Damping Page



### Concept:

In the screen-shot above, the various knobs and buttons allow you to configure the vibrato depth and speed, and assign MIDI controllers for real-time control of those parameters. From this page, you can also assign controllers for real-time selection and attenuation of release samples. There is also a master volume knob for release samples.

### Controls:

- 1) *Vibrato Depth Controller*: Choose your MIDI continuous controller for vibrato depth. Alternatively, set it to 128 to activate “learn mode”. While in learn mode, you can simply move the controller on your MIDI keyboard that you wish to assign as the vibrato depth control. Click “OK”, or play a note on your keyboard, and your assignment is saved.
- 2) *Maximum Vibrato Depth*: Set the maximum vibrato depth to taste. This will be the width of the pitch fluctuation while the controller assigned in item #1 is at a value of 127.
- 3) *Vibrato Speed Controller*: Choose your MIDI continuous controller for vibrato speed. Alternatively, set it to 128 to activate “learn mode”. While in learn mode, you can simply move the controller on your MIDI keyboard that you wish to assign as the vibrato speed control. Click “OK”, or play a note on your keyboard, and your assignment is saved.
- 4) *Maximum Vibrato Speed*: Set the maximum vibrato speed to taste. This will be the speed of the pitch fluctuation while the controller assigned in item #3 is at a value of 127.
- 5) *Release Sample Selector Controller*: Choose your MIDI continuous controller for release sample selection. Alternatively, set it to 128 to activate “learn mode”. While in learn mode, you can simply move the controller on your MIDI keyboard that you wish to assign as the release selector. Click “OK”, or play a note on your keyboard, and your assignment is saved. Once set, this controller will determine which type of release sample is played when a note is released.
- 6) *Release Sample Attenuation Controller*: Choose your MIDI continuous controller for real-time release sample volume control. Alternatively, set it to 128 to activate “learn mode”. While in learn mode, you can simply move the controller on your MIDI keyboard that you wish to assign as the release volume control. Click “OK”, or play a note on your keyboard, and your assignment is saved. Once set, this controller will determine which how loudly release samples are played when a note is released. See section 3.5.1, p.13 for more detail.
- 7) *Release Sample Master Volume*: Set the master volume of release sample playback to taste. This setting will change the volume of the release samples in addition to the release sample attenuation controller.

### 4.3) About the Amplifier Page



#### Concept:

In the screen-shot above, the various knobs and buttons allow you to configure the tone of the instrument. EQ, reverb level, amp model and mic configuration can all be adjusted from this page.

#### Controls:

- 1) *Amp Simulation On/Off*: Acts as a bypass control for the amp simulation. You may want to set this to “Off” if you wish to use a 3<sup>rd</sup> party amp simulator with the instrument.
- 2) *Reverb Level*: Set the desired amount of reverb to taste. This control is only available for the first two amp models (see item #3, below), since the classic tube amp has no built-in reverb.
- 3) *Amp Type*: Choose between three possible amp models: Steel Guitar Amp, Modern Tube Amp, or Classic Tube Amp.
- 4) *Bright/Full Selector*: Set to “Bright” to add extra treble to the active amp model.
- 5) *Stereo/Mono Mic Selection*: Changes the available option in item #6 (see below) between pairs of stereo mics and single mono mics.
- 6) *Microphone Selector*: Choose the active microphone(s). Stereo options include a close pair of dynamic mics, an ambient pair of condenser mics, and two mixed configurations: One with a room mic on the left channel and a close mic on the right, the other being the opposite (Room mic right, close mic left).
- 7) *Three-Band Equalizer*: Set the bass, middle and treble output of the instrument to taste. Please note that extreme changes to these settings can result in significant volume changes that may result in clipping. Adjust the master volume (shown above the treble knob) to compensate.

### 4.4) Saving Your Changes

To save any changes you've made to the instrument, simply open the save dialog from within Kontakt and save the instrument under a new filename. You'll be able to load the instrument with your preferred configuration at a later time. If you are hosting Kontakt within your DAW, saving your project will save the changes made, but the original instrument will remain unchanged unless you use the save dialog.

## 5) Where to Get More Help

At Wavelore, we consider it our duty to ensure that you have the best possible experience with our products and support. If you've read this far, you probably already know that there is nothing simple about this instrument...well, there is one simple thing:

**If you're having trouble, e-mail us and we'll help you!! We're at:**

[support@wavelore.com](mailto:support@wavelore.com)

There is also a support section on our website which will contain updates to the product as they become available, and currently contains links to a number of useful resources.

## Appendix A: The Pedal Steel Guitar Neck

For a handy reference when learning new positions or for deciding which positions are best while sequencing certain passages, consult the following diagram of the pedal steel guitar neck:

STRING#	PITCH BEND RANGE (ST)	Position/Un-Bent Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		OPEN	1	2	3	4	5	6	7	8	9	10	11	12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
1	+2*/-0	F#4	G	G#	A	A#	B	C	C#	D	D#	E	F	F#																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

Primary strings are shown in black, secondary strings in red. Note also the "pitch bend range" column, which gives each string's bending range.

Here are these notes (1<sup>st</sup> twelve frets of each string) as shown on the octave-treble clef:

The image displays ten staves of musical notation, each representing a string. Each staff begins with an octave-treble clef (a treble clef with an '8' below it). The notes are written as follows:

- String 1:** F#1, G1, A1, B1, C2, D2, E2, F#2, G2, A2, B2, C3.
- String 2:** F#1, G1, A1, B1, C2, D2, E2, F#2, G2, A2, B2, C3.
- String 3:** F#1, G1, A1, B1, C2, D2, E2, F#2, G2, A2, B2, C3.
- String 4:** F#1, G1, A1, B1, C2, D2, E2, F#2, G2, A2, B2, C3.
- String 5:** F#1, G1, A1, B1, C2, D2, E2, F#2, G2, A2, B2, C3.
- String 6:** F#1, G1, A1, B1, C2, D2, E2, F#2, G2, A2, B2, C3.
- String 7:** F#1, G1, A1, B1, C2, D2, E2, F#2, G2, A2, B2, C3.
- String 8:** F#1, G1, A1, B1, C2, D2, E2, F#2, G2, A2, B2, C3.
- String 9:** F#1, G1, A1, B1, C2, D2, E2, F#2, G2, A2, B2, C3.
- String 10:** F#1, G1, A1, B1, C2, D2, E2, F#2, G2, A2, B2, C3.

Each staff contains 12 notes, representing the first twelve frets of the string. The notes are written in a sequence that corresponds to the fret numbers 1 through 12.

## **Appendix B: Credits**

The following people played important roles in the creation of this software instrument:

Mark Belbin - Performance, audio editing, instrument design, documentation.

Steven Miller - Audio engineering, quality assurance.

Jim Van Buskirk – Audio engineering, voice recordings

Anna Houston – Vocal samples performance.

David Harvey - Photography, design concept, design. [dkch@telus.blackberry.net](mailto:dkch@telus.blackberry.net)

Luke Merdsoy, Mertz Creative Communications Inc. - Wavelore logos and visual concept. [www.mertz.ca](http://www.mertz.ca)

Adam Foran - Performance tutorials

Chris Ledrew – Consultation. [www.chrisledrew.com](http://www.chrisledrew.com)

Don Cuff - Consultation, instrument rental.

*Last Updated: June 8, 2009*