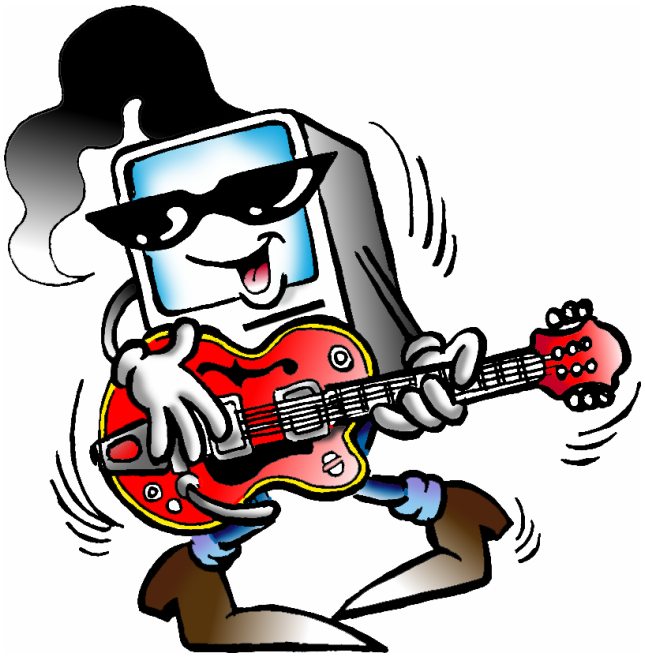
MusicLAB
MUSIC SOFTWARE DEVELOPERS

MusicLab RealGuitar Version 2



User's Manual

Table of Contents

About the program

RealGuitar is a sample-based specialized virtual instrument with an innovative approach to guitar sound modeling and guitar part performing on keyboard. It can be used as VSTi with any host application supporting VST 2.0, DXi and as a standalone version.

The true power of RealGuitar lies in 3 brand new technologies incorporated in this innovative guitar performance tool:

1. New multi-channel sound layering technology, incorporating a custom library of specially recorded samples taken from every fret of all 6 strings of a real guitar.
2. The unique Floating Fret Position technology, which imitates change of fret position of a guitarist's hand on the neck. This gives the possibility of playing on up to 104 guitar frets using just 43 keys of a standard keyboard!
3. Our original Guitar Touch technology letting you easily imitate basic guitar techniques (tremolo, strumming, plucking, sliding, bending, muting, etc.), using standard MIDI keyboard and MIDI controllers, such as Pitch Bender, Modulation Wheel, Sustain Pedal, After Touch.

These technologies allow to closely emulate live guitar sound and techniques, letting you perform guitar parts with a whole new level of realistic expression.

Installing RealGuitar 2

Installing RealGuitar PC version

Double-click “RealGuitar2 Setup.exe” file and follow the on-screen instructions.

At the end of installation process RealGuitar Bank Manager will open and extract sound bank optimized for particular sample rate which allows using Quick Load mode realized in RealGuitar 2. You can find the Quick Load switch button in RealGuitar Setup window.

In RealGuitar Bank Manager dialog check the appropriate sample rate box you normally use in your audio work, and click ‘Select’ to select the destination directory for bank installation. Click Apply button to start sound bank extracting. Close Bank Manager when sound bank installation is completed. Note, that higher sample rate value will install larger target sound bank.

Important! If Bank Manager window doesn’t open automatically during installation process you have to run it manually from Start menu->Program Files->MusicLab->RealGuitar 2, or alternatively go to RealGuitar 2 installation folder (by default: C:\Program Files\MusicLab\RealGuitar2) and double click StgMan.exe file.

Note, that if you want to change sample rate for your audio work you have to run RealGuitar Bank Manager and create sound bank optimized for the new sample rate value.

In case your VSTplugins folder is not registered correctly RealGuitar installer will not automatically install RealGuitar2.dll there. So to let your VST host ‘find’ RealGuitar you have to manually copy RealGuitar2.dll from RealGuitar installation folder to your VSTplugins directory.

Launching RealGuitar

Launching RealGuitar as a VST instrument:

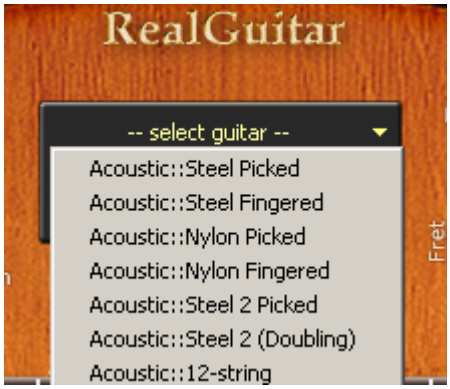
1. Open the VST Instruments window
2. Click the “No Instruments” label and select RealGuitar on the pop-up menu
3. Open the RealGuitar window by clicking the Edit button in the slot for RealGuitar.
4. In the VST host application, select RealGuitar as the output for a MIDI track.

Launching RealGuitar as a standalone version:

In Start Menu go to Programs/MusicLab/RealGuitar 2 folder and select RealGuitar icon.

Loading Guitar

Click the black screen combo box in the upper part of RealGuitar window to select the guitar patch from the list of available ones installed to RealGuitar Sound Bank.



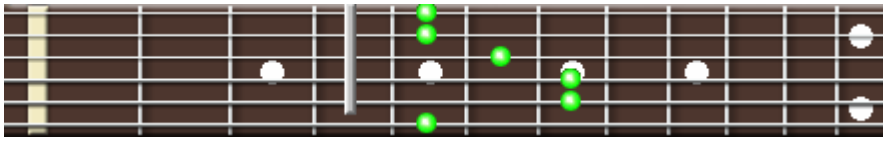
RealGuitar includes sample set featuring 8 Acoustic guitar patches:

1. Steel Picked
2. Steel Fingered
3. Nylon Picked
4. Nylon Fingered
5. Steel 2 Picked
6. Steel 2 (Doubling)
7. 12-string
8. Steel Stereo (290MB)

Virtual Fretboard

In RealGuitar we have realized the **Floating Fret Position** principle, which imitates change of fret position of a guitarist's hand on the neck. This gives a unique possibility of playing on up to 104 guitar frets using just 43 keys of a standard keyboard! This, along with the fact that we have sampled 19 frets of the first string and 16 frets of the others (2-6 strings) for all of our guitar patches, allows you to emulate a guitar performance with maximum sonic accuracy.

In the center of the RealGuitar window we provided virtual **Fretboard**, one of the most important elements of the plug-in, which allows to visualize and control the Floating Fret Position while playing the guitar part.

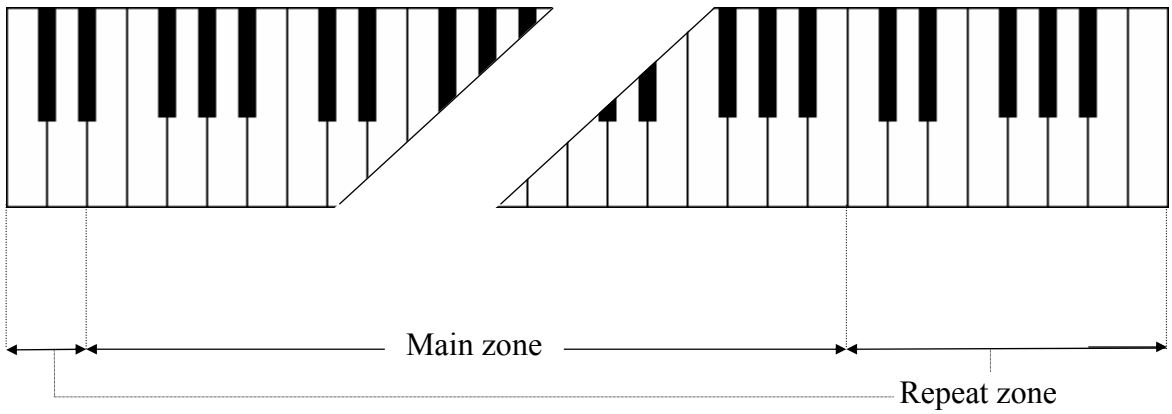


The Fretboard has a number of functions:

1. **Preview** - allows to preview the loaded guitar patch by simply clicking on a string.
2. **Display notes** - shows the performed notes in accordance with visual representation on the fretboard and real sounding (you see the notes displayed on string and fret of exactly the same samples, which sound in a given moment).
3. **Fret Position Auto** control (the **Auto** button is pressed) - realizes automatical fret position change in Solo and Harmony modes, which moves the ‘Capo’ strip along the Fretboard depending on the sequence of performed notes.
4. **Fret Position Manual** control (the **Auto** button is unpressed) - allows to manually change fret position by right clicking on any fret. A ‘Capo’ strip will appear on the fretboard, which will prevent to play samples from any fret lower on the neck than the ‘Capo’ position (except for the 6th string).

User Keyboard Map

When connected to RealGuitar MIDI input the external keyboard is divided into 3 zones: **Main zone** (E1 - B4), left (C1 - D#1) and right (C5 - C6) **Repeat zones**.



Main zone serves for playing melodic parts (Solo and Harmony modes) and entering chords (Chords, Bass & Chord, Bass & Pick modes).

Any key of the Repeat zone repeats notes and chords played in the Main zone.

This way of keyboard mapping allows you to play guitar parts with 2 hands - you play various notes or chords in the Main zone with one hand and repeat them by pressing the pre-mapped keys in Repeat zone with the other hand without changing its position. This is very important for careful preserving rhythm pattern accuracy and groove feel.

Using such a performance technique you can easily imitate the most characteristic details of guitar performance, such as tremolo, strumming, bass and strum, picking on your keyboard making them sound naturally as if they were played on real guitar.

Repeat Key zone functions:

- In Solo, Harmony, Chords, and Bass & Chord modes you can repeat notes and chords played in the Main zone (any white key repeats the full sound, while black key repeats the muted sound). Also with the keys of Repeat zone you can alternate up/down/muted strokes to produce strumming and tremolo techniques (C, E, G – trigger up stroke; D, F, A - down stroke; C#, F#, A# - muted up stroke; D#, G# - muted down stroke) with both single notes and intervals/chords
- In Bass & Chord mode you can trigger Bass I (Root) and Bass II (alternative bass) notes as well as upper string strums
- In Bass& Pick mode Repeat keys trigger individual voices (strings) of a chord taken in the Main zone.

Performance Modes

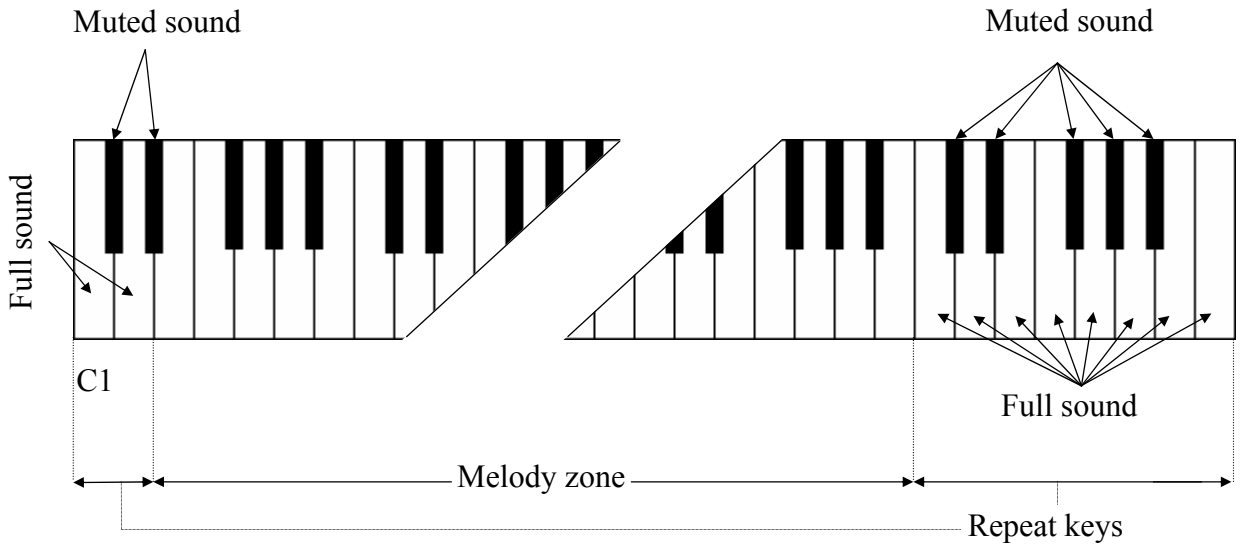
RealGuitar includes 5 separate guitar performance modes, each of which is a separate performance tool meant for imitating special guitar performance style:

1. **Solo** - polyphonic mode for performing melodic parts
2. **Harmony** - monophonic mode for performing parallel interval melodic parts
3. **Chords** - chord mode for performing accompaniment strumming parts
4. **Bass & Chord** - chord mode for performing bass and strum parts
5. **Bass &Pick** - chord mode for performing picking/plucking parts

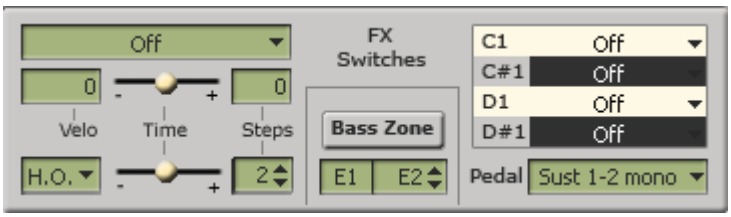
The modes are selected by clicking on a respective button under the Virtual Fretboard view.

Solo Mode

In this mode the Main zone (E1 - B4) of the keyboard works as a normal polyphonic keyboard, while both Repeat Key zones (left (C1 - D#1) and right (C5 - C6)) allow you to repeat notes taken on the Main zone (white keys repeat full sound; black keys repeat muted sound of the same notes).



Controls



RealGuitar Solo mode provides you with multiple permanent and switchable controls allowing to easily add various specific guitar articulations and effects to your performance.

Permanent Effects

H.O. - Hammer-on with automatic Pull-off on key release, assign the affected note range in Steps combo box

Slide - automatic slide (up/down) between two legato played notes, adjust speed with Time slider, and assign the affected note range in Steps combo box

Key Switch and Pedal Switch Effects

Any of 4 keys of Left Repeat zone (C1-D#1) as well as Sustain Pedal can be also used to temporarily switch the Main zone to new sound/articulation previously chosen in the respective combo box. Pressing the appropriate key or the sustain pedal switches the Effect on, while releasing the key/pedal reverts Main zone to the original sound/articulation. You can use various Key/Pedal switch FX's at a time.

Bass Zone

Bass zone splits Main Zone into two parts that allows using individual performance techniques for both parts.

Press **Bass zone** button and assign the right boundary key (E2 by default) – now all upper notes will be out of the Bass zone.

Bass zone notes have stronger velocity curve and are not affected by:

- **Mute keys** - that allows performing mutes/repetitions of higher range notes only without cutting bass notes
- **Velocity switch FX** - that allows to apply velocity switches only to higher range notes while playing bass notes in a normal way
- **Tremolo FX** - that lets you play normal accompaniment part within Bass zone while performing tremolo solo part in the higher range

List of Articulations/Effects available in Solo mode only

H.O. - Hammer-on with automatic Pull-off on key release (Permanent FX, Key/Pedal switch FX; assign note range (steps) in Permanent FX section).

Slide - automatic slide (up/down) between two legato played notes (Permanent FX, Key/Pedal switch FX; assign speed and note range in Permanent FX section).

Tremolo - automatic note(s) repetition on key release to easily perform tremolo technique (Key/Pedal switch FX).

Sustain 1-2 Mono - sustains all notes except for the notes played at a semi-tone or tone interval (step-wise melodic run): the next note 1-2 step apart mutes the previous one as if played on the same guitar string, while the thirds and larger intervals are being sustained (Key/Pedal switch FX).

Velo Mute - notes played with lower velocity values trigger muted sound (Velocity/Key/Pedal switch FX; assign velocity threshold in Velocity switch FX section).

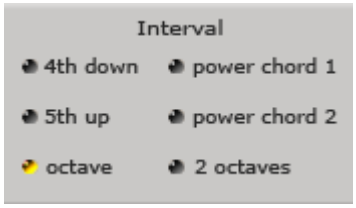
Mono Bend - applies pitch bending only to the lowest of simultaneously played notes allowing to emulate guitar specific single-string bending techniques: Unison Bend, Bend/Release combined with sustained note(s), etc… (Pitch Bender/Modulation Wheel controllers).

Hold button in Solo mode

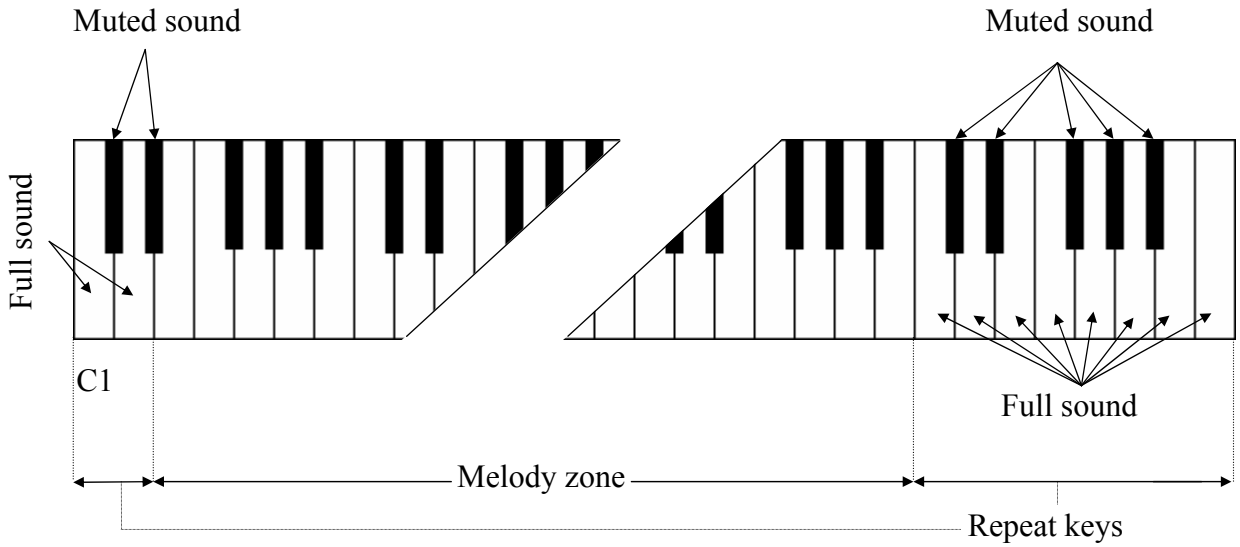
In Solo mode the Hold button works differently from the other modes, where it actually substitutes the Sustain Pedal. In Solo mode when Hold button is on, any pressed and held key can be used for sustaining the following notes.

Harmony Mode

In this monophonic mode any key of the Main zone triggers an interval/chord based on the played note, previously chosen from following options: 4th down, 5th up, Octave (up), Power Chord 1 (5th + 4th up), Power Chord 2 (4th + 5th up), 2 octaves (up).



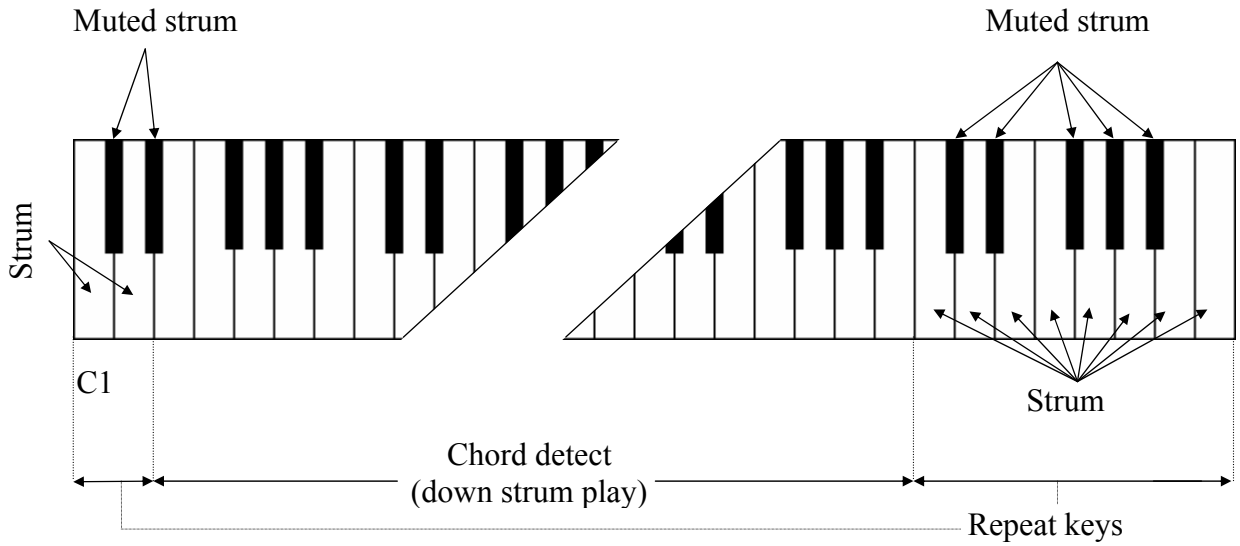
The keys of both Repeat zones (left and right) allow you to repeat the interval taken in the Main zone (white keys repeat full sound, while black keys repeat muted sound of the same notes).



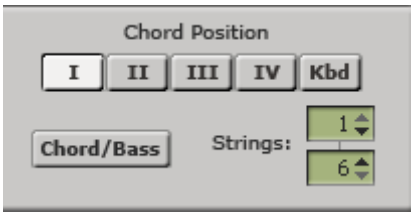
Chords Mode

In this mode the RealGuitar detects the chord played in the Main zone of the keyboard (the root note and the name of the chord appear on the black info screen), then the program builds guitar version of the chord considering the selected Chord position and current position of a 'Capo' strip on the Fretboard, and finally plays it using down strum technique.

Any key of Repeat zone repeats the whole chord played in the Main zone: black keys play muted strums, while white keys play strums when the chord is still held and muted strums when the keys in the Main zone are released. Up and down strums are triggered by neighboring keys for both white and black keys of the Repeat zones, like C1 - up strum, D1 - down strum, C6 – down strum, B5 - up strum and so on).



Controls



Chord position - selects the melodic position range for the built chords.

I - the highest note is between E3 and G#3

II - the highest note is between G3 and B3

III - the highest note is between A#3 and D4

IV - the highest note is between C#4 and F4

KBD - the melodic position range of the built chord depends on the octave position of the chord taken in the Main zone of the keyboard (with borders between E and E of the next octave).

Strings - allows disabling upper and/or lower strings in chords, so you can pare your strums down to any five, four, three, two or just a single string by selecting the first available string# in upper/lower combo boxes (e.g. selecting 2/5 will disable the 1st and 6th strings in the strums).

Chord/Bass - switches on the X/Y chord detect mode letting you construct major/minor triad chords with any desirable note in the Bass, e.g. A/G (Amajor chord over G bass) for G-A-C#-E

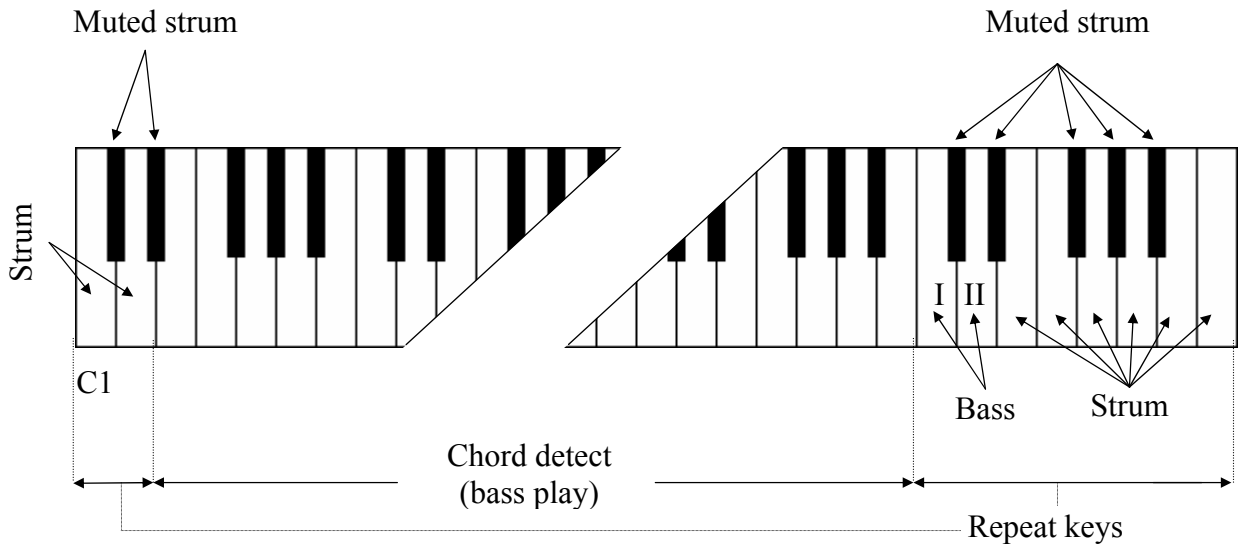
voicing, D/F# (Dmajor chord inversion with F# bass note) for F#-A-D voicing, F/G (Fmajor chord over G bass) for G-A-C-F voicing, etc…

Bass & Chord Mode

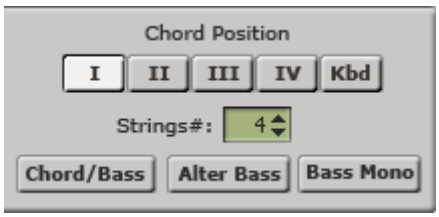
In this mode the program detects the chord taken in the Main zone of the keyboard, builds its guitar version and plays its Root note (Bass I) only. The Repeat zone keys now have following functions:

- C5 triggers Bass I (Root note),
- D5 triggers Bass II (Alternative bass, usually the 5th degree of the chord).

The rest of the keys in both right and left Repeat zones trigger up and down strums of the upper strings of the chord, black keys perform muted strums of the same strings).



Controls



Chord position - selects the melodic position range for the built chords.

Strings# - specifies the number of sounding strings in chords triggered by Repeat zone keys.

Chord/Bass - switches on the X/Y chord detect mode letting you construct major/minor triad chords with any desirable note in the Bass.

Alter Bass - automatically alternates between Bass I and Bass II when the same chord is taken in the Main zone.

Bass Mono - mutes Bass I note when the next Bass II is played.

Bass & Pick Mode

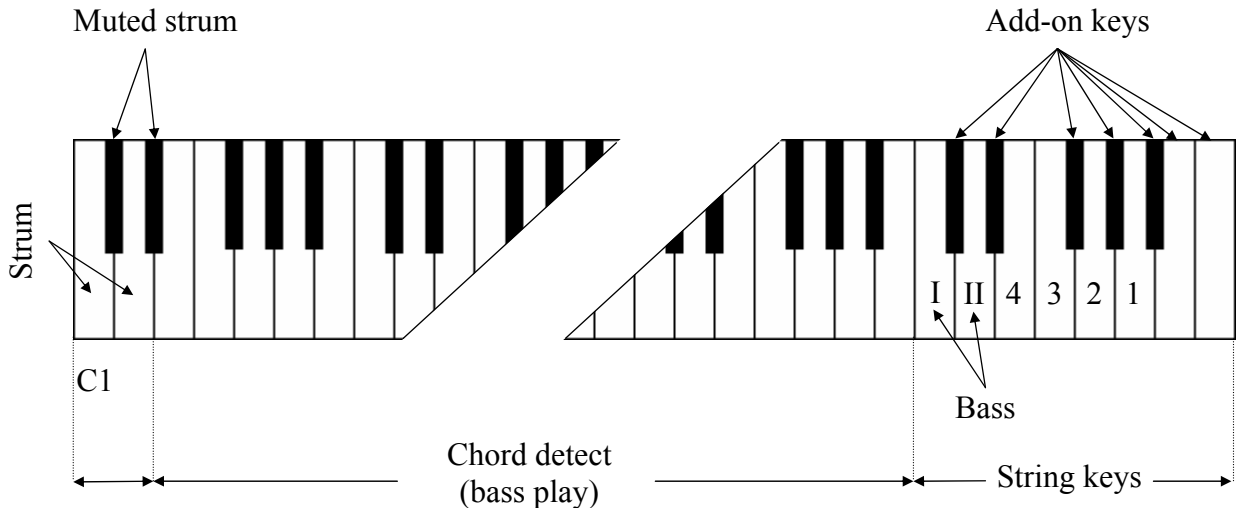
In this mode the program identifies the chord taken in the Main zone, builds its guitar version and plays only its Root note (Bass I).

The Repeat zone keys trigger each voice of the chord separately, just as if you'd play it string-by-string on real guitar in the following way:

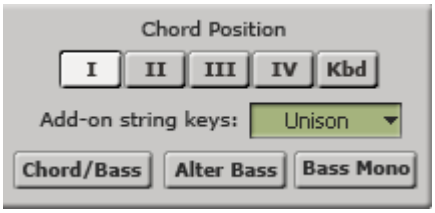
- C5 triggers Bass I (Root note)
- D5 triggers Bass II (alternative bass)
- E5 triggers 4th string
- F5 triggers 3rd string
- G5 triggers 2nd string
- A5 triggers 1st string

The other keys function as chosen in the **Add-on string keys** combo box.

The keys of the left Repeat zone strum 4 upper voices of the chord (black keys perform muted strums).



Controls



Chord position - selects the melodic position range for the built chords.

Add-on string keys:

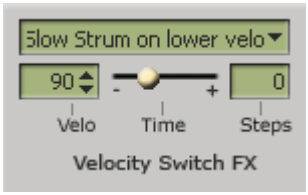
- **Unison** - doubles some strings for making performance easier: C#5 - Bass II, D# 5 - 4th string, F#5 - 2nd string, G#5, A#5, B5, C6 - 1st string.
- **Chromatic** - sets the Add-on string keys to play notes one semi-tone down from their respective string voices: C#5 - a semi-tone down from Bass II, D#5 – a semi-tone down from 4th string, F#5 - a semi-tone down from 2nd string, G#5 - a semi-tone down from 1st string; however A#5 - C6 add a semi-tone each to the sound of 1st string.

Chord/Bass – switches on the X/Y chord detect mode letting you construct major/minor triad chords with any desirable note in the Bass.

Alter Bass - automatically alternates between Bass I and Bass II when the same chord is taken in the Main zone.

Bass Mono - mutes Bass I note when the next Bass II is played.

Velocity Switch Effects



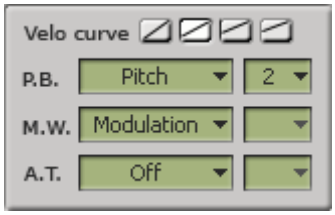
There is a number of guitar effects automatically triggered by note velocity values employed in RealGuitar:

- **Slow Strum on Higher Velo** - in all chordal modes you can set a velocity value, after which the program will perform slow strum when playing a chord in the Main zone
- **Slow Strum on Lower Velo** - in the same way you can set a velocity value below which the program will perform slow strum when playing a chord in the Main zone
- **Slide up** - slides up to taken note(s)
- **Slide down** - slides down from taken note(s)
- **Bend** - bends to the taken note(s) (Solo mode)
- **Reverse Bend** - pre-bend and release to taken note(s) (Solo mode)
- **VeloMute** - notes played with lower velocity values trigger muted sound (Solo mode)

You can set the following independent parameters for each effect:

- **Velocity** (threshold)
- **Time** (effect duration)
- **Steps** (range in semi-tones)

MIDI Controllers pane



Velo curve – select the output velocity curve for your performance by pressing one of 4 buttons

You can assign various guitar effects to standard MIDI controllers:

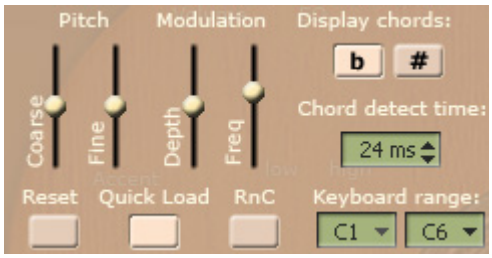
- **P.B** (Pitch Bender) - Pitch, Slide, MonoBend (Solo mode)
- **M.W.** (Modulation Wheel) - Pitch, Slide, Modulation, MonoBend (Solo mode)
- **A.T.** (After Touch) - Pitch, Modulation

In the combo box to the right adjust the range of the effect (in semi-tones).

Modulation envelope is adjusted in Setup window.

Main Controls

Setup



Pitch - adjust the master pitch:

- Coarse (+/-12 semitones)
- Fine (+/-100 cents)

Modulation - adjust the modulation envelope affected by Modulation controller (MIDI CC):

- Depth (0-100%)
- Freq (0.2 – 8.0 Hz)

Chord Detect time (0-50ms) -set the suitable delay for detecting chords taken in chord modes

Keyboard range (C1-C3/C4/C5/C6) - set the range of your keyboard

Display chords (#/b) - select sharps or flats for the chord names

Reset - resets all modified parameters in all modes to their factory values

Quick Load - with Quick Load button pressed samples are not fully loaded to RealGuitar that allows to instantly load guitar patches and drastically save RAM.

RnC button - switches on a special mode allowing the direct access for Rhythm'n'Chords MFX plug-in to RealGuitar multi-sample architecture (available only for Cakewalk/Sonar users).

Master

Volume (+/-10db) – adjust output volume

EQ - adjust internal equalizer parameters:

- High (+/- 10db)
- Low (+/- 10db)

Mixer

2 mixers allow to adjust the volume of various noise effects and additional sounds that form the modeled guitar sound.

Noises:

- Fret - volume and on/off of a fret noise
- Release - volume and on/off of a release noise
- Pick/Body - volume and on/off of additional pick and guitar body noises

Sounds:

- Muted – volume of muted sound triggered by Repeat zone keys

- Slow Strum – volume of Slow Strum sound (Velocity switch FX in Chordal modes)
- Switch FX – volume of additional sounds (Key/Pedal switch FX in Solo mode)

Sound Effects

1. **Tremolo** - adjust stereo tremolo parameters:

- Depth (0-10%)
- Freq (0.2-12 Hz)

2. **Chorus** – adjust stereo chorus parameters:

- Level (0-100)
- Freq 1 (0.1-6.0 Hz)
- Depth 1 (0-100%)
- Depth 2 (0-15)

Common

Hold (on/off) - actually substitutes the Sustain Pedal in all modes, except for the Solo.

In Solo mode when Hold button is on, any pressed and held key in the Main zone can be used for sustaining the following notes.

Strum time (20-60ms) - adjusts the time between the notes played in the strumming chords (Harmony, Chords, and Bass & Chord modes) as well as delay for more than one note played simultaneously in Solo and Bass & Pick modes.

Release time (50-200%) - adjusts how long the note sounds after releasing the key (MIDI note end).

Auto (on/off) - toggles between Auto and Manual mode of Floating Fret Position. Auto works only in melodic modes (Solo, Harmony). Manual mode allows to change the fret position by right-clicking on the Fretboard.

Accent (0-127) - adjusts the velocity threshold between soft and hard performance dynamics

Alter samples (1-5) - provides 5 positions of randomly alternating samples while performing repetitive notes (position 1 provides up to 3 different samples, while position 5 provides up to 10 ones).

Direct - this button turns RealGuitar into plain guitar sampler, allowing you to play samples directly from keyboard with all intellectual features turned off, having previously selected the respective MIDI channel in the track.

Pattern - switches on a Pattern playing mode. Note, with Pattern button pressed you will not hear any sound while playing in the Main zone. Only Repeat zone keys/notes can produce sound in pattern mode.

PM - opens **Pattern Manager** window (available only in RealGuitar 2L version).

Chord Map

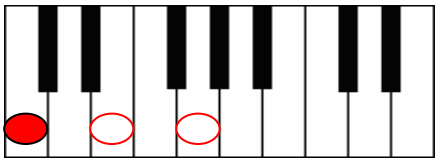
RealGuitar can detect 26 chord types.

The following chart lists the available chord types and the degrees unnecessary for chord detection that you can omit while entering chords.

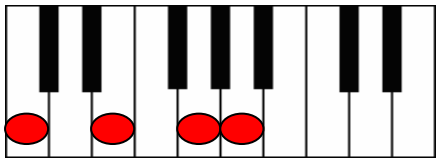
Chord type	Can be omitted
C	V, III
C6	-
Cadd9	-
Csus4	-
Cmaj7	V, V+III
Cmaj7(b5)	-
Cmaj7(#5)	-
Cm	V
Cm6	-
Cm(add9)	-
Cm7	V
Cm(maj7)	V
Cm7(b5)	III,
Cm9	V
C7	V, III+V
C7sus4	-
C7(b5)	-
C7(#5)	-
C9	V
C9sus4	V
C7(b9)	V
C7(#9)	V
C9(b5)	-
C7(add13)	V
Cdim7	III, VII, III+VII
Caug	-

All chords except for ma6 and min6 are detected in all inversions and note combinations.

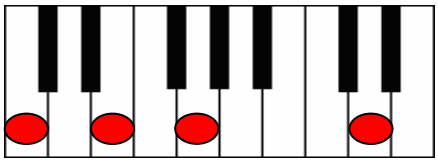
C



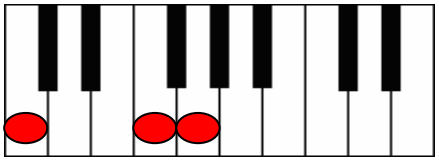
C6



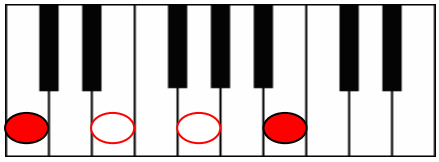
Cadd9



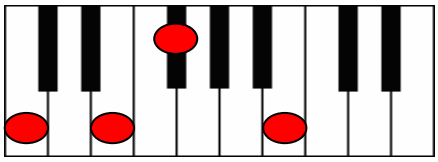
Csus4



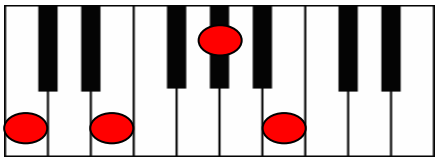
Cmaj7



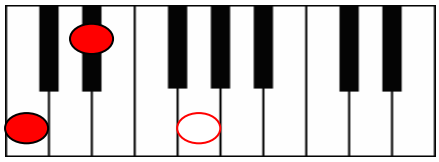
Cmaj7(b5)



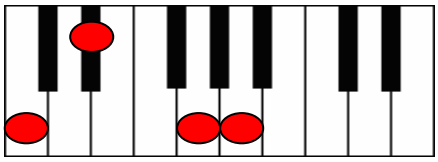
Cmaj7(#5)



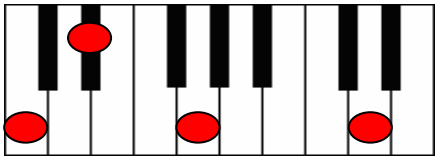
Cm



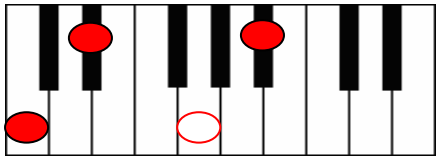
Cm6



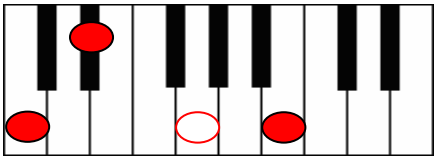
Cm(add9)



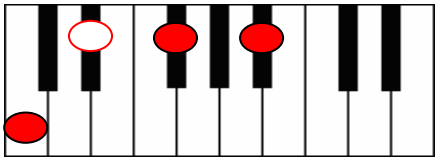
Cm7



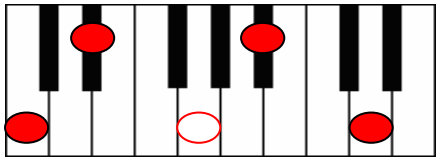
Cm(maj7)



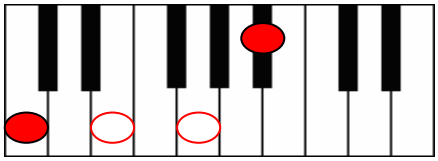
Cm7(b5)



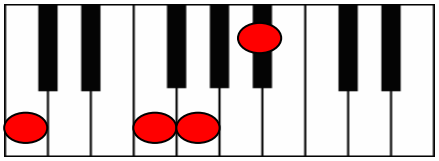
Cm9



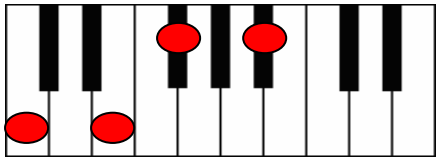
C7



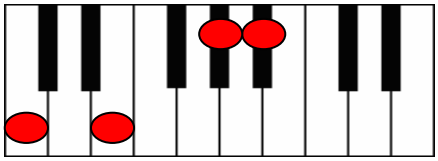
C7sus4



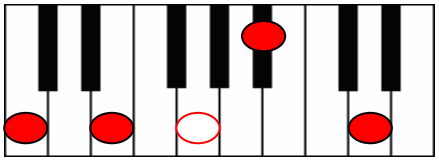
C7(b5)



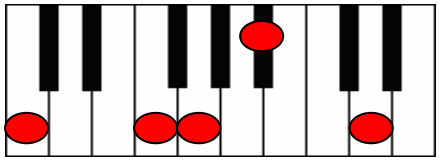
C7(#5)



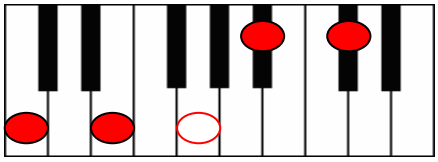
C9



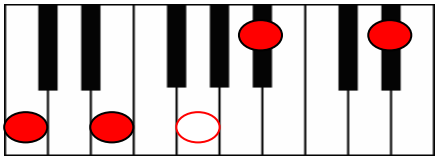
C9sus4



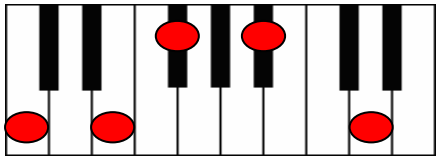
C7(b9)



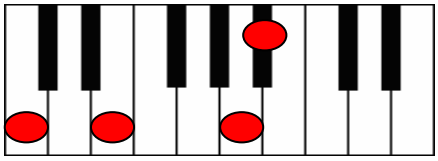
C7(#9)



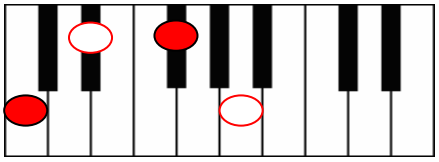
C9(b5)



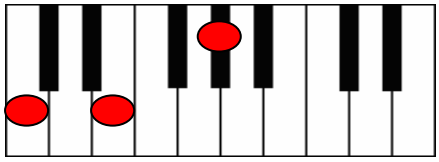
C7(add13)



Cdim7

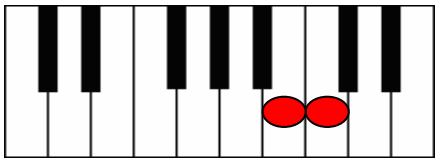


Caug

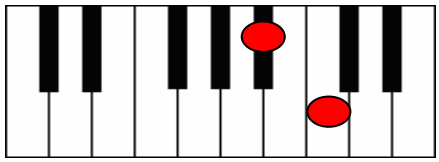


1-note chord detect system also included:

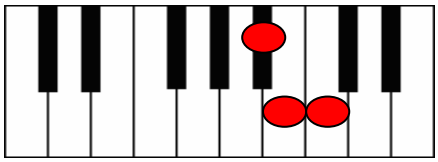
C7



Cm



Cm7



- obligatory

- can be omitted

Using RG Rhythm Pattern Library and Pattern Manager (available only in RealGuitar 2L version)

RG Rhythm Pattern Library is a unique collection of 1250 guitar accompaniment rhythm patterns classified by various musical categories, such as meter, music style, guitar technique, rhythmic feel, tempo range.

Using the prerecorded rhythm patterns of RG Pattern Library you can quickly create professionally sounding guitar accompaniment tracks for your songs. Then all you have to do is to choose the appropriate pattern(s) in RealGuitar Pattern Manager, copy them to your host sequencer's MIDI track, start sequencer and play chord changes on a MIDI keyboard, or alternatively enter chords to a MIDI track using sequencer's editor.

To better understand how you can use rhythm patterns with RealGuitar check pattern demo MIDI files included with the installation folder (By default: C:/Program Files/MusicLab/RealGuitar2/RG Pattern Demos).

Pattern Manager

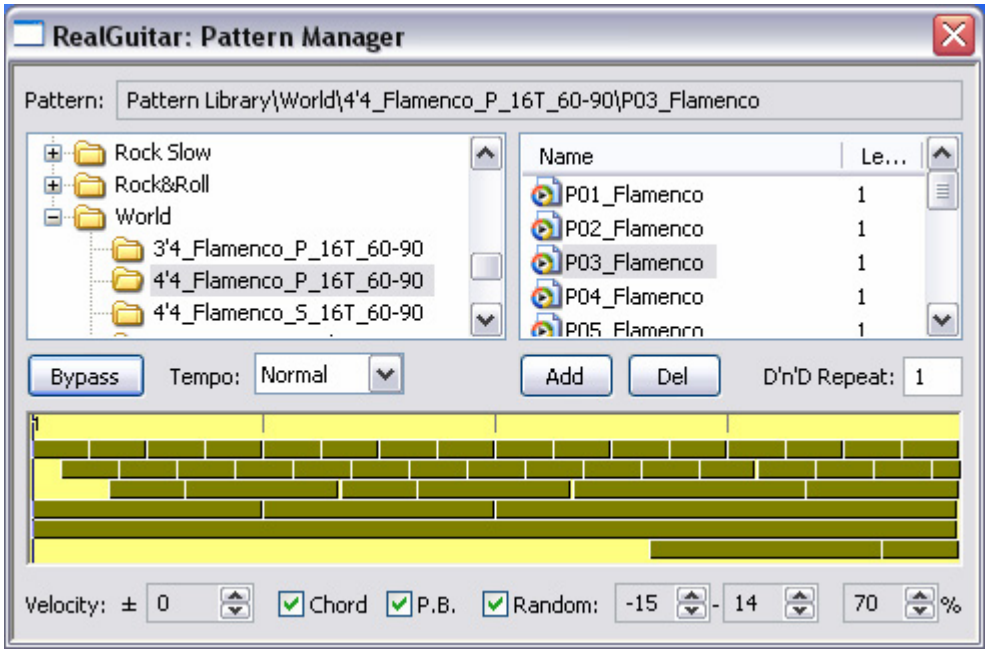
RealGuitar 2L is equipped with powerful multi-functional built-in Pattern Manager allowing to easily audition rhythm patterns of RG Pattern Library, quickly find the ones matching your musical needs, as well as drag'n'drop/export the chosen patterns directly to the host's MIDI track to use with your song.

Pattern Manager Window

Launch RealGuitar, load guitar patch, and select any of the chordal modes (Chord, Bass&Chord, or Bass&Pick) by pressing the appropriate mode button. Note, that you can use rhythm patterns with all performance modes, the mode selection depends on what harmonic part you want to play with the rhythm patterns:

- Select Chords, Bass&Chord, Bass&Pick modes for automatically constructed guitar chords
- Select Harmony mode to perform intervals with strumming patterns
- Select Solo mode to perform your own chords with strumming or picking patterns

Click **PM** button to open Pattern Manager window. Press **Pattern** button to activate RealGuitar pattern playing mode:



Finding Pattern in RG Pattern Library

Rhythm patterns are organized within Pattern Library tree view by Category folders and Style subfolders including sets of MIDI patterns. The name of each folder/subfolder contains short musical information helping you to quickly find patterns matching your song.

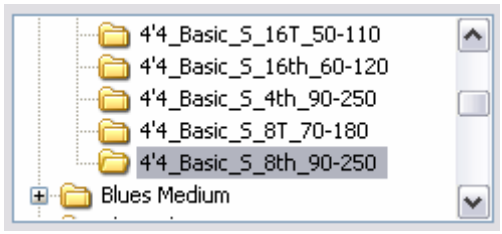
For instance:

Category name - Basic Strumming:

- includes a number of guitar strumming Styles

Style name - 4'4_Basic_S_8th_90-250:

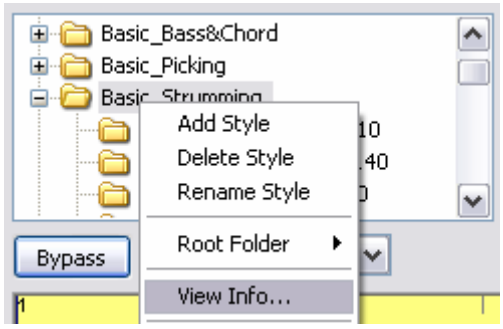
- contains Basic style rhythm patterns in 4'4 meter (_4'4_Basic_) featuring strumming technique (_S_) and 8th note rhythm feel (_8th_), usable within the 90-250 bpm tempo range (_90-250).



Library Tree view. Style folder

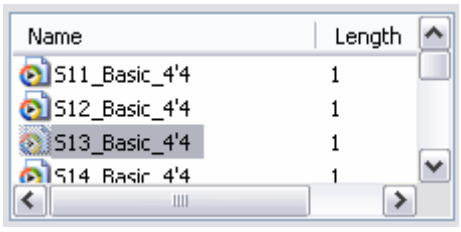
To read the details about RG Pattern library right-click on Pattern Library root folder, and select View Info item in pop up menu.

To read the additional information about Styles included with the Category right-click on Category folder and select View Info item in pop up menu:



Selecting Category and Style

To find the appropriate pattern set in Pattern Library tree view choose Category folder and click '+' below the folder to get access to the included Styles. Click the appropriate Style folder to load the available pattern set to Pattern List pane.



Pattern List

All patterns of RG Pattern Library have unique names containing brief information as well, so you can easily identify them when using outside the Style folder.

For instance:

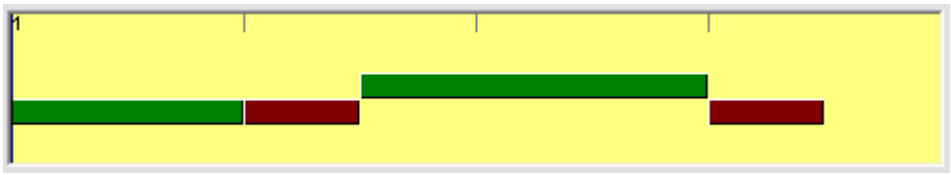
Pattern name - S13_Basic_4'4

- indicates strumming technique used (S), pattern number (13_), and Style name (Basic_4'4)

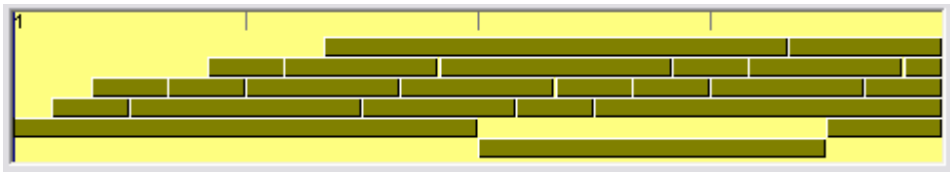
Selecting pattern

Click on pattern name in the list to select it - pattern rhythmic contents will appear in Pattern view and it is ready to play.

Pattern view graphically presents measures/beats as well as guitar 'Strokes' used in the current rhythm pattern. Differently colored 'Piano Roll' type bars and their vertical position allow to easily identify the stroke types: green bars present Full strums, red ones present Muted strums, blue ones present Slow strums, light green bars present Top strums, brown ones present individual 'string' picks (up strums bars of the same stroke type are in higher position than down strums):



Strumming Pattern



Picking Pattern

Auditioning Pattern

Host sequencer in stop mode (or RealGuitar in standalone run)

Press chord on your MIDI keyboard to trigger pattern playback that will be visualized by position cursor moving along the Pattern view. Pattern will perform your chord(s) until you release the keys. Pattern stops when you release the keys and starts from the beginning when you press chord again. Pattern will continue playing if you change chords legato way (if at least one key is constantly pressed)

Press Hold button or Sustain Pedal to turn pattern playback to 'Latch' mode - in that case pattern will continue playing the last chord even if you release all chord keys.

Host sequencer in playback mode

Start your host sequencer. Now pattern will 'silently' follow host's playback until you press chord on a MIDI keyboard (or alternatively insert chord changes to MIDI track). Releasing chord keys mutes the performance. Pressing chord again will continue pattern playing.

Press Hold button or Sustain Pedal to turn pattern playback to 'Latch' mode - in that case pattern will continue playing the last chord even if you release all chord keys.

Note, that using sequencer in playback mode allows you to easily choose pattern(s) for your song by previously entering chords to a MIDI track and selecting patterns in Pattern Manager 'on the fly' along with the song.

Controlling pattern playback

Dynamics control

Pattern Manager has powerful real time velocity control options allowing to drastically change pattern performance:

‘+’/’-‘ - add/reduce velocity

Chord - check to apply velocity of trigger chord to pattern dynamics (+/- velocity)

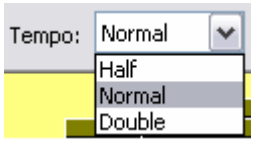
P.B. - check to assign +/- velocity to Pitch Bender controller for continuous dynamics changes

Random (velocity):

- **on/off** – check to switch randomization on
- **+velo** - maximum deviation range
- **-velo** - minimum deviation range
- **strength** (%) - sensitivity of randomization, at 100% all pattern notes will be randomized

Tempo Control

Pattern Manager takes tempo value from the host sequencer, but you can make it twice lower or higher by simply selecting the appropriate item in Tempo combo box:



Bypass Mode

In case you use host's MIDI track for playing rhythm pattern to RealGuitar you must press Bypass button to disable pattern loaded to Pattern Manager, or else both will play simultaneously. In Bypass mode Pattern view is grayed out, showing that pattern will not play.

Transferring Pattern to host's MIDI Track

If you want to use more than one rhythm pattern for your song you have to copy the chosen patterns from Pattern Manager to MIDI track of your host sequencer. There are two ways to do that:

Drag'n'Drop Pattern

The simplest way to copy pattern to MIDI track is to drag'n'drop the selected pattern directly from Pattern view. To do this click on Pattern view (or pattern name in Pattern List pane) and drag the pattern to the needed measure of a MIDI track.

You can automatically multiply pattern by the appropriate number of cycles if you previously set the desired number of repetitions in D’n’D Repeat box:

Note. Velo+ and Random parameters will be also applied to the exported pattern (MIDI file).

Import Pattern to MIDI Track

If your host doesn't support drag'n'drop MIDI data you can previously drag out pattern from Pattern view directly to Windows – it will be exported as a Standard MIDI file, and then import it to your sequencer.

Alternatively you can import pattern right from RealGuitar installation folder (by default: C:/Program Files/MusicLab/RealGuitar2/Loops/Pattern Library), but in that case you get single original pattern and you have to multiply it manually in a MIDI track of your host.

Using Rhythm Patterns in a MIDI Track

When the appropriate rhythm patterns for your song parts are successfully found in Pattern Manager and copied to the host's MIDI track you must disable Pattern Manager by pressing Bypass button and work with pattern MIDI track only (or else pattern loaded to Pattern Manager will play simultaneously with pattern from the track). Check also that Pattern ('Silent' mode) button is pressed.

There are two ways of creating guitar part with the help of rhythm patterns playing from MIDI track to RealGuitar: real-time and non real-time methods.

1. Non real-time method

- Create MIDI track for chords, output it to RealGuitar, and enter chord changes for you guitar part (step record chords from your MIDI keyboard or manually enter notes via sequencer's editor)
- Start your sequencer to listen to the ready part.

2. Real-time method

- Create MIDI track for chords, output it to RealGuitar
- Start sequencer and play/record chord changes to RealGuitar from your MIDI keyboard

Real-time method is more intuitive and allows to control pattern playback adding various expressive adjustments to the performance.

Controlling pattern playback

You can control pattern playing from MIDI track with the help of chords played on a MIDI keyboard by pressing and releasing keys, using Hold button (Sustain Pedal), and also by triggering Slow Strum (Velocity Switch FX).

Hold button (Sustain Pedal)

With Hold button unpressed pattern will play only while you are holding the chord on your MIDI keyboard, and it will be muted when you release the keys. This allows you to play guitar pattern here and there along with the song. With Hold button (or Sustain Pedal) pressed pattern will continue playing even if you release the keys.

Slow Strum

Use Slow Strum velocity switch FX to add syncopes and accents to pattern playback:

- Temporarily mute pattern by triggering Slow Strum (the time window can be adjusted by 'SlowZone' Automation parameter)
- Completely stop pattern by triggering Slow Strum and quickly releasing the keys (to stop Slow Strum sound press the Mute key (Black) of the left Repeat zone). To continue pattern playback press the chord again.

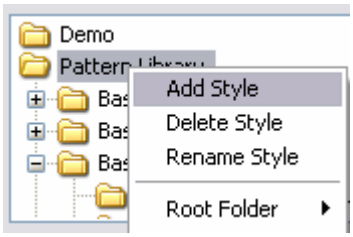
Note. With Hold button (Sustain Pedal) pressed you can't completely stop pattern by triggering Slow Strum and releasing the keys.

Creating Custom Styles for Pattern Library

Organizing Existing Patterns in Custom Styles

You can create your own pattern sets by copying the favorite patterns taken from the RG Pattern Library and organizing them as custom Styles within Library tree view for future use:

- Select pattern you are going to copy to your new Style - it will appear in Pattern view
- Right-click on a Category folder or Style subfolder of the Tree view and select Add Style in pop up menu. Name the newly created empty folder (the Pattern List pane will be empty)



- Press 'Add' button under Pattern List pane to copy the current pattern to your new Style folder
- Find and audition other patterns, and copy them one by one to the new Style using the same method

You can also delete/rename Style folders by right-clicking on it and selecting the appropriate item in pop up menu.

Creating Custom Patterns

RealGuitar rhythm patterns are single track Standard MIDI files (SMF format 0) recorded with special RG Stroke Map notes, so advanced users can edit the existing patterns or create their own patterns from scratch in the host's MIDI track, and then save/export them as SMF directly to RG Pattern Library folder for future use (C:\Program Files\MusicLab\RealGuitar2\Loops).

Guitar Stroke Map incorporated in RealGuitar allows to use up to 22 MIDI notes in the lowest octave range (from C#-2 to A#-1) for emulating a number of guitar techniques (Strokes) within a MIDI rhythm pattern. So you can use the Stroke Map notes for creating your own rhythm patterns including various guitar 'Strokes', such as chord strums (up/down), slow strums (up/down), individual string picks, bass note pick, muted strums (up/down), chord slides (using chromatic strums), etc.

RealGuitar Stroke Map

Note #	Note name	Stroke name
22	A#-1	"Slow Upstrum"
21	A -1	"Slow Downstrum"
20	G#-1	"Muted Upstrum"
19	G -1	"Muted Downstrum"
18	F#-1	"Full Upstrum"
17	F -1	"Full Downstrum"
16	E -1	"Full Downstrum 1 semi-tone lower"
15	D#-1	"Full Downstrum 2 semi-tones lower"

14	D -1	"Full Downstrum 3 semi-tones lower"
13	C#-1	"1st string"
12	C -1	"2nd string"
11	B -2	"3rd string"
10	A#-2	"4th string"
09	A -2	"Bass I"
08	G#-2	"Bass II"
07	G -2	"Muted Top Upstrum"
06	F#-2	"Muted Top Downstrum"
05	F -2	"Top Upstrum"
04	E -2	"Top Downstrum"
03	D#-2	"Top Downstrum 1 semi-tone lower"
02	D -2	"Top Downstrum 2 semi-tones lower"
01	C#-2	"Top Downstrum 3 semi-tones lower"
00		

Top strum - strum on the 3-4 higher strings (Bass strings omitted)

Parameter Automation MIDI CC and VST Map

RealGuitar	MIDI CC #	VST name
Master		
Volume	7	Volume
EQ, High	29	EQ-High
EQ, Low	30	EQ-Low
Setup		
Pitch, Coarse	12	PtchCrse
Pitch, Fine Tune	13	PtchFine
Modulation, Depth	14	ModDepth
Modulation, Freq	15	ModFreq
Sound Mixers		
Mixer_Muted_sound, Volume	20	MxMuted
Mixer_Slow_Strum, Volume	21	MxSlStrm
Mixer_Key_switch_FX, Volume	22	MxKeyFx
Mixer_FretNoise, on/off,	23	MxFrtN_
Mixer_FretNoise, Volume	24	MxFrtNse
Mixer_ReleaseNoise, on/off	25	MxRelN_
Mixer_ReleaseNoise, Volume	26	MxRelNse
Mixer_Pick/BodyNoise, on/off	27	MxPckB_
Mixer_Pick/BodyNoise, Volume	28	MxPckBdy
Sound Effects		
FX_Tremolo, on/off	44	MxTremol
FX_Tremolo_Depth	45	TremDpth
FX_Tremolo_Freq	46	TremFreq
FX_Chorus, on/off	47	MxChorus
FX_Chorus_Level	48	ChLevel
FX_Chorus_Depth	49	ChDepth1
FX_Chorus_Freq	50	ChFreq1
FX_Chorus_Depth2	51	ChDepth2
Common		
Alter_sample, mode	52	AltSmple
Accent_Threshold	53	VelThrsh
Performance_Mode, select	54	Mode
Release_Time	55	RlseTime
Strum_Time	56	StrmTime
Fret_Position, select	78	FretPos
Auto_Fret_Position, on/off	79	AutoFret
Hold, on/off	64	Hold
Controllers		
Pitch_Bender, Mode	57	PBMode

PBender_to_Slide, Range	58	PBSldRng
PBender_to_Pitch, Range	59	PBPtcRng
Modulation_Wheel, Mode	60	WhMode
ModWheel_to_Slide, Range	61	WhSldRng
ModWheel_to_Pitch, Range	62	WhPtcRng
Aftertouch, Mode	75	AtchMode
Aftertouch_to_Pitch, Range	76	AtchRng
Velocity_Curve, select	77	VelCurve
Velocity Switch FX		
Velo_Switch_Slide_mode, select	85	VelSlide
VelSw_SlideUp, Velo	86	SldUpVel
VelSw_SlideUp, Steps	87	SldUpStp
VelSw_SlideUp, Time	88	SldUpTim
VelSw_SlideDown, Velo	89	SldDnVel
VelSw_SlideDown, Steps	90	SldDnStp
VelSw_SlideDown, Time	102	SldDnTim
VelSw_Bend_mode, select	103	VelBend
VelSw_Bend, Velo	104	BendVel
VelSw_Bend, Steps	105	BendStep
VelSw_Bend, Time	106	BendTime
VelSw_ReverseBend, Velo	107	RBendVel
VelSw_ReverseBend, Steps	108	RBendStp
VelSw_ReverseBend, Time	109	RBendTim
Slow_Strum_on_high_velo, select	112	SlStrmHi
Slow_Strum_HighVel, Velo	113	SlStrHVe
Slow_Strum_HighVel, Speed	114	SlStrHSp
Slow_Strum_on_low_velo, select	115	SlStrLow
Slow_Strum_LowVel, Velo	116	SlStrLVe
Slow_Strum_LowVel, Speed	117	SlStrLSp
Mode Controls		
Chord Position, select	111	ChordPos
Alter_Bass, on/off	118	ChdAltBs
Bass_Mono, on/off	119	ChdMnoBs
Chords_mode_Strings#, select	3	ChdStr#
Bass&Chord_mode_Strings#, select	9	BnCStr#
Harmony_Mode_Interval, select	31	HrmIntr1
Solo_Mode_Mono, on/off	35	SoloMono
Solo_Mode_Legato, on/off	41	SoloLegt
Solo_mode_Key_Switch_FX, select	63	SolKeyFX
Slow Strum time zone (Ptrn. mode)	120	Slowzone
Pattern_mode_switch	110	Pattern

Contacting MusicLab

Web site: http://www.musiclab.com/
Technical support: mailto:supportbox@musiclab.com

How to purchase

Please visit http://www.musiclab.com/shop to purchase RealGuitar.