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(Includes "StringMaster Fretlight Edition")





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INTRODUCTION

StringMaster is an advanced iPad application suitable for beginner through to advanced Guitarists and other fretted instrument Musicians. With its beautiful, natural sound, StringMaster supports a wide range of instruments including:

- Acoustic Guitar
- Electric Guitar (including 7 String)
- Bass (including 5 String)
- Banjo (including 4 String)
- Mandolin
- Ukulele (Soprano/Concert/Tenor/Baritone)

StringMaster supports native sounds for each of these instruments as well as two additional sounds: Piano or an Overdriven electric sound, and any of the sounds may be used with any instrument.

StringMaster's chord building and detection, comparison between instruments, a fretboard learning system, scales and advanced song writing tools are all supported with any instrument in any orientation, and with tremendously flexible alternate tuning and capo support. In addition, the integrated Tuner and Metronome make it a complete learning tool.

With its high-resolution graphics, StringMaster has been fully optimized for the iPad Retina Display, and also works with the iPad 2. Note StringMaster is an iPad-Only application and is not supported on the iPhone.

Key Features:

- Play and discover a wide range of chords and fingering, all with beautiful natural tone.
- Display and play scales, including scale runs up the fretboard
- Display chord notes or suggested fingering as well as Chord Tones
- Unique Note Finding capability to learn notes & their relative positions on the fretboard.
- Integrated Chromatic Tuner
- Integrated Metronome that may be played in the background while using the application
- Using a set of complex musical algorithms, StringMaster will show you the name of a chord based on the finger positions you define!
- StringMaster's easy-to-use Song Writer recommends which chords sound best together making it easy to write and store killer songs and progressions, including individual notes
- Explore and learn the fretboard, Chords & sounds of a range of instruments
- Learn to play a new instrument by comparing it with one you already know. Select a chord on one instrument, then display the equivalent chord pattern and fingering on any of the many other instruments.
- Output MIDI from any notes played in the application

FRETLIGHT GUITAR SUPPORT

There are two versions of StringMaster, with the "Fretlight Edition" enabling all its features on the Fretlight Bluetooth Guitars, or USB Fretlight Guitars connected bridged to Bluetooth. The "Fretlight Edition" also includes an additional screen called the "Canvas", for directly writing to the Fretlight fretboard.

Note: Fretlight Ready™ designates that an app can send its data over Bluetooth to a Fretlight® guitar and light its fretboard. To learn more about Fretlight guitars go to http://www.fretlight.com

STRINGMASTER BASICS

StringMaster is an application that integrates several different functions that come together to form a core set of tools for any fretted instrument musician. There are 5 different tabs, each of which are accessed by selecting its icon on the tab bar at the bottom of the screen. The StringMaster tabs are:



Chords

This is the home screen of StringMaster for exploring and learning chords



Scales

Display and play scales and scale runs on the fretboard



Song Writer

Explore scales & use chords that sound good together in a scale to write songs



Compare

Compare chords on 2 different instruments at once



Note Finder

Learn relative positions of notes on the Fretboard



Fretboard Game

Tool to help learn the notes of the Fretboard



Fretlight Canvas (Fretlight Edition only)

Allows direct drawing on the Fretlight fretboard, and supports additional features such as static or scrolling text, sine waves, and the game of life.

CHORDS

The Chords tab is the main/home screen of StringMaster designed to explore chords and the fretboard. From here, you can also access settings, set up the capo, define new instruments and tuning, and set other options that apply across the other screens in the application.

By default, the Chords screen will show how to play any chord selected from the picker at the bottom of the screen. When new key and/or Chord Types are selected, the list of possible ways to play the chord is also updated. Selecting any of these options from the list will display that pattern on the main fretboard.

Clicking on the Play button will re-play the current selection. Selecting the Chord Detective option will allow you select notes and have StringMaster determine the chord being played. When the Capo is enabled (by pinching the fretboard), Transposer option will be displayed which essentially changes the Chord picker into a shape picker, and the chord description in the centre bar of the screen will indicate what chord that translates to.

Pinch the fretboard on a fret to enable the Capo. Chord patterns in the chord picker will be adjusted accordingly. Pinch the Capo to remove it. The Capo can be moved by pinching in a new location or by selecting the clear space just behind it and dragging it up and down the fretboard.

The Settings Button lets you access a range of settings for StringMaster including fretboard configuration, advanced options and more. See Settings section for detail.

The Chord Fingering button toggles whether the suggested fingering for a chord, or the notes of the chord are shown on the fretboard. Fingering is shown when the icon is lit.

This part of the screen shows actual chords being played, the notes and scale degrees of the notes of the chord

The Chord Tones Option shows all the notes from the currently selected chord.

When you have a capo selected, the button changes to a Chord Transposer button, allowing you to use the chord selector to select a chord shape rather than a key. This allows you to see what chord you are actually playing when, for example, you play a "C" chord shape with a capo on the 5th fret.

Major and Minor buttons provide quick access to Major and Minor chord definitions for the selected note.

Use this picker to select a Key, Chord Type or Chord Pattern. It will display it on the fretboard and play the notes

Select a Key/Chord Type here to update the chord shapes shown in the chord picker. In the Advanced Mode, a significantly larger set of chord types will be shown.

Click here to access the Chromatic Instrument

Click here to access the Metronome, If Metronome is playing this button will be lit

Click here to select a different instrument

Strum the open strings up or down to Press individual notes on the play the selected chord. Strings being played will vibrate. Strumming over open space will play notes of the selected chord

fretboard to play them, or press and flick down on a note to strum the chord shown on the fretboard

This button allows you to cycle between 3 modes of displaying notes on the fretboard: 1) Chord Only 2) Notes that are part of the selected chord (blue) or 3) All notes (green).

Click here for flexible alternate tuning of the selected instrument -Each string may be tuned up or down by 6 semi-

Turning on the Chord Detective turns the fretboard into a calculator which will work out chords based on the notes you select. You can use existing chords as a base, or just press your own notes on the fretbaord to work out what a chord is. The results are shown in the chord indicator in the middle of the

Play the currently selected

Return home to the top of the Chord shape list (generally the most common or easiest to play)

Move up or down through the list of chord shapes

The canvas option provides tools for drawing on the fretboard - Available only in the "Fretlight Edition" of StringMaster



The Chord Picker shows all possible chord combinations for the selected instrument and Kev/Chord Type. The root fret is shown for each diagram. Chords are ordered by relevance, playability

In addition to the main cords for the Key/Chord Type, inversions

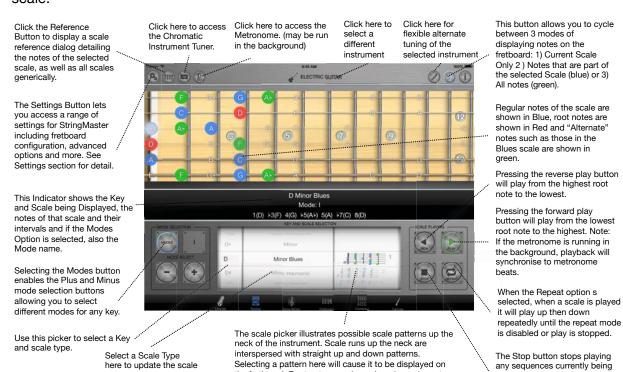
(slash cords) may also be shown. Inversions are illustrated in the chord diagram by showing the inversion note, followed by a slash. E.g. an E over C Major Chord would show an "/E" in front of the chord diagram. For instruments with 6 or more strings, Inversions are ordered by their position in the scale and shown after the pure versions of the chord. For Instruments with less than 6 strings, inversions will be interwoven based on playability, with primary chords in the chord list.

SCALES

The Scales tab is used to explore scales on the fretboard. After selecting a key and scale type, a default pattern of the scale will be shown n the fretboard. Other possible ways to play the scale may also be selected from the picker in a similar way to selecting chords.

On the right hand side of the screen there are forward and back play buttons and a stop button to play the scale from the lowest root note to the highest root note and visa versa. The Stop button is used to stop all currently playing sequences.

On the left hand side of the screen, the "Modes" button enables you to select modes for any scale.



shapes shown in the

scale picker.

the fretboard. Root notes are shown in red, regular notes.

in blue, and "alternate" notes such as blues notes, which

are typically transient notes, are shown in green.

played and also stops a

repeated sequence

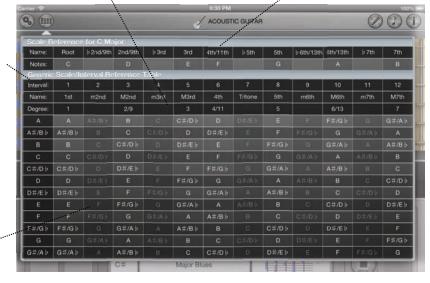
SCALES REFERENCE

The Scales screen also has a "Reference" button in the tool bar at the top, which shows both the notes and names of notes for the currently selected key and scale type, as well as providing a general reference for all notes of all scales. The Scale reference window is illustrated below.

The bottom section of the screen is a general reference chart for scale notes for all keys. Highlighted columns show the reference note positions for notes of the Major scale from which other scale positions can be derived.

The top section of the reference screen shows notes of the currently selected key and scale with their position in the scale.

Dark cells represent title data including columns for the interval (or position in the 12 note scale), common name for that interval, the Degree (the position of the note within the Major scale), and a row for each note. Note that the first interval of a note is the note itself.



Greyed out columns represent notes that are not part of the major scale

SONG WRITER

The Song Writer is a tool to allow you to explore scales, and the chords that go together in those scales. This allows you to easily compose and record great sounding chord progressions, play them back later.

The first step in using the Song Writer is to select a key for your song from the Key selector at the top left of the screen. This will set up the rest of the screen to be in that key. The Primary and alternate notes of Chord buttons at the left of the screen are used to play chord sequences. Any of the chords shown on these buttons will sound good together, though the Songwriter helps you further by highlighting more common combinations in green and, and less common combinations in amber. As you press a chord button, the chord will be played, the notes of the chord shown on the fretboard, and the text on the other chord buttons will change to reflect the next logical notes.

The "Example Chord Patterns" picker at the right, bottom of the screen lists many examples of 4 bar chord combinations that sound good. Use these to get ideas of the chord sequences you may like to play using the chord buttons.

The bottom middle side of the screen contains controls to allow you to record, play back and save your songs. Underneath the Save button is the Song Detail button, which shows the Song Detail view in the top right hand corner of the screen. This window provides a list of recorded songs and shows the instrument, key, chords and notes of the currently selected song. Selecting the instrument Icon brings up the instrument selection popover, allowing you to change the instrument for the song, and clicking on the Key of the song, under the instrument icon, brings up a Key selection popover allowing you to transpose the key of the song. Note that both changing the instrument and the key of the song, effectively creates a new song and you will need to save it if you want to keep it.

Select the base key for your song here. Note: the selection shows Sharp and Flat Keys separately.

in Amber.

7th Chords can be interchanged with any chord in the classic chord sequence. Select this to add a one off 7th sound to the

Songs are major scale by default. Select Minor (m) mode to have a sadder, minor sound. This section shows a traditional fretboard, or "Song Detail" (as illustrated) when the Song Detail button is highlighted. The fretboard shows the note positions of the "Now Playing" chord on the selected Instrument. Fingering will be displayed instead of this option was enabled on the Chords screen.

These buttons represent allthe best sounding chords for your selected key and scale. Any lit button can be selected, though the more common follow-on chords are shown in green, with less common chords being shown

For the minor scale, 6 alternate chords are also shown (and just 1 note for Major which is a flat 7th). The chords below the line are less common. The scale degree of the note is shown in the bottom right hand corner of the button.

Selecting the Mode buttons will show Mode selection buttons and allow Mode selection for the scales, in addition to the basic Major or Minor Key.

This portion of the screen shows either a fretboard, or the Song Detail and song list. When the Song Detail button is selected, this list shows the list of songs you have recorded showing their key, time of recording and the number of notes they contain. This is a scrollable list, so you can flick up and down through recordings. Note: Selecting a song from the list will overwrite any current recording that you have not yet saved.

Songs can be renamed by entering a new name in the song name box at the top of the detail view. To permanently remove unwanted recordings select the track and swipe left reveal a delete button. Press "Delete" to permanently remove the recording.



Press the Play button to play back the last (current) recording or the recording selected from the list. Press the pause button to pause playback or recording. Show the current scale rather than chords on the fretboard view – Typically used for soloing on a Fretlight.

Show or hide notes of the scale in the fretboard view

Make any changes to the Song Name here.

To commence recording, press the Record Button, which will light up Red when recording is in progress. Both the Chords being selected and the intervals between them will be recorded, as well as any notes selected on the fretboard. Pressing the record button while recording will stop recording. Both the Chord buttons at the top left of the screen and the example chord patterns are recorded.

Press the "Save" button to save the current recording. A new entry will be added to the list showing the Key, the date and time, and the number of notes recorded.

Press Stop button to stop playback or recording.

This picker shows hundreds of combinations that sound good together. Select them to play the four chord sequence illustrated.

The Song Detail button toggles the Song Detail view (illustrated) which shows the chords and notes of the song in a TAB like form

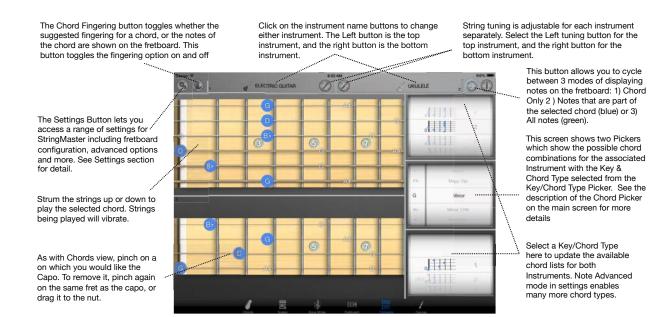
Loop playback of the current song when playing.

INSTRUMENT COMPARISON

The Comparison tab allows you to compare chords and notes on two different instruments. This is particularly useful to work out chords on a new instrument. The screen is divided into 3 sections: A top and bottom instrument section, and a Key and Chord Type picker section on the right hand side of the screen. Selecting a Chord Type or Key from the picker will play and display the chord on both instruments, and update the list of chord shapes for each of the instruments.

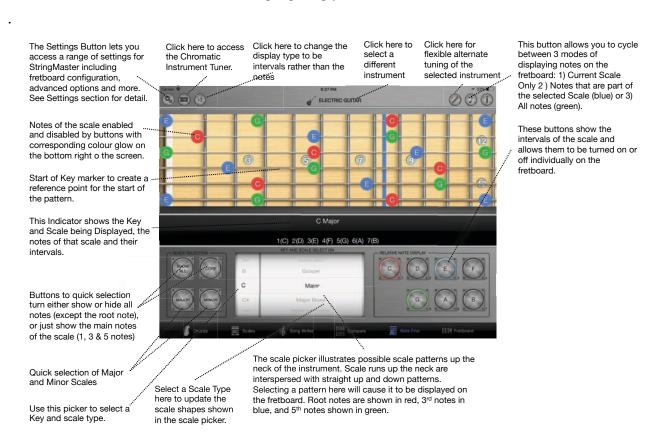
Note that settings made on the Chords tab (such as instrument selection and capo position) will be reflected in the top instrument on this screen, and conversely, changes made here to the top instrument will also be reflected when returning to other screens.

The Tuning and Instrument buttons to the top left-centre of the screen relate to the top/main instrument, and the bottom/secondary instrument buttons are to the right of centre.



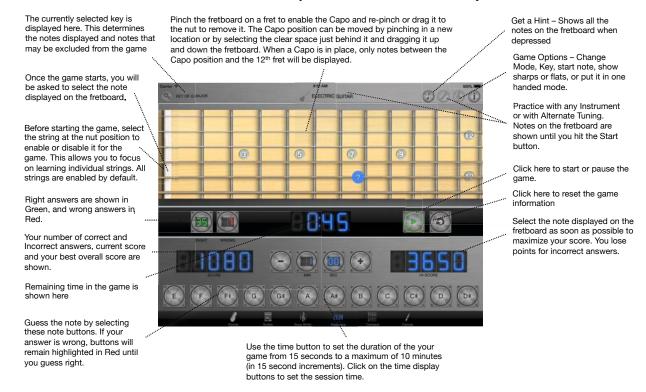
NOTE FINDER

Note Finder is a tool to allow you to select a key and scale, then selectively show or hide relative notes based on their interval, highlighting patterns on the fretboard.



FRETBOARD MASTER GAME

The Fretboard Master tab is a simple game to help you learn the notes of the fretboard. It supports any of StringMaster's instruments, in any orientation you prefer, and also allows you to select alternate tuning. The musical key of the game may be altered by clicking the "key selection" button (with the treble clef), located at the top right hand corner of the screen. Selecting a different key will determine if notes are shown as sharps or flats and the game also allows exclusion of notes outside the major scale of the selected key.



GAME OPTIONS

The Fretboard Game has two basic modes of operation 'Note Guess' and 'Find Notes on Fretboard'.

The Note Guess mode shows a question mark on the fretboard and you need to select the correct note from the note buttons at the bottom of the screen as quickly as possible. The 'Find Notes on Fretboard' mode selects a random key and note from that key, then highlights it in green on the note selection buttons. The aim is to find all instances of that note on the first 12 frets of the fretboard as quickly as possible.

Common Options

Both modes allow you reconfigure the note selection buttons in a 4x3 cluster allowing them to be accessed with one hand (though these are read only in the Find Notes option). There is also an option to show sharp or flat notes on the fretboard as a guide.

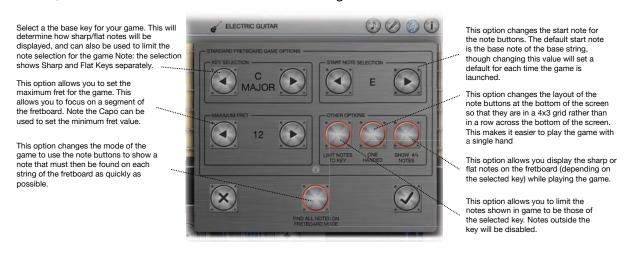
Note Guess Options

Key Selection

The Note Guess mode of the FretMaster game allow you to select a different key for the fretboard game, and limit the notes shown to that key. Selecting a different key will determine if notes are shown as sharps or flats and there is also an option that allows exclusion of notes outside the major scale of the selected key.

Start Note Selection

The Start Note Selection allows you to configure the note on which the buttons start. By default, this is the note at the nut of the base string.



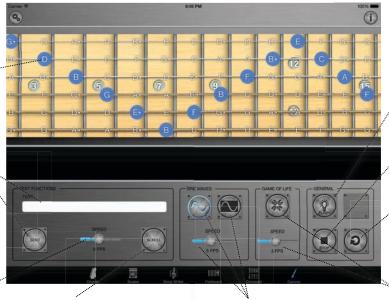
FRETBOARD CANVAS

The "Fretlight Edition" of StringMaster supports a "Canvas" screen, which includes options for displaying or text, showing sine waves, playing the game of life, or just lighting up fret positions on the Fretlight Guitar. Notes are directly lit on the Fretlight by touching them on the on-screen fretboard. If the "Flash Root Notes" option is selected from the Settings, these notes will be highlighted in red on screen, and flash on the guitar. Simply tap again on a lit note to turn it off.

This Fretboard mirrors the Fretlight fretboard, and also allows direct drawing by touching notes. When the "Flash" notes button is selected, notes will appear in red on the screen and flash on the Fretlight.

Text Entry box. Text displayed here can be either sent to the Fretlight as static text via the "Send" button or as scrolling text via the "Scroll" button.

Adjust the text scrolling speed of scrolling text here (in frames per second). Note that scrolling must be stopped and restarted in order for changes to take affect



Click here to scroll the text, in the text box, on the fretboard (note this will appear upside down on the screen) Generate a sine wave on the fretboard. The right button shows the wave inversed on the Fretlight. The slider is used to adjust the speed.

When this option is selected, notes touched on the Fretboard will show up red, and Flash on the Fretlight Guitar

Click here to stop the current animations - leaving the Fretboard lit as it is currently.

Reset and Clear the Fretboard, stopping all animations.

Invoke the Game of Life on the fretboard. This will continue until all the generations have died out or the game is stopped.

Frequency of update may be changed via

STRINGMASTER SETTINGS & OTHER OPTIONS

StringMaster Settings are accessed by selecting the "gear" icon at the top left corner of each screen. The available settings are described below. In the "Fretlight Edition", the setting screen is also used to pair with the Fretlight guitar via the Fretlight section. Non-Fretlight Edition versions, may provide an upgrade path to a Fretlight enabled version in the future.

The Flip Fretboard option allows the instrument to be flipped over to learn play like Hendrix, Play a right handed guitar left handed or left handed guitar right handed!

When the Advanced Mode option is switched on, a wider range of chord types may be selected from the chord type list. Chords may also span 5 frets instead of 4. Advanced mode also enables the Mode selection capability in the Songwriter.

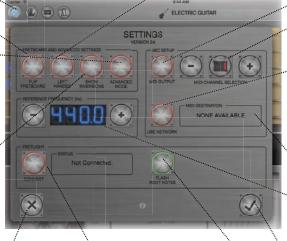
Selecting the Advanced Option also turns on the Show Inversion option by Default.

Inversions are chords with the same notes as the selected chord, though the first note is not the root note of the chord. For instruments with less than 6 Strings, inversions are often the default way of playing a chord, and therefore they are always shown. This option allows inversions to be displayed in the chord picker for the instruments with 6 or more strings.

Note: For Instruments with less than 6 strings, inversions to be mixed in with regular chords based on playability, rather than being listed in order after the non-inverted chords.

Select the Settings button on the any screen to activate the Settings screen as shown. Option buttons are highlighted in Green when on and Red when off.

Make fretboard left handed with strings extending from the left. In this mode, chord diagrams in the chord picker will also be displayed with this orientation.



Press the Cancel Button to abort your setting changes and close the window.

Fretlight settings are only be available in the "Fretlight Edition" of StringMaster. Click here to connect to the guitar. When the button is Red, there is no connection, Amber means that the app is trying to connect and Green means the guitar is connected. Ensure Bluetooth is enabled on the iPad, then press this button, then press the pairing button on the Fretlight guitar to connect.

Select this option to have Root notes automatically flash on the

Fretlight

fretboard.

MIDI Output will enable StringMaster to send MIDI notes to any connected MIDI devices listening on the selected channel. With this option enabled, any notes played in StringMaster will also be sent as MIDI. The MIDI channel may be set using the +/-buttons and will be shown in Red if MIDI output is disabled.

MIDI on an iPad can operate over WiFi, using a computer as a bridge to MIDI devices. This option introduces some latency to the MIDI, though offers tremendous flexibility. See the StringMaster manual (link below) for additional details on setting up the computer end of this connection.

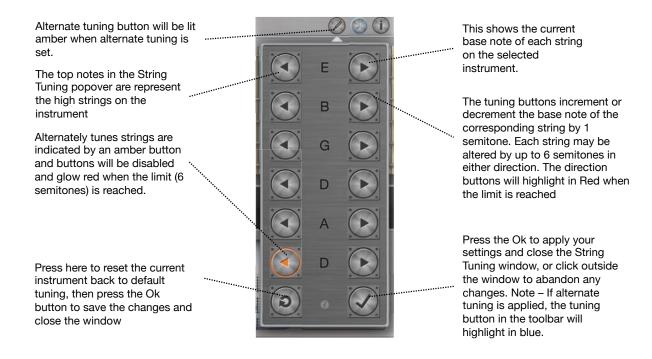
Any available MIDI destinations are displayed here.

Increase or decrease the reference frequency of the application by clicking on the +/- buttons. Click on the display itself to reset to the standard reference frequency of 440Hz. Press and hold to +/- buttons to rapidly increase/decrease values

Press the Ok to apply your settings and close the window.

ALTERNATE TUNING

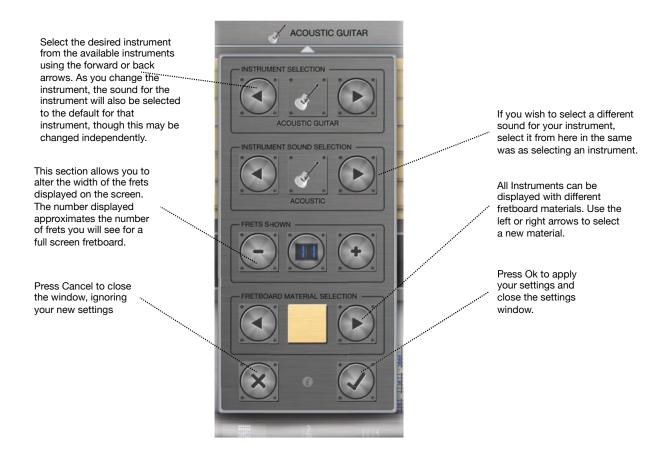
A "Tuning" button is available on the top right hand corner of each of StringMaster's screens, with the exception of the Comparison screen, which has a button for each of the two instruments displayed, one on the left side and one on the right. The tuning option allows you to tune each of the strings on the currently selected instrument up or down by 6 semitones.



INSTRUMENT SELECTION

StringMaster supports multiple fretted instruments, which may be selected by pressing the Instrument Name Button at the top of any screen. The Comparison screen has 2 Instrument selection buttons, one for each fretboard. The instrument selection window is illustrated below.

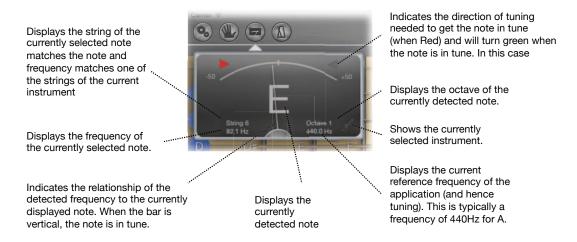
The Instrument Selection option also allows you to select different sounds fretboard material or fret width for each instrument.



TUNER

The StringMaster tuner is accessible from the Chords, Scales and Song Writer screens and provides fast, accurate chromatic tuning that is optimised for your selected instrument. The Tuner knows your tuning settings of the currently selected instrument and the reference frequency set for the application, and will show when the detected frequency matches a string with these parameters.

In a quiet environment, the Tuner should sensitive enough to pitch up an unplugged electric instrument if it is close to the microphone of he iPad. However, for best results when tuning, it is recommended that electric instruments be plugged in to the iPad though a device such as an iRig.



METRONOME

The Metronome provides a flexible mechanism to configure beat patterns, save those and play them in the background while using the rest of the StringMaster application. This is particularly useful for enhancing timing when using the Song Writer, or for playing back scales in a way that follows a pre-defined beat and pace.

Visual beat indicator that oscillates based on the Beats Per Minute (BPM) setting.

Sets the number of beats per bar (also changing the beats shown on the beat display.

Sets the type of beats in the bar from ½ to 16th notes. Combined with the Beats per Bar, this provides a time signature.

Save current settings to the currently

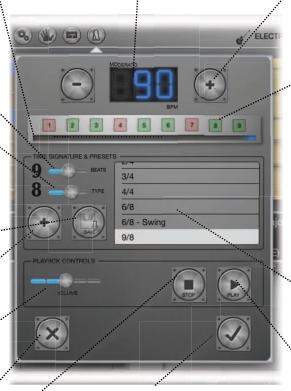
Add a new preset to the list with the current settings.

Sets the volume level for the Metronome relative to the rest of the application

Close the metronome and stop playing.

Stop playing the current sequence

Illustrates the number of quarter notes beats per minute. Tap here to reset to 120bpm.



Close the metronome and though continue playing. If the metronome is not currently playing, this is equivalent to just closing the window, though if the Metronome is playing, it will continue to do so and the Metronome icon will ne highlighted in blue.

Click the + and – buttons to increment or decrement the number of beats per minute by 1. Press and hold to more rapidly increase or decrease values.

Illustration of the makeup of the beats in the bar. Each is lit in turn as they play, with their colour indicating the type of sound the beat will make.

Red=Kick Drum (Reference) Green=HiHat (Tick) Blue=WoodBlock Clear=Silent (Rest)

Tapping a beat will change its type to the next type in the list, playing that sound.

List of pre-configured time signatures and user presets. Selecting a preset from the list will automatically load it.

Start playing the current sequence. This button will highlight in green when the sequence is playing.

APPENDIX

MIDI SETUP

MIDI (Musical Instrument Device Interface) is a tried and true mechanism for musical instruments and devices to exchange information, allowing exchange of note information including velocity, pitch, etc, and also control other information. StringMaster 2.0 supports MIDI output to allow, for example notes played o StringMaster to trigger the notes to be played on another device, or recorded in a MIDI aware application such as Garage Band.

When using MIDI Output, StringMaster will automatically detect and bind to MIDI destinations connected to the IPad. There is also an option to connect to other MIDI devices using WiFi, so you can enjoy the benefits of MIDI without needing any additional hardware. This is supported natively on the mac, as described below, or requires additional software on a PC such as rtpMIDI.

Network Midi Setup on the Mac

The "Use Network" option in the StringMaster settings enables this, though it is also necessary to have a computer to act as a receiver and bridge for the MIDI information. If you are running a modern Macintosh running OSX, this is relatively easy to set up.

Step1:

Make sure your mac and iPad are on the same WiFi network, then, on your Mac, open the AudioMIDI Setup app in the Applications->Utilities folder.

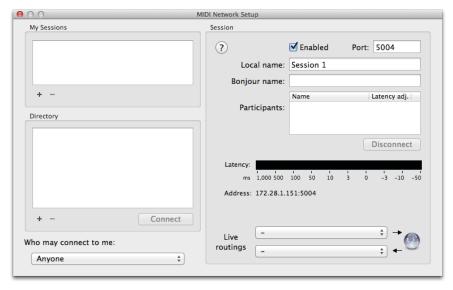


Step 2:

Once the App is running, it should show the Audio setup of the machine. Go to the Window menu and click 'Show MIDI Window' to show the MIDI Studio, which should show the IAC Driver and Network devices as well as other MIDI devices you have connected to the system.

Step 3:

Double click the Network icon to launch the MIDI network setup screen.



Step 4:

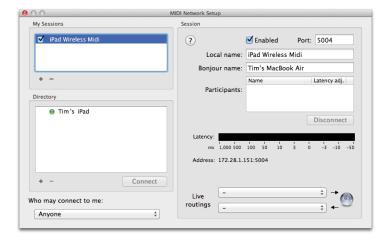
If you have not done so already, create a new "Session" by clicking the plus button at the bottom left hand corner of the "My Sessions" panel. Ensure that the "Who may connect to me" dropdown box is set to "Anyone".

Step 5:

Go to the StringMaster Settings and enable midi and "Use Network" options. Within a couple of seconds you should see the MIDI destination change to "NETWORK SESSION 1

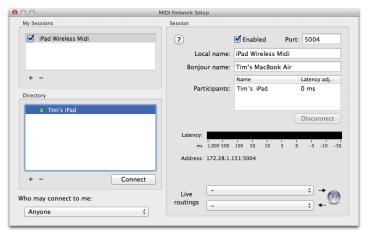


Your iPad should appear in the "Directory" section of the MIDI network Setup window.



Step 6:

Select your iPad then click on the "Connect" button to complete the wireless setup. If it appears in the Participants section of the window then you are connected.



Step 7:

If you are not using MIDI outside the Mac, then you just need to select the Network Session as a MIDI input such as this example with the Korg Legacy Application:



Garage Band should automatically recognize the MIDI connection, and allow you to record MIDI data from StringMaster.

Subsequent connections should only require steps 6 & 7 to reconnect.