Guitar Scales & Modes

Version 2.1
(c) 1990, David Sampson

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DISTRIBUTION:

This program is being distributed under the **BeggarWare** concept. I'm handing it out to anyone that wants it. Use it without any formal obligation to the author, except that you can't sell it to anybody. I've obtained alot of Public Domain stuff in the past from various BBSs, so here's another attempt on my part to contribute back to the cycle.

If you like the program and feel that you've received some benefit from it, (and you feel charitable) **you can contribute $5.00 to my Foster's Beer fund** ("It's Australian for beer, mate." $5 is the going rate for a six pack in these here parts).

PROGRAM DESCRIPTION:

<u>This program requires Microsoft Windows 3.0 to run</u>. When the program is started, a guitar neck is displayed. You can toggle between an expanded view (default) or showing the entire neck at one time. You'll notice that on a real guitar, there are fret inlays at the 3rd, 5th, 7th, etc., positions. These are shown here as white filled rectangles. The 12th fret has two stacked rectangles. Above the guitar neck, the frets corresponding tho the inlays are labeled to give you a quick reference.

The notes corresponding to the C Major scale (Ionian mode) are displayed (default), showing a complete map of the scale in that key for the entire fretboard. The numbers represent the scale degrees (note positions in the scale) for the selected scale or mode.

In the **Expanded** mode, a horizontal scroll bar appears at the bottom of the screen. Use this to slide up and down the neck. If you click on the arrows, it moves about 1 1/2 frets in the direction of the arrow.

Below the guitar neck are a few comments such as the selected key signature and mode. I also tell you how the scale is constructed, using the notation of:

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Root    = key signature note   (root note)
H Step  = Half Step interval      (1 fret)
W Step  = Whole Step interval  (2 frets)
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So the Ionian mode (major scale) is constructed as follows:

  Root -> W Step ->   W Step -> H Step -> W Step -> W Step -> W Step -> H Step

This means start at the Root note, then add a whole step to get to the 2nd scale degree, then another whole step to get to the 3rd scale degree, the a half step to get to the 4th scale degree, etc. The final half step takes you back to the root note one

octive higher than the starting note.

In some of the scales, you'll see W Step + H Step. This is a minor 3rd interval (3 frets).

Note: When you choose a scale that has a 5th and a flatted 5th, like the Blues Scale 1 for example, you'll see the number 5 listed on adjacent frets. The first instance is the flatted fifth, the second is the fifth. I labeled the scale degrees as integers not characters, so that's one of the little problems I encountered after I designed the data structures, wrote a whole bunch of code and then wanted to add that scale.   As long as you're aware, that shouldn't be too much of a problem. I'll fix that in the next revision.

Four menu categories are available: **FILE**, **KEY**, **MODE**, & **DISPLAY**.

The **KEY** submenu contains the 12 chromatic notes in western music scales. Select the key signature that you want from this menu.

The **MODE** submenu contains the list of scales and modes.

FILE lets you print the window, exit the program, and see the About box. I've tested the print capability with an Apple NTX II Postscript compatible printer. **For best results on any printer,** I suggest you run the Windows Printer configuration program and **put your printer in Landscape mode**. This image is compressed as hell in Portrait mode.

You can print from either the expanded or the full display mode. In expanded mode, the program will print the view you have on screen. So if you're intrested in the 12th fret region, put that area on screen before you print.

DISPLAY lets you toggle between an expanded mode and a full view mode.

How to Get the Most Out of this Program:

Rather than trying to memorize the fretboard by brute force, try a different approach. Select the key of A and the Blues Scale 1. This scale is the Aeolian mode (natural minor) with an extra note, a flatted 5th, thrown in. It's pretty easy to learn.

Root 6 Chord Formation:

Look at how you would play an Am bar chord with the root note on the sixth string (this is known as a Root 6 chord). Your index finger is on the 5th fret when you form that chord. Your pinky and ring finger are on the 4th and 5th strings at the 7th fret. This is a bar chord constructed on the Em open chord form. Now the region starting at the 5th fret and extending to (and including) the 8th fret, represent a "Box" position. As a 1st attempt, learn the scale just in that position. **Visualize the scale in relation to how you form the Am bar chord.** That way you can shift up and

down the neck and play any minor bar chord with the root on the 6th string using the same pattern. Some of the important notes are the ones you use to make the chord.

Root 5 Chord Formation:

Now what if you want to play the Am chord with the root note on the 5th string (known as a Root 5 chord) instead of the 6th string. You would play this chord on the 12th fret using a bar chord constructed from the Am open chord form. The Box position is the 12th fret to the 15th fret. Learn the scale in this position. Once again, focus on the notes in the scale in this position and the way you make the chord.

Connecting a Root 6 to a Root 5:

How do you connect the two Am chord forms? Starting with the Root 6 box position, and the root note on the 4th string/7th fret, play the following pattern (grouped by string):

1 (fret 7 / string 4),

3 (fret 5 / string 3), 4 (fret 7 / string 3), 5b (fret 8 / string 3), 5 (fret 9 / string 3),

7 (fret 8 / string 2), 1 (fret 10 / string 2),

3 (fret 8 / string1), 4 (fret 10 / string 1), 5b (fret 11 / string 1), 5 (fret 12 / string 1).

Now take a look at where you are. You're on the 12th fret which is where you form the Root 5 Am bar chord. You've connected up 1 octave.

Connecting a Root 5 to a Root 6:

You can connect up to the Root 6 Am bar chord on the 17th fret with this pattern (starting with the Am Root 5 bar chord box position):

1 (fret 14 / string 3),

3 (fret 13 / string 2), 4 (fret 15 / string 2), 5b (fret 16 / string 2), 5 (fret 17 / string 2),

7 (fret 15 / string 1), 1 (fret 17 / string 1).

Now look at where you are. You're on fret 17, which is where your index finger forms the Am bar chord like you did on the 5th fret. The scale pattern that you learned on the 5th thru 8th frets is the same as the scale pattern on the 17th thru 20th frets.

Now you know how to connect the Root 6 chord to the Root 5 and up to the Root 6 chord. You have just learned how to connect these chord up and down the fret board. And you did it by visualizing where and how you make the bar chords! Just learn the connecting patterns.

Applying this to Chord Changes:

This stuff also applies to different chords as well. If you want to solo over a Root 6 Cmaj chord to Root 5 Em chord, use the program to learn the notes in the Root 6 Cmaj box position. You've already learned the Root 5 minor box position (the pattern from the Am at the 12th fret above). Now when you solo, choose the notes from the Cmaj box when you're on that chord, then switch to the Root 5 minor box when the chord changes to Em.

All you have to do is make sure that the lick you play has a smooth transition (sound) when the chord changes. This can be achieved by selecting a note that is common to both patterns when the change occurs, by bending the string to change the pitch from a note in the Root 6 major box to one in the Root 5 minor box, or sometimes by playing a 7th note and dropping a half step (this only works if the drop in half step results in a note that belongs on the new scale), or by not actually playing anything when the chord changes. Silence can be useful. So who says you have to continually play notes.

Future Versions:

I still developing a wish list for future additions. One is utilizing the font capabilities in the installed printer. I'm not real happy yet with the way the comments print out on the screen or the printer.   I want to add a printer setup menu to this program so that you don't have to go to the control panel and set Landscape mode. I also want to add the Box position outlines, so that you could ask for a Root 6 or Root 5 chord and get a border drawn around the notes within that box position.

Revisions:

Version 2.1 :   In the major revamp of the code between versions 1.0 & 2.0 I left one line of code in the program that seemed innocuous, but in reality, disabled the printing function for most printers. Version 2.0 worked fine for an Apple Laserwriter NTX (what I used to test the program), but not for an HP Laserjet and most dot matrix printers. That is now fixed.

I also changed the printout so that a white filled retangle would be placed under the scale degree labeling on the fretboard. People with dot matrix printers can now read the output. The comment section and program title now print on the page when you're in expanded mode, regardless of where you position the scroll bar. In version 1.0, the comments printed only when you dumped the screen image with the scroll position all the way to the left.

Version 2.0: Added the Full View and Zoom mode with horizontal scrolling. Streamlined the code to improve the overall size of the program. Improved the display to make it easier to read.

Version 1.0: Initial release.

How to Contact the Author:

I hope you get some benefit from this program. If you have any comments, suggestions or you want to contribute to my well being, I can be contacted at the following:

US Mail: David Sampson
                 P.O. Box 060573
                Palm Bay, FL 32906

InterNet: dsampson@x102a.ess.harris.com

Enjoy......