

SC-1 Footswitch Controller Instructions



Contents

SC-1 Footswitch Controller Instructions	1
List of Figures	3
Overview	4
Scope.....	4
SC-1 Quick Start Overview	5
Physical Connections	6
Programming Mode	7
File Creation	8
SC-1 File Creator Application	12
Connect to SC-1	12
SC-1 Application	14
Run Mode	17
Select Setlist.....	17
Delete Setlist.....	18
Performance Mode.....	19
Firmware Update	21
Browser Setlist Viewing and Modification.....	24
Appendix A.....	26
Internet Connection.....	26
Programming Mode Laptop.....	30



List of Figures

Figure 1: SC-1 Overview	4
Figure 2: : Quick Start Overview	5
Figure 3: Physical Connections	6
Figure 4: Midi Implementation Tabs.....	8
Figure 5: Settings Files	9
Figure 6: Spreadsheet Edit Buttons	10
Figure 7: Dropdown Sort Tabs	10
Figure 8: Setlist Examples	11
Figure 9: SC-1 Application File	12
Figure 10: Windows Notification	12
Figure 11: Select Program Mode Channel 1	13
Figure 12: Setlist Select Screen	13
Figure 13: Setlist File Creator Application	14
Figure 14: Upload Error Message(s)	15
Figure 15: Successful Runtime File Upload	16
Figure 16: Setlist Selection Mode	17
Figure 17: Select Setlist Operation	17
Figure 18: Delete Setlist Screen	18
Figure 19: Operating Mode Screen.....	19
Figure 20: Fast Forward/Reverse Screen	20
Figure 21: Internet Connection PC.....	26
Figure 22: Internet iPhone Connection	27
Figure 23: Password Entry iPhone	28
Figure 24: iPhone Initial Setup Screen	29
Figure 25: Web Interface Setup Screen	30





Figure 1: SC-1 Overview

Overview

The *SC-1 Footswitch Controller* is designed by musicians, for musicians who use Midi devices during live performance.

Presets associated with songs in gear such as multi-effects processors, modeling amplifiers, keyboard controllers, drum machines, etc. are stored randomly and uncorrelated with the gig *Setlist*. Since it is *required* to be able to change to presets quickly and accurately between songs and often during a song, navigating to the right patch can be slow, prone to error, distracting, and often stressful.

Setlist song ordering is often difficult and time consuming for equipment that does provide the capability. Multiply this by the number of devices involved. This is a serious shortcoming of the majority of products on the market making it difficult for the musician to work with otherwise great sounding gear, and impossible to realize the devices full capability.

The *SC-1* allows musicians to change presets easily and effectively by organizing the presets with the *Setlist*. Once programmed, the SC-1 sends *Midi Program Change* and *Control Change* commands to the device with the press of a button, synchronizing each song with the desired preset(s) in real-time. After initial setup of the *SC-1 Settings/ Preset File*, changes are minimal and can be performed in just a few minutes for each new performance.

Scope

This document provides an overview of the setup procedure for the SC-1. Additional information is also detailed in videos located at the support website <https://www.nichedevices.com>.

Note: If there is some detail of setup or operation that is unclear, please contact us with the form provided on the website.

SC-1 Quick Start Overview

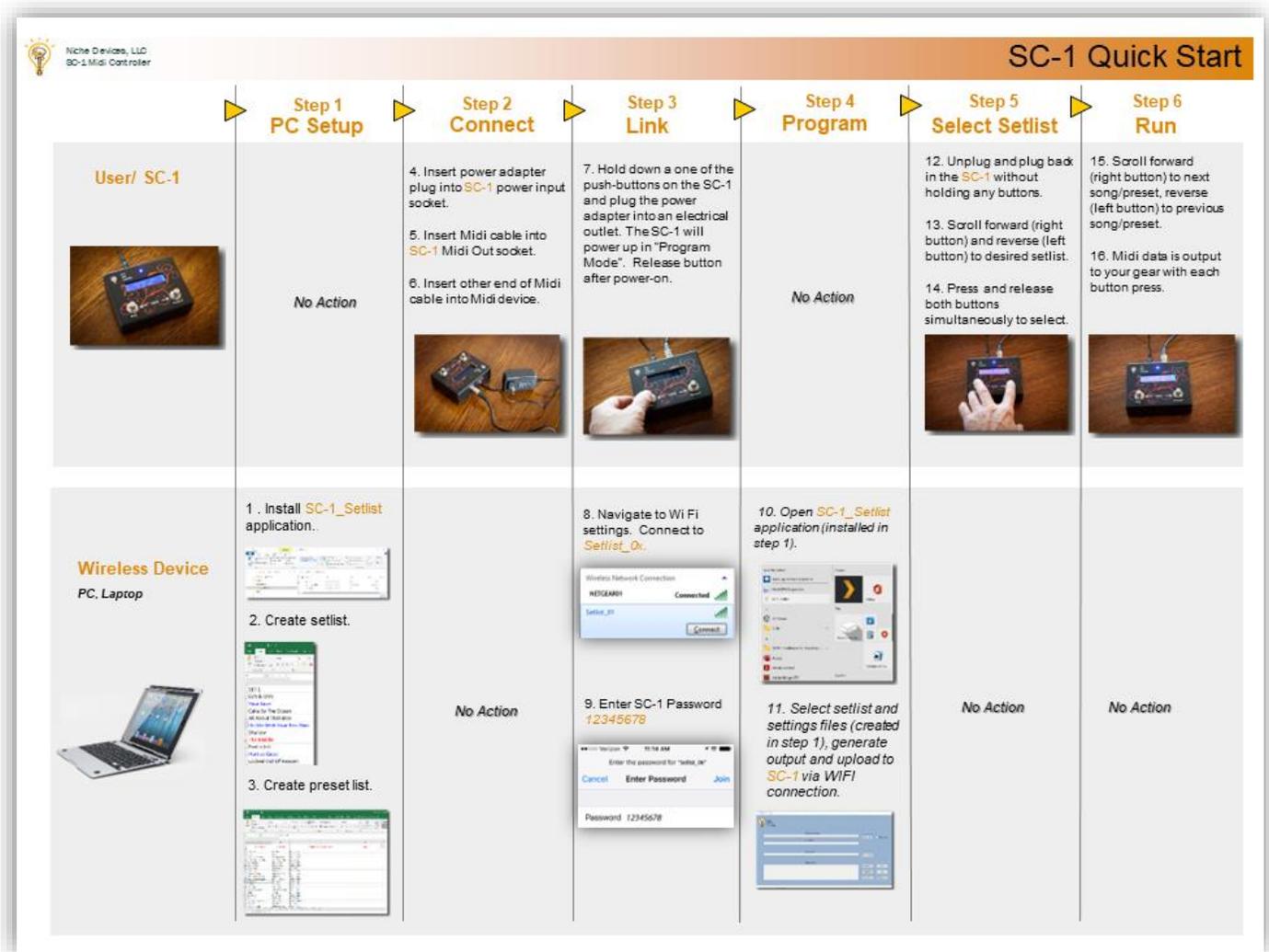


Figure 2: : Quick Start Overview

Physical Connections



Figure 3: Physical Connections

There are two physical connections that need to be made to the SC-1; *power in* and *MIDI OUT*.

1. Connect the power adapter supplied with the unit to the power input socket on the controller. Make sure to use only the power supply provided which is a regulated 5V supply. 
2. To connect to your Midi device(s) attach a standard Midi cable from MIDI-OUT of the SC-1 to MIDI-IN on your device. Connect additional Midi devices by running from your devices MIDI-THRU to MIDI-IN on the next device in the chain.

Note: all programming of the SC-1 is done over a wireless interface described in the sections below.

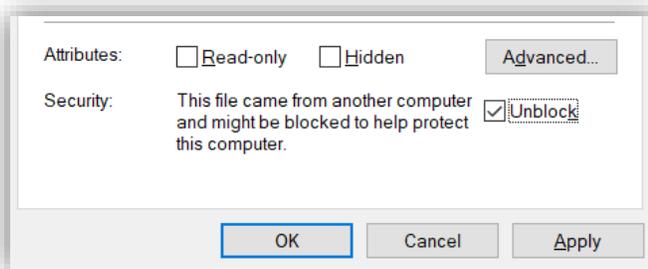


Programming Mode

This section describes how to set up your *Set-list song* data and *Midi Preset* information. These files will be used to generate a resulting runtime file that will be downloaded into the SC-1. We will refer to this as “*programming*” the unit.

In *programming mode*, the SC-1 acts as a Wi Fi access point and you connect to it with your computer as you would connect to a wireless router. The data transferred to the SC-1 is generated from a file that you create¹ in the following steps.

1. Create a *Settings File* with your presets.
 - a. This file is a mapping of song->preset. It is based on the patches you have selected for each song based on your gear manufacturers settings and midi implementation.
 - b. The recommended way to implement the *Settings File* is to start from the *Excel .xls (97 – 2003 workbook)* template file², downloaded from the [website](#). However, it can also be implemented from a blank *Excel .xls (97 – 2003 workbook)* or a *comma separated file (.csv)*.
 - c. The downloaded files need to be “unblocked”. Right-click and check the “Unblock” option in order to be able to edit the file(s).



- d. Note: Once the initial *Settings File* is created it will likely stay relatively constant over time. However, tweak it as necessary to zero in on your optimal sounds and effects.
2. Create your *Setlist File*.
 - a. The *Setlist File* contains the songs you will be performing at the gig, in the order performed.
 - b. The Setlist printout that we use on stage at the gig is printed from the *Setlist File* used in this process, so the SC-1 is “guaranteed” to match.
 - c. The required ways to implement the *Setlist File* are from a blank *Excel .xls (97 – 2003 workbook)* or a single column *text file (.csv or .txt)*.
 3. Install/ run the Application Program.
 - a. The *SC-1 File Creator application* will create a text [file](#) that will be uploaded to the SC-1.
 - b. Once the file is uploaded, the SC-1 can run standalone, no computer connection is required for live performance.

Note: this is the most complicated part of the process and as such there are videos to explain each step on the support [website](#). Below is a brief description of the files, their usage, and notes on setting them up.

¹ NOTE: There are example files available for download at www.nicedevices.com.

² Download all support files from www.nicedevices.com.



File Creation

Settings File

SC-1 Midi Ch-1 (BOSS GT-100 Settings)

BOSS GT-100/001 Midi Implementation

	A	B	C	D
	Preset Designator	Bank Number (0 - 127)	Program Change (0 - 127) (1 - 128)	CC(s) (0 - 127) Ex. #34,8,1 #71,0,1
1				
2	U01-1	0	1	
3	U01-2	0	2	
4	U01-3	0	3	
5	U01-4	0	4	
6	U02-1	0	5	
7	U02-2	0	6	
8	U02-3	0	7	
9	U02-4	0	8	
10	U03-1	0	9	
11	U03-2	0	10	
12	U03-3	0	11	
13	U03-4	0	12	
14	U04-1	0	13	
15	U04-2	0	14	
16	U04-3	0	15	
17	U04-4	0	16	
18	U05-1	0	17	

MIDI Implementation

Model: GT-100/GT-001
 Date: Apr. 30, 2014
 Version: 2.00 (GT-100)
 1.00 (GT-001)

BANK MSB	PROG CHG	GT-100	GT-001
0	1	#U01-1	#U001
0	2	#U01-2	#U002
:	:	:	:
0	99	#U25-3	#U099
0	100	#U25-4	#U100
0	101	#U25-4	#U100
0	102	#U25-4	#U100
:	:	:	:
0	126	#U25-4	#U100
0	127	#U25-4	#U100
1	1	#U26-1	#U101
1	2	#U26-2	#U102
:	:	:	:
1	99	#U50-3	#U199
1	100	#U50-4	#U200
1	101	#U50-4	#U200
1	102	#U50-4	#U200
:	:	:	:
1	126	#U50-4	#U200
1	127	#U50-4	#U200
2	1	#P01-1	#P001
2	2	#P01-2	#P002
:	:	:	:

1. RECOGNIZED RECEIVE DATA (Main Section)

CHANNEL VOICE MESSAGE

Received when the "SYSTEM: MIDI SETTING: RX CHANNEL" matches the number of the MIDI channel on which they arrive. Also, when "Omni Mode" for "SYSTEM: MIDI SETTING: OMNI MODE" is set to "ON," all MIDI channel numbers are received, regardless of the MIDI receive channel number.

Figure 4: Midi Implementation Tabs

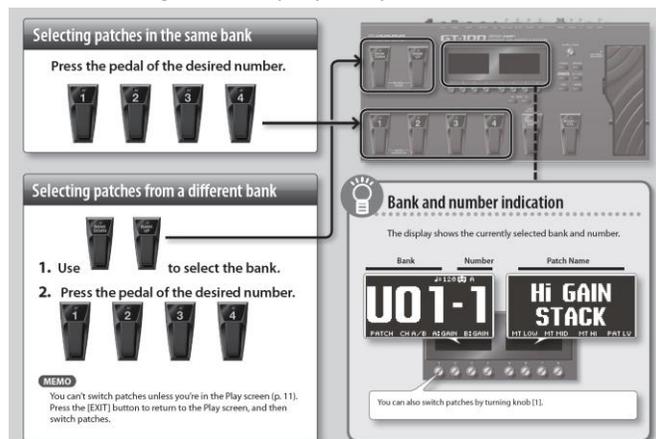
Manufacturers Implementation Tab Setup

This procedure describes a process using the *Excel Template file* downloaded from the support website.

Above is a *typical* midi implementation. The example shown here is for the *Boss GT-100 Multi-effects Pedal*.

In the Settings File template, there are tabs for 8-midi channels (*CH1* corresponds to midi channel 1, etc.).

- In column A on the midi channel spreadsheet, enter the Device/ Gear Preset Designator. The Preset Designator will be referenced on the main page to correlate the song to the gear preset. In this example, designators are U01-1, U01-2, ... (see above table). Each of these settings corresponds to a preset/patch on the GT-100 and is also the designator displayed by the GT-100.



- In column B enter the midi Bank Number for the corresponding Preset Designator. These will be found in the user manual for your gear. The GT-100 implementation is shown above.
- In column C enter the *Program Change* number, again from the gear manufacturers documentation.
- Column D is *Control Change* data. This is sometimes necessary to be sent to the gear along with bank, and program change information in order to select various sub-settings within the patch. For example, on certain controllers the Bank/Program Change selection may get you to a preset with multiple options. The *Control Change* command will then further specify a sub-option to select (ea. reverb on/off). A description of how to enter CC data in this field can be found [here](#) in this document.

With the downloadable template you can specify settings for up to 8 devices. These would be assigned midi channel 1 – 8 (corresponding to the spreadsheet tabs, CH1, CH2, etc.) .

Song/Preset Setup

MS-Excel Settings File

Comma Separated Value Settings File

	A	B	C	D	E	F	H	I
	Set-List Name	SC-1 Name	Command(s) Sent To Device	Notes	BPM (x 240)	Reserved	CH1	CH2
1	All About That Bass	All About Bass	0,40,1 0,0,2	Key of A	120		U10-4	1
2	All The Small Things	All Small Things	0,18,1 0,48,2				U05-2	100
3	All Fired Up	All Fired Up	0,63,1 0,69,2				U16-3	154
4	American Girl	American Girl*	0,18,1 0,123,2		105		U05-2	281
5	American Girl	American Girl-L	0,63,1 0,60,2				U16-3	127
6	Are You Gonna Be My Girl	Are You Gonna	0,18,1 0,45,2				U05-2	95
7	Billie Jean	Billie Jean	0,28,1 0,0,2				U07-4	1
8	Blow	Blow	0,63,1 0,69,2				U16-3	154
9	Cake By The Ocean	Cake By Ocean	0,40,1 0,58,2				U10-4	123
10	Can't Stop the Feeling	Cant Stop Feeling	0,4,1 0,31,2				U01-4	49
11	Dead or Alive	Dead or Alive*	0,45,1 0,68,2				U12-1	147
12	Dead or Alive	Dead or Alive	0,18,1 0,69,2				U05-2	154
13	Dirty Deeds	Dirty Deeds*	0,6,1 0,46,2				U02-2	96
14	Dirty Deeds	Dirty Deeds	0,18,1 0,69,2				U05-2	154
15	Dirty White Boy	Dirty White Boy	0,50,1 0,29,2				U13-2	47
16	Don't Stop Believing	Dont Stop	0,62,1 0,59,2				U16-2	124

```

1 All About That Bass,All About Bass,"0,40,1 0,0,2",Key of A,120
2 All The Small Things,All Small Things,"0,18,1 0,48,2",,
3 American Girl,American Girl*,"0,18,1 0,123,2",,105
4 American Girl,American Girl-L,"0,63,1 0,60,2",,
5 Are You Gonna Be My Girl,Are You Gonna,"0,18,1 0,45,2",,
6 Billie Jean,Billie Jean,"0,28,1 0,0,2",,
7 Blow,Blow,"0,63,1 0,69,2",,
8 Cake By The Ocean,Cake By Ocean,"0,40,1 0,58,2",,
9 Can't Stop the Feeling,Cant Stop Feeling,"0,4,1 0,31,2",,
10 Dead or Alive,Dead or Alive*,"0,45,1 0,68,2",,
11 Dead or Alive,Dead or Alive,"0,18,1 0,69,2",,
12 Dirty Deeds,Dirty Deeds*,"0,6,1 0,46,2",,
13 Dirty Deeds,Dirty Deeds,"0,18,1 0,69,2",,
14 Dirty White Boy,Dirty White Boy,"0,50,1 0,29,2",,
15 Don't Stop Believing ,Dont Stop,"0,62,1 0,59,2",,
    
```

Figure 5: Settings Files

After setting up the *Manufacturers Implementation* tabs for your gear, you'll need to set up your song-to-patch mapping (*Main Tab*).

- In column A enter the song title. This needs to match the *Setlist song* title for each song. This column is scanned by the *Application Software* to generate the SC-1 file used during runtime.
- In column B enter the song title to be displayed on the SC-1. This field is limited to 16 characters.
 - Note: an asterisk * is placed after the song title to represent that a patch follows that is part of the same song. This is handy for songs with a rhythm patch and lead patch that need to be switched between (forward/back).
- Column C is generated from your patch selection(s) for each channel (Column's H – V) and the gear manufacturers implementation date (CH1 – CH8 tabs). This is generated from formulas in the template spreadsheet.
 - Note: since the example template spreadsheet is imbedded with formulas, care must be taken when adding, copying, or deleting anything.
 - A description of how to best manage data in this file is described in the associated instruction video.
 - It is recommended to save a backup of files in order to revert back if necessary.

- Column D is for “memo notes” (optional). These will show up on line-2 of the SC-1 display for the associated song and are handy for reminders (ea. song key, “que vocalist”, etc.). This field can be left blank.
- Column E is for a BPM/ Tempo setting (optional). If this column holds a numeric value, the LED on the SC-1 will flash at that tempo for 16 beats. This is useful to help start the song at the same tempo every time. This field can be left blank.

Note: the data described above can also be programmed in a .csv file (see table above) however it is recommended to use the Excel template(s) when possible.

The spreadsheet template has many built in functions to facilitate generation of the midi command output data. Care must be taken to perform copy/ paste/ cut. You can find video’s describing the process on the [website](#).



Figure 6: Spreadsheet Edit Buttons

The worksheet is protected to preserve the embedded formulas. Macro buttons serve to facilitate data editing.

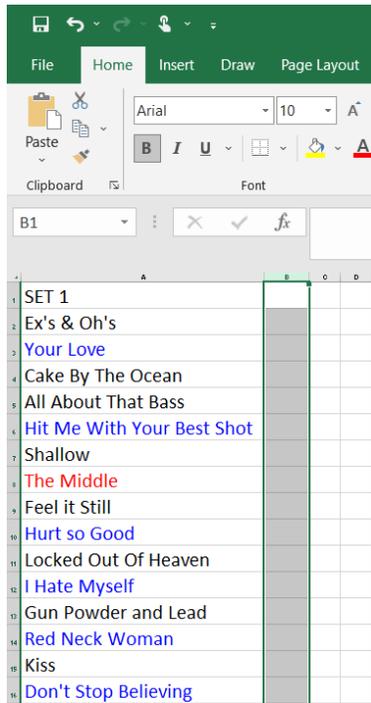
- *Delete Row(s)* – deletes the one or multiple row(s) selected by the cursor.
- *Insert Row* – inserts a single blank row above the current cursor highlighted row.
- Data can be added at the end of the list and sorted using the “*Sort Table*” button. This is probably easiest for adding multiple new songs.
- If you need multiple patch settings for the same song, for example a clean and lead patch to switch between, use the “*Copy Row*” button. This will make a copy of the song on the row directly below and the patch data can be changed for this entry.
- The “*Clear Data*” button will clear the row data if you need to start over or erase an entry.
- Data can be filtered by using the filter drop-down tab (shown below). This is handy for seeing which songs have been mapped to a specific patch and which songs might be affected by changes made to the patch.

H	J	L	N	P	R	T	V
CH1 <input type="button" value="v"/>	CH2 <input type="button" value="v"/>	CH3 <input type="button" value="v"/>	CH4 <input type="button" value="v"/>	CH5 <input type="button" value="v"/>	CH6 <input type="button" value="v"/>	CH7 <input type="button" value="v"/>	CH8 <input type="button" value="v"/>
U10-4	1						
U05-2	100						

Figure 7: Dropdown Sort Tabs

Setlist File

MS-Excel Setlist



Text (or .csv) Setlist

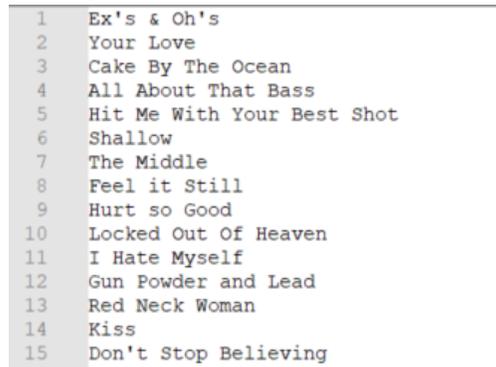


Figure 8: Setlist Examples

Above are example Setlists. These can be downloaded from the [website](#). The Excel spreadsheet example shows a (partial) list of Set 1 songs. There are multiple tabs (not shown) in this spreadsheet for Set-2 and Set-3, however the spreadsheet can also be implemented as a single tab. If there are multiple tabs, the *SC-1 Setlist Creator Application* software will search through each tab to generate the SC-1 output file. If desired, the Setlist can be a text file (.csv or .txt).

The "setlist" file will be changed frequently but the "settings" file will not need to be changed unless new songs are added or presets are changed. The "setlist" file can also be saved as a .csv or .txt text file and edited with *Notepad* or other text editor.

SC-1 File Creator Application

The SC-1 File Creator Application produces a “runtime” file from the *Setlist* and *Settings* files (described above). This output is used by the SC-1 to send (midi) preset information to your gear.

Installation³

1. Download the latest Setlist File Creator application software from the support [website](#).
2. Double click on the downloaded file and then double click on “*setup*”.

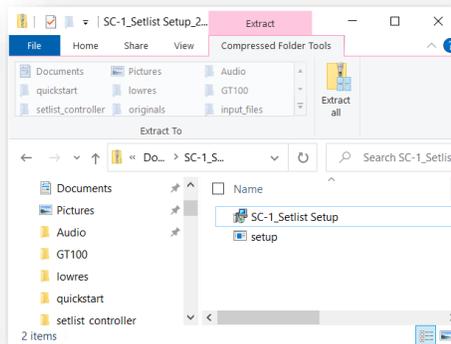


Figure 9: SC-1 Application File

3. You may get a notification (shown below). Click on “More” and then click “Run Anyway”.

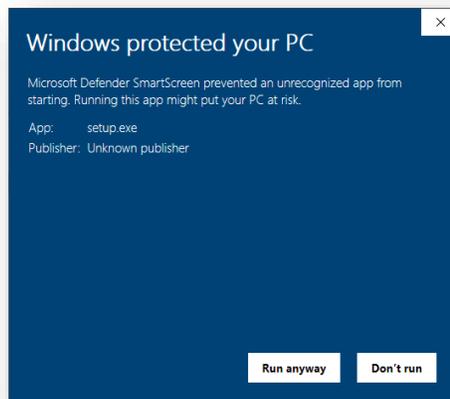


Figure 10: Windows Notification

Connect to SC-1

The SC-1 is able to communicate with your laptop or PC on one of three Wi Fi channels (1, 6, & 11). You will want to pick the channel with least interference and best performance for your local area. It’s recommended to start with channel 11 and if performance suffers (unable to connect) try restarting the connection or use one of the other channels.

³ This is a one-time operation.



1. From a power-off state hold down the *left/BACK* footswitch button to start up the SC-1 in *programming mode* on *Wi Fi channel 11*. Plug in the power adapter to apply power to the device keeping the button held down until the unit powers up.



Figure 11: Select Program Mode Channel 1

2. When the device powers up it will be in *Program Mode* and the LCD screen should appear as shown below (*note: channel 01 is shown but channel 11 is the desired starting connection*). Release the button. The LED will flash until the device connects to your PC. When connected, line 2 of the display will show “*Connected...*”.

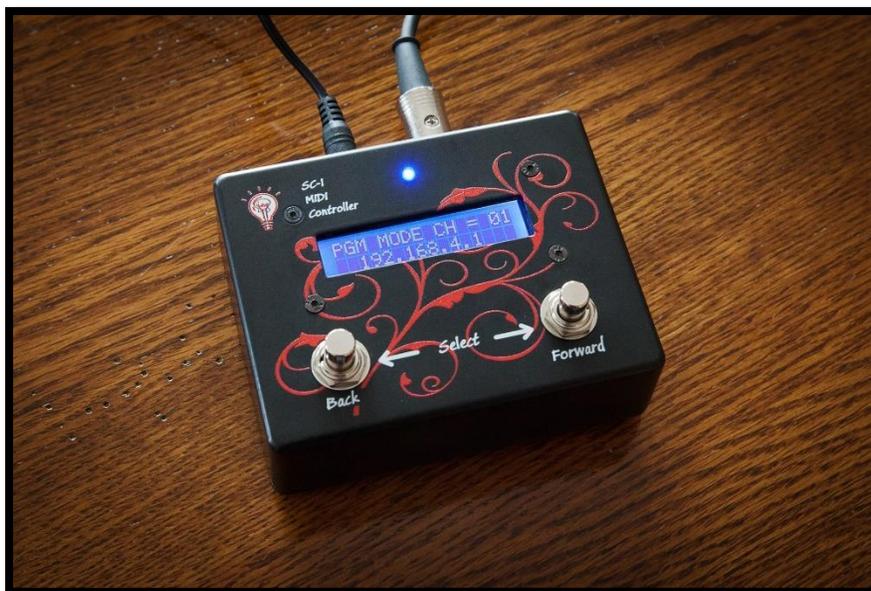


Figure 12: Setlist Select Screen



3. If there are programming performance issues during programming, return here and select Wi-Fi channel 6 by holding down the right button during power up. Similarly, to select channel 1 hold down both buttons on power up.
4. On your laptop or PC, go to *Internet Access settings* and connect to “*Set-list_xx*”⁴ as shown in *Figure 21*. You don’t need to disconnect from your current Wi Fi in order to connect to the SC-1.
5. A secure connection is required and the password is “*12345678*” as shown in *Figure 23*. Click on *CONNECT* and you should now be connected to the SC-1.

SC-1 Application



Figure 13: Setlist File Creator Application

1. Navigate to *Windows Start-> setlist creator* and click to open the applications software (installed in the *Installation* step on page 12).
2. Select the *Setlist File* (created in *Setlist File* on page 10).
 - a. Note: If using .csv or .txt files check the “*Use .csv files*” checkbox.
 - b. Note: the resultant output (*.JSON file*) will be saved in the same folder as the *Setlist File*.
3. Select the *Settings File* (created in *Settings File* on page 8).
4. Click on *Create Output* and the “runtime” output file is generated.
 - a. The location of the SC-1 setup file is displayed in the *JSON file* textbox and in the *Output status* screen.
 - b. Informational output is displayed in the *Output status* screen in blue.
 - c. Errors or notes are displayed in red.
 - i. In the example above, it is showing that there is no song date for the page headers (Set 1, Set 2, and Set 3 – see example) in the spreadsheet. This is expected since these are not

⁴ XX represents the channel number. If the device is on channel 1 the Wi Fi screen will show “*Setlist_01*”



song names, however if the song data entered in the *Setlist File* has no match in the *Settings File* then this is important to correct before proceeding.

5. Click upload to upload the Song/Presets runtime file to the SC-1.
 - a. If there are *errors*, they will be displayed in the application window.
 - i. Wait and try again.
 - ii. Disconnect and reconnect.
 - iii. Try a different Wi Fi channel as described above.

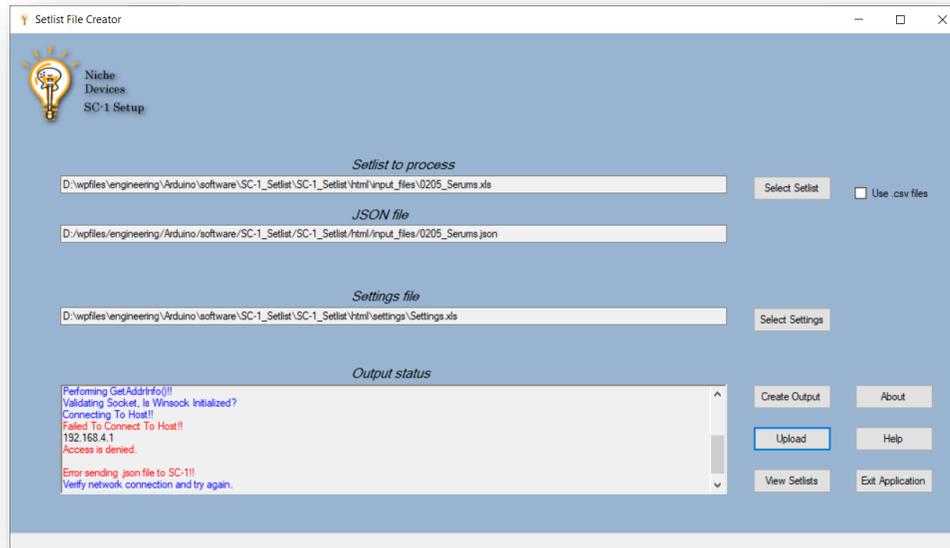


Figure 14: Upload Error Message(s)

6. When completed successfully the following screen will be displayed.

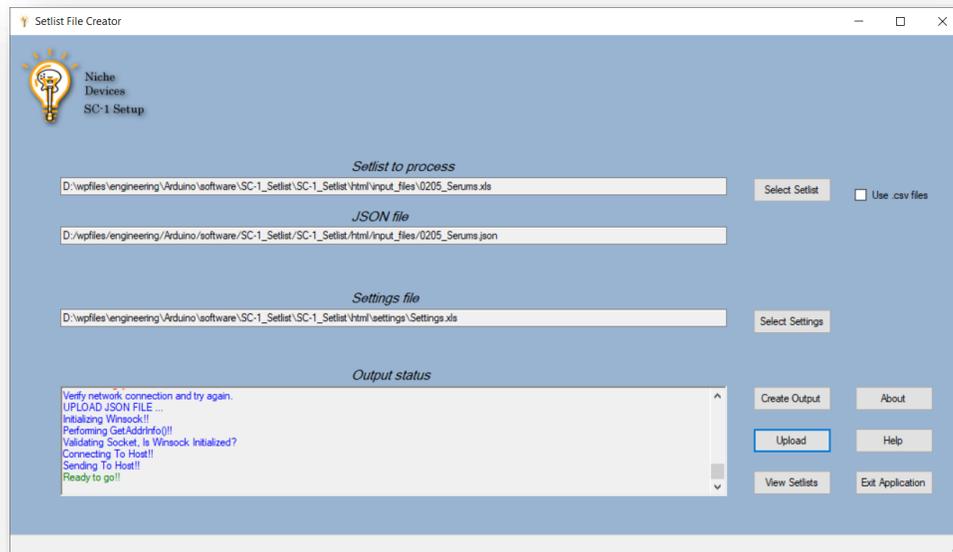


Figure 15: Successful Runtime File Upload

7. Additional options:

- a. **“About”** will show the revision of the *Setlist File Creator* application.
- b. **“Help”** will bring up a browser and redirect to the support website.
- c. **“View Setlists”** will open a browser and link to the SC-1 file server. From here you can load/ view/ modify setlists on the SC-1 as described below on page 21 for more information).
- d. **“Exit Application”** – as described.

Run Mode

Select Setlist

When the unit powers up with no buttons held down the SC-1 starts up in *Set-list Selection* mode.

1. Press the *Forward* button to move forward through the saved Set-lists and press the *BACK* button to go to the previous entry.



Figure 16: Setlist Selection Mode

2. When the desired setlist is displayed press both buttons simultaneously and hold for approximately 3-seconds to select it and run the file in *Performance Mode*.

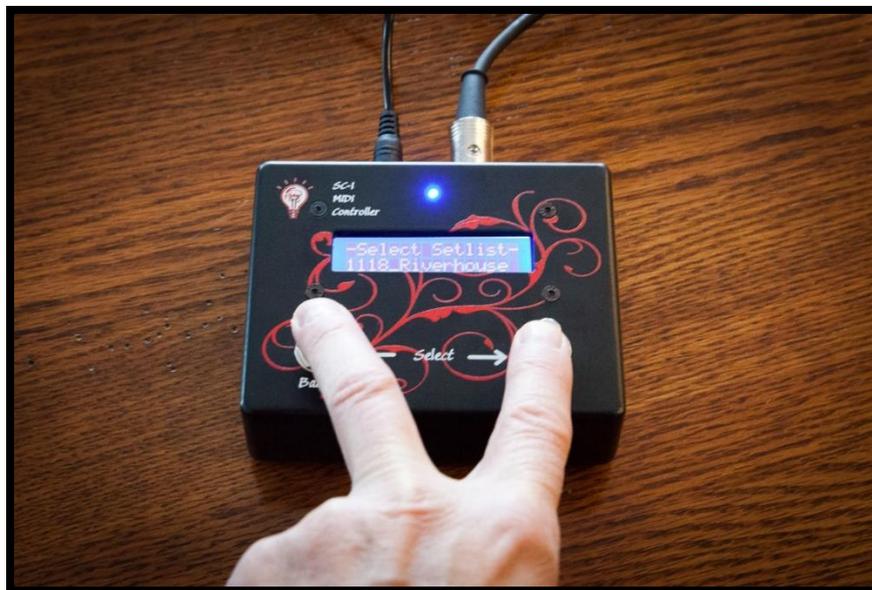


Figure 17: Select Setlist Operation



Delete Setlist

1. To delete a setlist on the SC-1 hold the left (*Back*) button for 3-seconds.
2. Press the right (*Forward*) button to Delete. The screen will revert to scroll/ select mode.
3. Press the left (*Back*) button to exit without deleting. The screen will revert to scroll/ select mode.



Figure 18: Delete Setlist Screen



Performance Mode



Figure 19: Operating Mode Screen

This mode is used during live performance. The songs will appear in the order entered from your *gig Setlist file*.

When switching to this mode from *Set-list selection* mode the first song in the list will appear and *Midi program change* and *CC* data will be sent to the device(s) for the song immediately. Pressing the momentary *Forward* switch will go to the next song title/preset and send Midi data associated with that song/preset to the device(s). Pressing the momentary *Back* button will go to the previous song title/preset and send Midi data associated with that song title to the device(s). Each time a new song title is selected the Midi data will be sent out over the Midi bus and the associated devices will respond according to the *Program Change* and *Control Change* data entered for the device/*channels*.

If data was entered in the *Memo* field during the programming steps it will appear on line 2 of the LCD. If this field is left blank line 2 on the LCD will show *[n of total]* where n is the current preset position in the list and total is the total number of presets in the Set-list file.

If a *tempo value* was entered in the *BPM* field during programming the LED will flash (1/4 notes) at the tempo rate entered for 16 beats. If this field was left blank the LED will remain on (no blinking) for the song.



It is sometimes necessary to jump ahead or back in the list quickly. To achieve this there is a fast-forward/reverse scroll mode. To enter this mode, press both the *Forward and Back* buttons at the same time and hold for approximately 3-seconds. The display will change and the “<” and “>” arrows will be displayed. Pressing the forward button will jump ahead by 10 songs, and pressing the back button will jump back by 10. To exit this mode, press the *Forward and Back* buttons again simultaneously and hold for approximately 3-seconds.



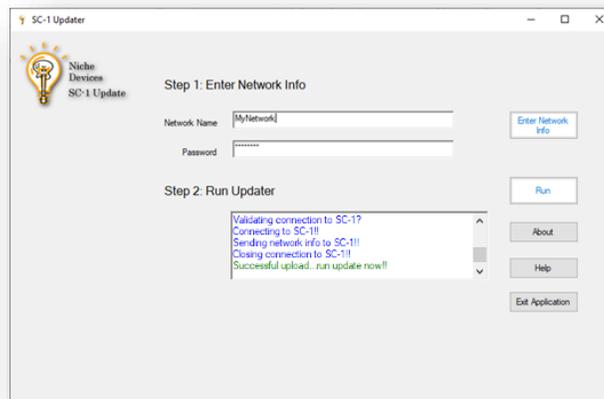
Figure 20: Fast Forward/Reverse Screen



Firmware Update

Firmware updates may include performance enhancements and/or bug fixes. To perform a firmware update, follow the steps below:

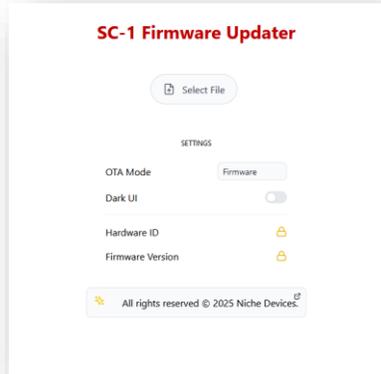
1. From the website (<https://www.nichedevelopers.com>) download the following:
 - a. *Firmware Update Application*.
 - b. Latest Firmware binary file (*setlist.ino.esp32.bin*).
 - i. **NOTE:** the latest version will be listed on the website. If you already have this version installed in most cases it shouldn't be necessary to re-install it.
2. Install the *Firmware Updater Application*.
 - a. Installation will follow similar steps as described for installation of *SC-1 File Creator Application* on page 12.
3. Connect your laptop/PC device to the SC-1 via WIFI as described above in section "*Connect to SC-1*".
4. Open the *Firmware Update Application* from the windows->start->SC-1 Updater.
 - a. Type in credentials for "your local wireless network" (*Network Name and Password*).



5. Click the "*Enter Network Info*" button. This will download the network information to the SC-1. Check the Run window for any errors and *re-connect* if necessary. When successful you will get the following message: "*Successful upload...run update now!!*" in the updater status screen as shown above.



- 6. Next click the Application Update “Run” button. This opens a webpage in your browser as shown below:



- 7. Click on the “*Select File*” button in the browser window and from the explorer popup locate the “*setlist.ino.esp32.bin*” binary file that was downloaded in step 1. Select the binary file and click open in the explorer window.
- 8. The firmware will start downloading from the PC to the SC-1 immediately and will be installed on the SC-1. A progress screen will be displayed on the webpage and on the SC-1 as the firmware is updated:

Updater Window



SC-1 Screens



...



9. Upon successful completion you will see the following screens. The SC-1 will reset and start up in run mode. This is a normal completion of the firmware update process.

Updater Window



SC-1 Screens

A screenshot of a blue LCD display showing the text "FW Status Update Success!!" in white, monospaced font.A screenshot of a blue LCD display showing the text "MESSAGE: 0 SW_CPU_RESET" in white, monospaced font.A screenshot of a blue LCD display showing the text "MESSAGE: 1 SW_CPU_RESET" in white, monospaced font.

10. Additional options:

- a. "About" will show the revision of the *Firmware Updater Application*.
- b. "Help" will bring up a browser and redirect to the support website.
- c. "Exit Application" – as described.



Browser Setlist Viewing and Modification

NOTE: The following is provided as additional information only. This method can be used to “tweak” settings over Wi Fi using a standard web browser (ea. Safari, Firefox, etc.).

Programming steps can be performed over Wi Fi using an internet browser on your wireless device (iPhone, or iPad, android tablet, etc.). No software needs to be installed on your device for the SC-1 to be modified in this manner. This is handy if at the gig last minute changes need to be made without a laptop present.

1. Start up the SC-1 in Programming Mode (described in *Programming Mode* section on page 7) and connect to the SC-1 from your “settings->Wi Fi” screen.
2. Open a browser on your wireless device and enter the IP address “192.168.4.1” in the address field. This is entered in the browser area where normally you would enter the domain name for the page you are viewing. The initial *Set-list Creator* page as shown in *Figure 24* should load.
3. To recall a stored Set-list for editing click the *Select* button. All saved *Set-lists* should be displayed in a drop-down menu. Click on the desired drop-down entry, press *Load* and the Set-list will be loaded for editing.
4. To program your song and Midi data refer to *Figure 25*.
 - a. There are four text entry fields:
 - i. Song Title (**16** characters max)
 - ii. MIDI Patches
 - iii. User Memo (**16** characters max)
 - iv. Beats Per Minute – BPM (Tempo value < **240**)
5. To add songs to an existing Set-list click on the **+** (plus) icon in the upper right corner of the screen. This will add blank lines to the end of the page where you can enter *new* song and Midi data.
6. Click in the area on the line you want to enter/modify data for each field. This should open a text box and you can type in your information.

There are two types of Midi data that can be programmed into the SC-1 and associated with each song; *Bank and Program Change* information, and *Control Change (CC)* values. These are entered on the same line as the associated song. There are three comma separated numerals required for each Midi entry.

7. MIDI bank and program change information is entered as follows:
 - a. The first (leftmost) number is the *MIDI Bank Number*. Midi devices have from 0 to 15129 banks. Practically, most devices have a few hundred or less. Enter a 0 for the bank number if no bank information is required for your device.
 - b. The 2nd (middle) field is the *MIDI Program Change number*. This can range from 1-128. Enter the program change number for the associated bank.
 - c. The last (rightmost) field is the *MIDI Channel Number*. This can be a number from 1-16 and is the number associated with the MIDI device.
 - d. After entering the MIDI data for device-1, you can enter additional fields to select presets on additional devices⁵. Multiple device fields need to be separated by spaces.

⁵ This is accomplished by connecting additional devices to the MIDI THRU continuing on to the last device, or by using a MIDI Splitter.



- e. An example entry would be “0,3,12 1,5,7”. This would select bank 0, program change 3 on the Midi device programmed to Midi channel 12, and bank 1, program change 5 on the device programmed to Midi channel 7.

Midi Control Change (CC) information is a MIDI message capable of transmitting a range of values, usually 0-127. The MIDI Spec makes 128 different continuous controllers available for each MIDI channel, although some of these have been pre-assigned to specific functions based on the music device. CC's are commonly used for things like MIDI controlling volume (#7), pan (#10), data slider position (#6), mod wheel (#1), and other variable parameters.

8. MIDI CC information is entered as follows:
 - a. Start each CC command with the hash sign #.
 - b. The first character following the # will be the *CC number* (0 – 127)
 - c. The 2nd value will be the *CC parameter*. For example, for volume settings you would type #7 followed by a comma followed by the volume setting (again a number between 0-127).
 - d. The 3rd CC parameter is the *Midi channel number* (1-16).
 - e. An example, to set the volume for Midi channel 1 to a value roughly 50% of maximum you would enter the command “#7,64,1”.
 - f. CC strings can be entered alone, or after *bank and program change* information separated from other data by a space. See Figure 25 for examples of song and Midi data entry fields.
9. In the (optional) *User Text/Memo field* enter “helpful” information pertaining to the song. This is intended to be information about the key of the song, possibly who starts the song, pickup and switch settings, or whatever information is desired to be listed for the song. This information will be displayed on line 2 of the LCD. If this field is left blank line 2 on the LCD will show [n of total] where n is the current song position in the list and total is the total number of songs in the Set-list (shown below).
10. In the (optional) *BPM field* enter the beats-per-minute (tempo) of the song. When the song comes up in *Performance Mode* the LED will blink at the specified tempo for 16 beats then return to on-solid. This is particularly useful to always start the song at the same tempo. NOTE: This value must be less than 240 beats per minute. If this field is left blank the LED will remain on (no blinking) for the song.
11. To delete a song (row) click on the delete icon  on the line of the song you want to delete.
12. To move a song up in the list order press the up arrow  and to move a song down one place click on the down arrow .
13. To save the *Set-list* make sure the correct name is in the *NAME Field* and click on the *Save* button. You can load a song under one name, make changes, and save it under a different name. In this case the information stored under the original name will not be changed.
14. A *Set-list* can be deleted by entering the name in the *Name Field* and clicking on the *Delete* button.
15. Once all of the Set-list information is entered the SC-1 can be powered down and all data (saved previously and in step 13) will be retained in the device. At this point the device is ready to be used in *Performance Mode*.

This concludes the setup and operation description of the SC-1 controller.



Appendix A

Internet Connection



Figure 21: Internet Connection PC





Figure 22: Internet iPhone Connection



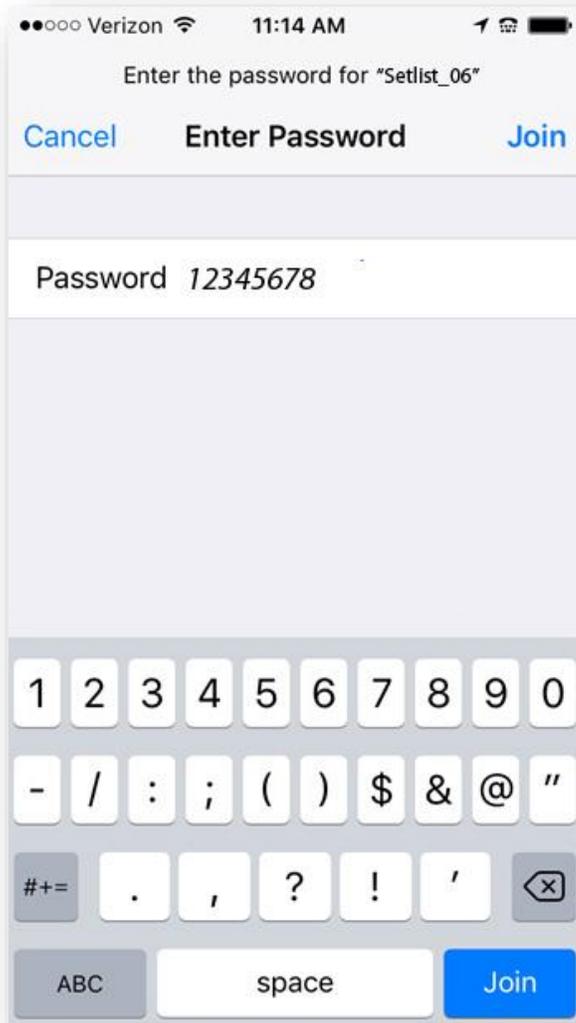


Figure 23: Password Entry iPhone



Programming Mode iPhone

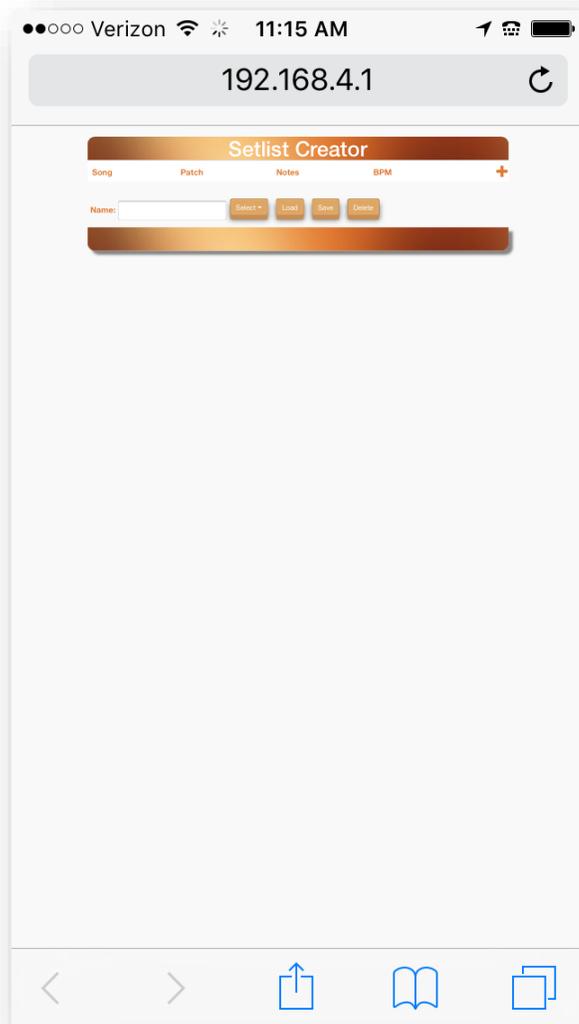


Figure 24: iPhone Initial Setup Screen



Programming Mode Laptop

Song	Patch	Notes	BPM	
Separate Ways	0,1,3 #7,64,3	Keys Start		
Blue Collar Man	0,2,3			
Jessies Girl	1,23,3	Guitar	100	
Are You Gonna	64,16,3 0,123,5			
Hit Me	0,65,3 #7,64,3			
Your Love	0,122,3	Guitar Starts	112	
The Middle	12,32,3		150	
Rollin Deep	123,115,3	Guitar Starts	95	
Take it Easy	0,1,3			
Forget You	64,16,3 0,123,5			
Hurt So Good	0,15,3	Guitar Starts	112	
All About Bass	0,34,3			
Dance Night Away	64,16,3 0,123,5		115	
Jump Around	0,0,3			
Bad Case	0,43,3 0,123,5 #7,100,5			
Hate Myself	0,0,3			
Country Girl	2,46,3 0,123,5			
Own Worse Enemy	0,15,3	Guitar Starts	112	
I Love RnR	64,12,3 0,123,5			
Living on Prayer	0,15,3			
You Shook Me	5,78,3			

Name:

Figure 25: Web Interface Setup Screen