

Helmsman User Guide v1.5

By Nelson Bairos (MonkeyBasic)

Introduction

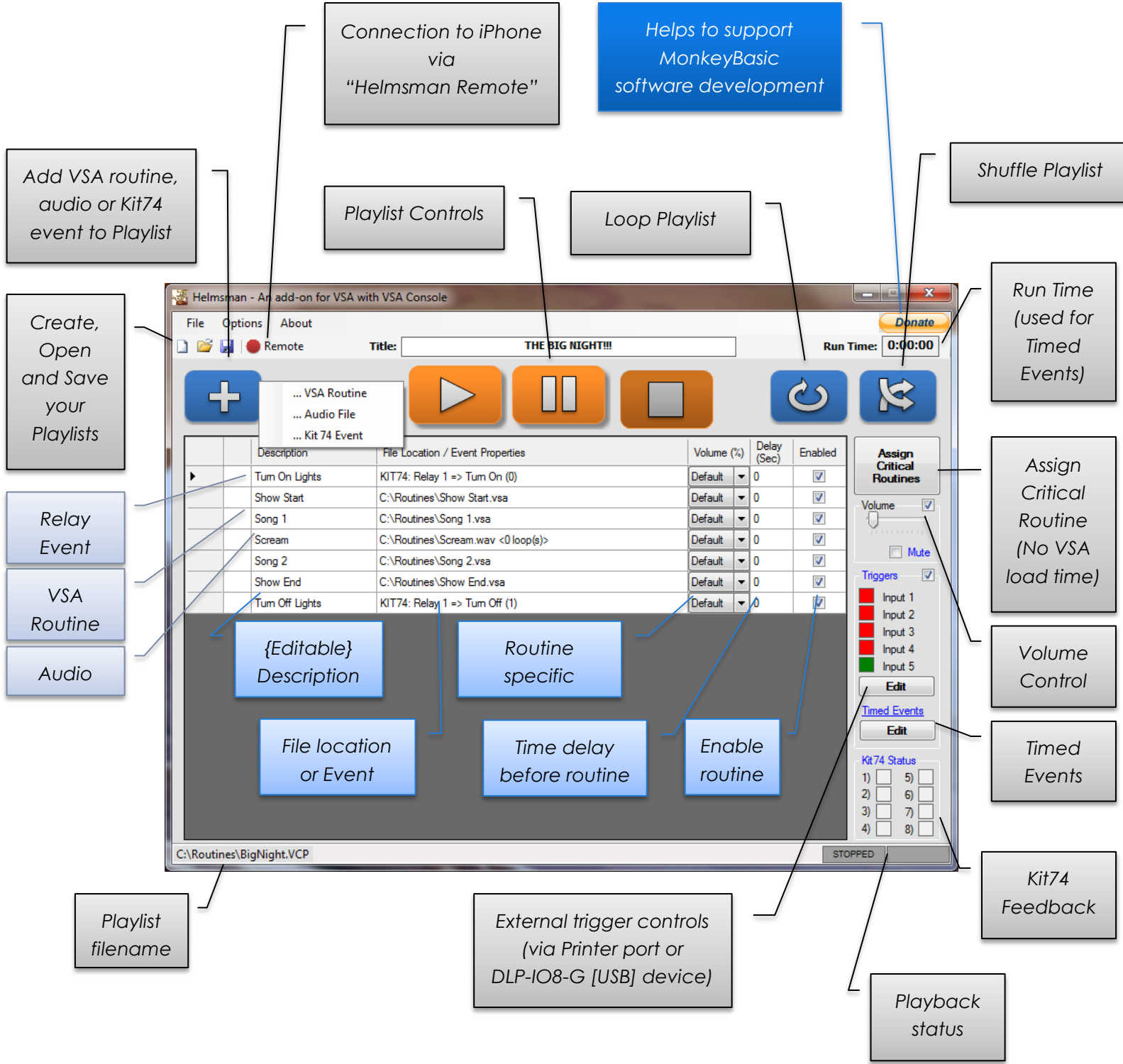
Helmsman is an application first developed for the haunter community to help automate Brookshire Software VSA routines. It has since grown to allow for more interaction with the audience with the addition of external triggers that can launch specific routines or actions. Helmsman can be considered similar to a media player for routines with some great extras. You can create playlists of routines and/or audio files, add delays, control a Kit74 relay board, and more.

Helmsman was first developed in 2008 under the name Composelt (for lack of a better name). It has since been modified, tweaked and stuffed with features. It will forever be an evolving application. Users have always been welcome to submit ideas to nelson@monkeybasic.com. Enjoy!

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Overview




Playlists

A playlist can be a group of VSA routines, audio, Kit 74 Events or a mix of all three.

VSA Routines

VSA Routines are the files created by Brookshire Software's Visual Show Automation (VSA) software. More information can be found here <http://brookshiresoftware.com>

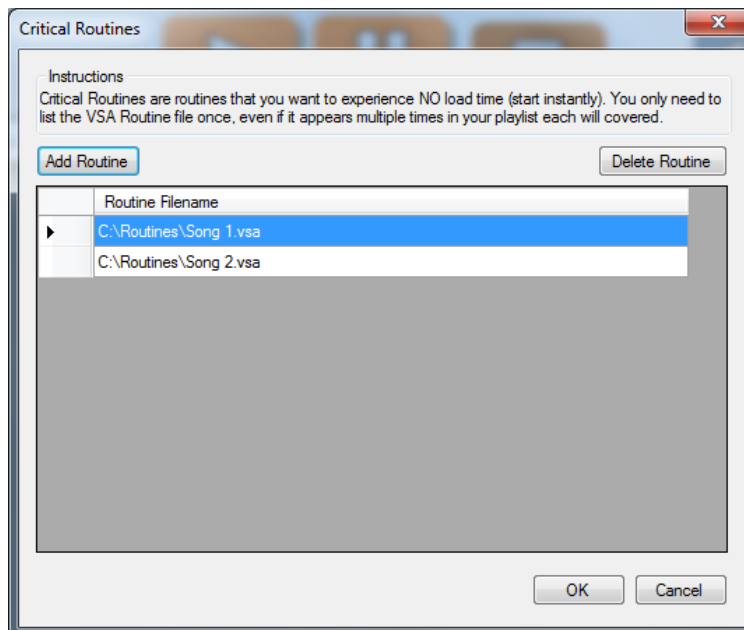
HOW TO: To add a VSA routine, click the  then choose "... VSA routine"

**Please make sure the routine file runs in VSA itself,
without any popups or other error messages.**

Critical Routines


Critical Routines are routines that are pre-loaded into VSA to minimize the load time required to start the routine.

HOW TO: Click the "Assign Critical Routines" button on the right hand side. Enter the routines you wish to be treated as Critical.

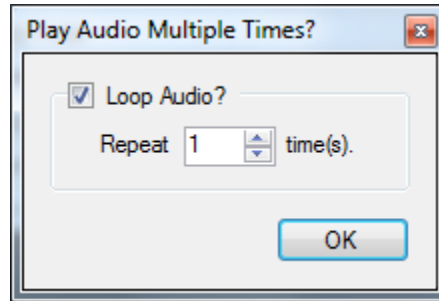


Critical routines only need to be listed once.

Audio File

HOW TO: To add an Audio file, click the  then choose "... Audio File"

OPTIONS: You will be prompted if you want to Loop the audio, this will repeat the same track in succession for the number times you select.




.....
Audio files can be either a Wave (WAV) or an MP3.
.....

Relay Events:

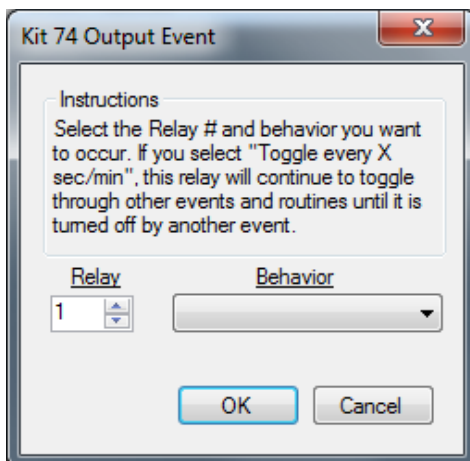
Relays can be incorporated in two ways, a Kit 74 Relay board or Phidgets 1014 USB board.

The Kit 74 is a printer port relay board that contains 8 relays capable of switching 12VDC/10A or 240VAC/5A. This board is available from <http://KitsRUs.com>

The Phidgets 1014 USB board contains 4 relays that are capable of switching 100VDC/5A or 250VAC/10A. **Helmsman supports up to 2 of these boards for a total of 8 relays.** This board is available from <http://phidgets.com>

HOW TO: To add a Relay Event, click the  then choose "... Relay Event"

OPTIONS: You will be prompted to select which relay (1 through 8) and the behavior you wish to occur. These can be any of these options:



Option	Result
Turn On	Switch relay On
Turn Off	Switch relay Off
Toggle Once	Invert relay (On goes Off, Off goes On)
Toggle every XX seconds	Switch relay Off, wait XX seconds, switch relay On
Toggle every XX minutes	Switch relay Off, wait XX minutes, switch relay On

Volume Control

Volume Control allows you to alter the volume of the playlist directly within the application. You can set a default volume for the entire playlist or set custom volume levels for individual routines/audio files.

Default Volume

HOW TO: Check off the box next the "Volume" on the right hand side. This will enable a slider that will adjust your PC's volume. You can also mute the volume as well.

Routine Specific Volume

HOW TO: Each row of the playlist, contains a column labeled "Volume (%)". There are two options:

Option	Result
Default	This option will use the default value set for the entire playlist.
0% through 100%	This will set the volume to the specified percentage.

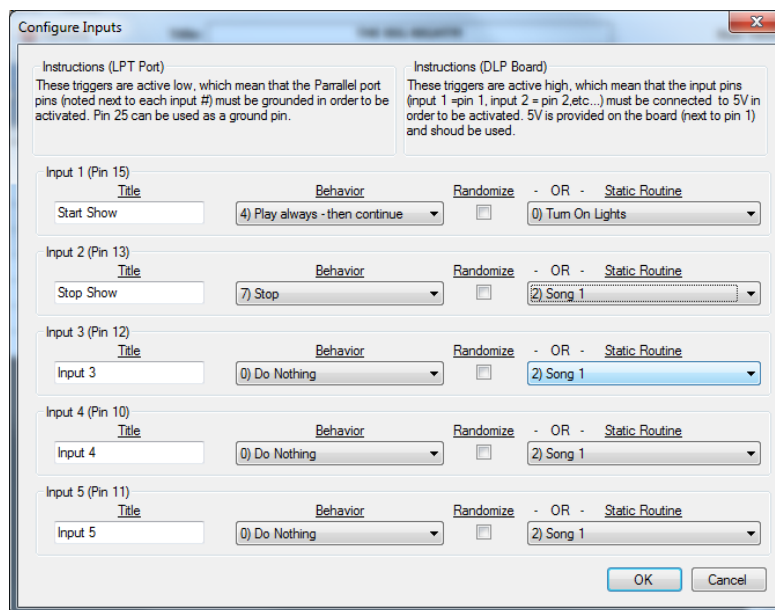
Triggers

Triggers allow for external influences to effect the playback of your playlist

Configuration

There are currently 8 separate triggers that can be configured.

HOW TO: Check off the box next the “Triggers” on the right hand side. This will enable a feedback display as well as an “Edit” button. Clicking the “Edit” button, will allow the user to configure the trigger behaviors. The following dialog will be displayed.



OPTIONS: You may enter a custom Title, select a behavior (see table below), then a random routine or a specific one from the dropdown.

Option	Result
0) Do Nothing	Default – Trigger is ignored
1) Play if nothing is playing - then stop	If playlist is not running, plays a single routine only
2) Play if nothing is playing - then continue	If playlist is not running, starts playlist at a specific point
3) Play always - then stop	Plays a single routine only no matter what the playlist is doing
4) Play always - then continue	Starts playlist at a specific point, no matter what is playing
5) Play always - then restart previous	Plays a single routine, then returns to what was playing before
6) Pause	Pauses the playlist
7) Stop	Stops the playlist

Trigger Sources

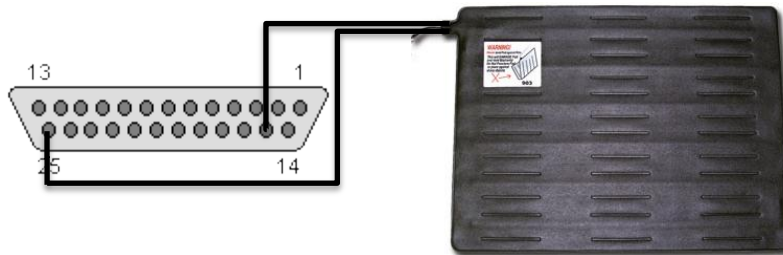
Triggering can be accomplished by 3 different external sources, a printer port, the DLP-IO8-G (USB) device and/or Keyboard input.

Printer Port

Using the printer port, there are 5 input pins that can be used for triggering. These pins (triggers) are active low, which means that the pins must be grounded in order to be activated. Pin 25 can be used as a ground pin.

Printer Port Pin	Usage
15	Trigger 1
13	Trigger 2
12	Trigger 3
10	Trigger 4
11	Trigger 5
25	Ground

Example: Pressure Mat connected to Trigger 1 (Pin 15)



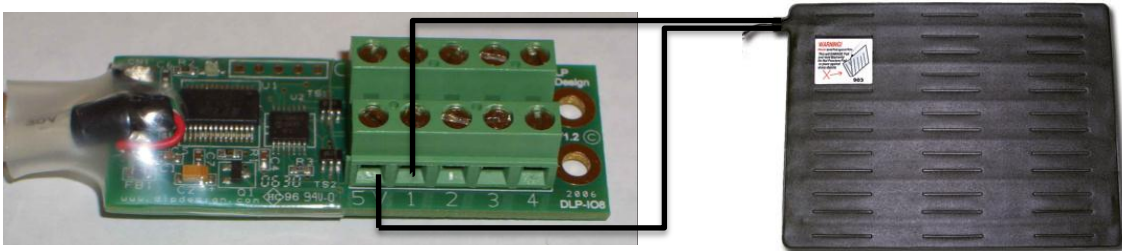
Note: Under the "Options" menu item, make sure that "Printer Port" is selected under "Trigger Type". The default value of 378 should work for the majority of computers.

DLP-IO8-G (USB)

This device is available from multiple distributors. Search google for "DLP-IO8-G" and you should find it for \$29.95

These triggers are active high, which mean that the input pins (trigger 1 = pin 1, trigger 2 = pin 2, etc...) must be connected to 5V in order to be activated. 5V is provided on the board (next to pin 1) and should be used.

Example: Pressure Mat connected to Trigger 1



Note: Under the "Options" menu item, make sure that "DLP-IO8-G" is selected under "Trigger Type". Also, select the Com Port that the board is connected to.

If you experience strange or random triggering with the DLP-IO8-G board, the solution is to install pull-down resistor between Ground and each of the inputs (1 through 8). I recommend 10K ohm resistors.

Here is a quick picture of my board in testing (you can accomplish this by soldering the resistors on the back side as well, much cleaner).



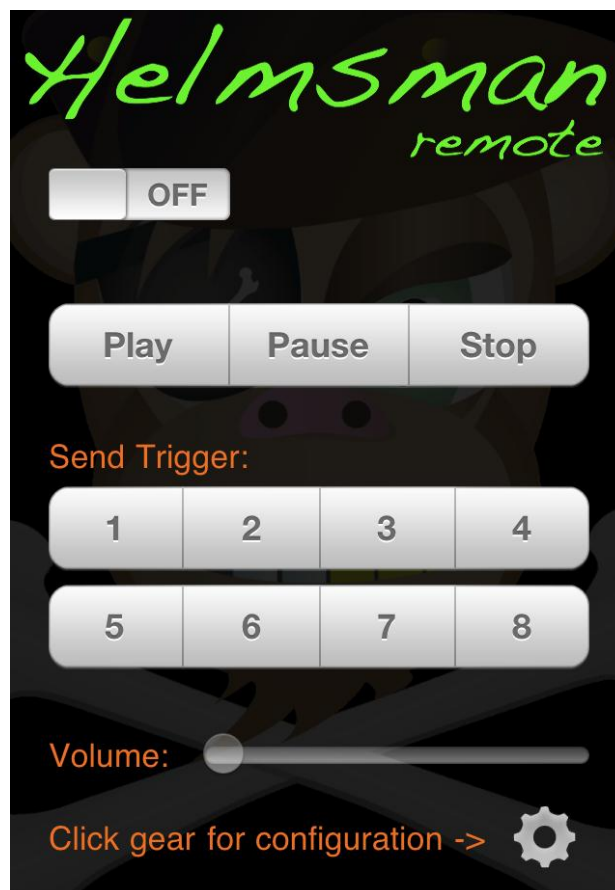
Keyboard

You can also trigger via the Keyboard. The following key combinations are available.

Key Combination	Result
[ALT] + [1]	Trigger 1
[ALT] + [2]	Trigger 2
[ALT] + [3]	Trigger 3
[ALT] + [4]	Trigger 4
[ALT] + [5]	Trigger 5
[ALT] + [6]	Trigger 6
[ALT] + [7]	Trigger 7
[ALT] + [8]	Trigger 8

iPhone

You can also trigger using an iPhone with the free Helmsman Remote app. You can find more information and obtain a copy here: <http://itunes.apple.com/us/app/helmsman-remote/id385020097?mt=8>



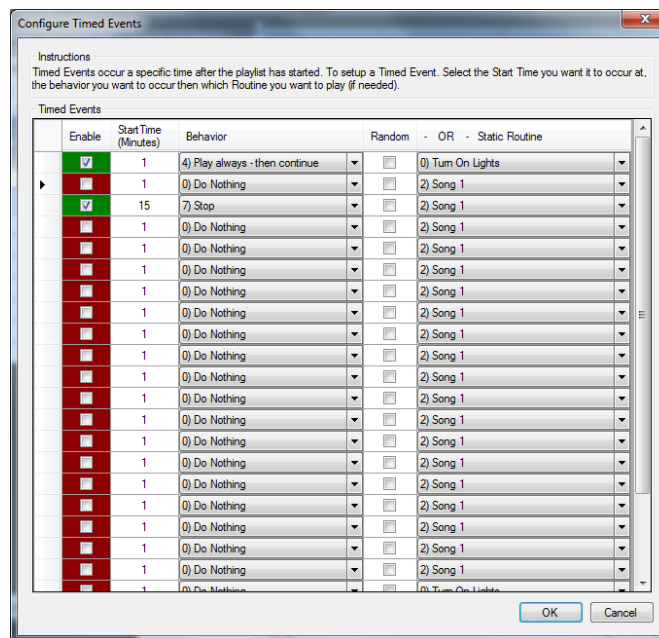
Timed Events

Timed Events allow you to schedule events during the playback of your playlist

Configuration

There are currently 25 separate timed events that can be configured. These are very similar to triggers.

HOW TO: Check off the box next the “Triggers” on the right hand side. This will enable a feedback display as well as an “Edit” button under Timed Events. Clicking the “Edit” button, will allow the user to configure the timed event behaviors. The following dialog will be displayed.



OPTIONS: You may enable/disable up to 25 events, select a start time (in minutes), a behavior (see table below), then a random routine or a specific one from the dropdown.

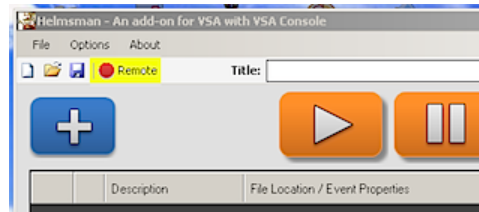
Option	Result
0) Do Nothing	Default – Trigger is ignored
1) Play if nothing is playing - then stop	If playlist is not running, plays a single routine only
2) Play if nothing is playing - then continue	If playlist is not running, starts playlist at a specific point
3) Play always - then stop	Plays a single routine only no matter what the playlist is doing
4) Play always - then continue	Starts playlist at a specific point, no matter what is playing
5) Play always - then restart previous	Plays a single routine, then returns to what was playing before
6) Pause	Pauses the playlist
7) Stop	Stops the playlist

Helmsman Remote (for iPhone)

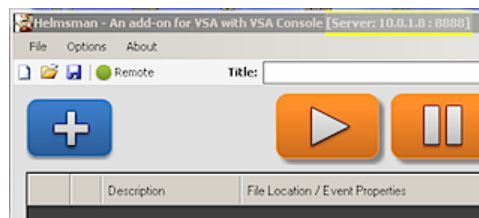
Remote control Helmsman right from your iPhone.

Configuration

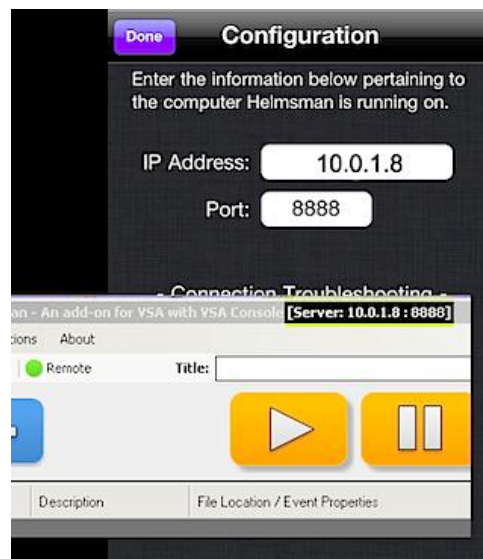
You will see this new button in Helmsman V1.3.0.0 and up, simply click it and that's it!



When it goes Green, you know that Helmsman is waiting for a connection.



Added to the title bar of Helmsman will be the IP Address and Port that you will need to use in Helmsman Remote. (Click the Gear icon in Helmsman Remote to add these values).



In order to avoid special router settings, forwarding ports, etc... make sure that your iPhone is connected to the same network as the computer running Helmsman.