

CHALK RIVER GRAPHICS

CrgSim Sound Module

Installation and User's Guide

Chalk River Graphics

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Sound Module

The CrgSim sound module is an optional software module for providing background aviation chatter and flight announcements. It should run on XP systems and above. This module also provides altitude call outs and other flight status announcements (flaps up, autopilot on, ...)

You can use it to trigger flight announcements of your own. For example it can be configured to play your “OK to use approved electronic devices” announcement when ascending through 10,000 feet AGL.

Installation

The Sound Module is great for adding atmosphere and provides a greater sense of immersion to a flight simulation. To install, copy the sound folder to a destination computer. The destination computer can be your computer that runs FSX or another computer attached to your local network.

We have not had much luck playing longer wave files with XP, it seems the longer length sounds do not play or get truncated. The API documentation indicates that the entire sound file must fit in memory although if you use MP3 files they should work just fine.

The Sound Module Window

When the sound module is started a window similar the one below will be displayed. Actual window size will depend on the number of sound files specified in the configuration file. The window has a number of columns:



The screenshot shows a window titled "Crg Sound" with a table of sound files and their settings. The table has six columns: Name, File, Index, Altitude, AGL, and Direction. The "Name" column contains entries like "Boston Tower", "Test Sound 1", "Sound 2", "Flight Sound", "Boston ATC", "Ok To Use", and "Fasten Seatbelt". The "File" column contains corresponding file names like "CrgPlaylist.crgsfl", "GearUp.wav", "Minimums.wav", "FlapsUp.wav", "KBOS-ATC-1.mp3", "OkToUse.wav", and "FastenSeatbelt.wav". The "Index" column contains values like 5, 9, 10, 19, 50, and empty cells. The "Altitude" column contains empty cells and the value 10000. The "AGL" column contains empty cells and the value 10000. The "Direction" column contains empty cells and the values "UP" and "Down". At the bottom of the window, there is a "Not Connected" button, a "Level" button, a "Run Index" field with the value 5, and an "Enabled" button.

Name	File	Index	Altitude	AGL	Direction
Boston Tower	CrgPlaylist.crgsfl	5			
Test Sound 1	GearUp.wav	9			
Sound 2	Minimums.wav	10			
Flight Sound	FlapsUp.wav	19			
Boston ATC	KBOS-ATC-1.mp3	50			
Ok To Use	OkToUse.wav			10000	UP
Fasten Seatbelt	FastenSeatbelt.wav		10000		Down

Not Connected Level Run Index 5 Enabled

- Name - this is the name you give to the sound file. If the name in the configuration file is too long this column will display as blanks.
- File - this is the actual name of the wave file on disk. If the file name in the configuration file is too long this column will display as blanks.
- Index - The sound file will start playing when Run Index is greater than or equal to this value depending on what type of sound it is.
- Altitude - The sound file will play when this altitude is reached on descent or ascent depending on the value in the direction column.
- AGL - The sound file will play when this altitude AGL is reached on descent or ascent depending on the value in the direction column.
- Direction - Specifies whether the sound will play on ascent or descent.

There are four fields across the bottom. From left to right:

- Connected indicator: shows “Com Connected” on a green background if there is a connection to the ComMgr. “Not Connected” on a red background will show if there is no connection to the ComMgr.
- Climb/Descend indicator: If the aircraft is climbing “Ascending” will display, if the aircraft is descending “Descending” will display, and “Level” will display if the aircraft is flying reasonably level.
- Run Index displays the current run index. When no sound is playing the run index advances at about 1 increment per second. When a sound starts to play the run index halts until the sound is finished.
- The right most field is the silence indicator. When a new airport or aircraft is selected the sound module goes silent for a period of time to give everything time to settle down. When a silence period is started the box will turn red with a countdown number in the center. Typical silent periods are about 15 seconds. When the silent period is over this box will change color to green.

Starting CrgSound

Start crgsound.exe from within the Sound folder. A display similar to that above will appear except in the "Name" column all of the backgrounds will be gray until 15 seconds have passed. Then you should hear some ATC chatter and the top box background will be green as above. In the lower left corner the green box with the text "Com Connected" indicates that the program is connected to the CrgSim network. If there is no connection "Not Connected" will be displayed on a red background.

Types of Sound Files

There are three types of sound files:

Callouts - these are short sounds that announce aircraft status (gear up, flaps down), and altitude callouts (500 feet, 200 feet, ...). These are embedded sound files and do not need to be added to the configuration file.

Background sounds - typically these would be atc chatter files that can be long (20 minutes, 1 hours,...). MP3 files are a good fit for longer (longer than 3 or 4 seconds) recordings. They are added to the configuration file with just a "sndindex" parameter to indicate the order in which to play them.

Flight announcements - these files contain announcements that you typically hear from the air crew and can things like "OK to use approved electronic devices". Announcements can be triggered by altitude (both absolute or AGL) and if the aircraft is ascending or descending. Flight announcements may have an optional sndindex parameter but usually do not. Since high fidelity is not an issue these can be MP3 format files.

Playing CrgSim Play Lists

A play list can be listed as a sound file in the sound configuration. A play list can contain up to 20 other sound files. If these are longer playing MP3 files then the sound module can be configured to play hours of aircraft related sounds during your flight. You can have multiple play lists in your sound configuration file. The format of the CrgSim play list can be found below.

Crg Sound Notes

- Once a sound file has played automatically based on altitude (or AGL) and direction it will not play again.
- There are a number of cabin announcement available on the net. Once you find and download a set that you like copy the sounds files that will be used to the same directory that crgsound.exe is executed from. Try searching for vsswacol.zip, vskaua1.zip, vsajcthy.zip, and English.zip on some of the flight sim forums. If you find some interesting announcements please let us know.
- www.LiveATC.net is a good place to get long archived recordings (30 minutes or so) of ATC traffic from many different airports. The download files are MP3s so they can be played with no conversion.
- CrgSim format play lists can be played by the sound module. Only one play list or mp3 file may be playing at a time. Multiple sounds are possible with wave files. For example an ATC playlist can be playing and at the same time altitude call outs can be made on descent with wave files.
- If a playlist or mp3 file is being played then other mp3 entries and play lists will not be started until the currently playing mp3 file completes.

CrgSound has been tested on Windows 7 and Windows XP. On XP the longer files did not play, it seems there is a length restriction (at least on our test computer) so if you have a large wave file that does not play you can convert the sound to MP3 or try cutting the file into segments with an audio editor. Try including one of the included short sounds (Minimums.wav) in the crgsound.cfg file as a test of XP.

The ATC files are provided by permission of www.liveatc.net. This is a great place to get hours of ATC background chatter.

Sound Module Configuration

The information displayed under the columns is specified in the sound configuration file (crgsound.cfg):

- snddef - begin each sound file definition with this keyword.
- sndname - your display name for the sound.
- sndfile - the name of the sound file on disk.
- sndindex - an optional parameter that specifies the run index value at which to start playing the sound.
- sndalt - an optional parameter specifying the altitude at which to play the sound. (see snddir below).
- sndagl - an optional parameter specifying the altitude above ground level at which to play the sound (see snddir below).
- snddir - this parameter specifies whether to play the sound on ascent or descent. For example one would expect the “prepare for descent” announcement to play on descent instead of onclimb out. To play on descent enter “down”, to play on ascent enter “up”.
- sndend - this indicates that configuration for this sound is complete.

- The following is an example of a valid sound definition in the sound configuration file:
 - snddef
 - sndname cruising
 - sndfile ElectronicsOk.wav
 - sndalt 10000
 - snddir up
 - sndend

This could be the specification for a cabin announcement indicating that it is OK to start using “approved” electronic devices. The sound file would play as the aircraft passed through 10,000 feet when ascending.

Other Sound Module Parameters

The parameters below are optional.

- **volume** - used to change the relative volume of sounds emanating from the sound module. Allowable range is 0 to 1000 where 0 will produce no sound and 1000 leaves the sound level unchanged.
- **80ktsadjust** - due to the variable nature of networks sometimes the 80- knot call out is early or late. This parameter adjusts the airspeed at which the call out occurs. For example a -3 will cause the 80 knot call out to occur 3 knots earlier than 80 knots.
- **rotateadjust** - modifies the rotate airspeed by the value. +3 causes 3 knots to be added to the airspeed before rotate is called.
- **v1adjust** - as above, this parameter modifies the V1 call out airspeed.
- **channel** - configures the sound module to play an MP3 ATC sound file when the Com frequency is set to the configured frequency. This option requires 2 parameters: the frequency and the file name. The frequency is any valid Com1 or Com2 frequency and the file name is the full file path name enclosed in quotation marks. The default radio is Com2 unless changed by the option below. WWW.LiveATC.com has a huge library of ATC recordings.
- **atcsrc** - specifies the radio (com1 or com2) that will be used to play the MP3 sound files.

See the Sound Application Note for more information on the ability to play sound files by selecting com receiver frequencies.

Examples:

Play the San Francisco Ground sound file when Com2 is set to 119.900: (your path will of course be different, quotes required)

- **channel 119.900 "g:\ATC Recordings\KSFO-Gnd-Aug-22-2012-0000Z.mp3"**

Make the channel radio above Com1 instead of the default Com2:

- **atcsrc com1**

Lower volume by 20% (1000 = 100%)

- **volume 800**

change V1 by + 2 knots

- **v1adjust 2**

change rotate air speed by -2 knots

- **rotateadjust -2**

Play List Format

The play list format is simple. Comment lines begin with //. Other lines begin with the name of the sound file.

For example:

```
// This is a comment.  
Soundfile.mp3  
// another comment  
Another sound file.mp3
```

Sound File Directory

You can configure the CrgSim Sound Module to look in a fixed directory for all of the sound files. This is useful if you have customized your sounds. The sound directory does not have to change when a new version of the software is loaded. And if you use the “CrgSimConfigs” directory feature no changes will be required to the sound configuration file.

To specify a sound file directory in the sound configuration file use “sndfolder”. For example:

```
sndfolder “c”\CrgSimSounds”
```

tells the sound module to look for all of the sounds in the directory indicated above in quotes.

Contact

You can contact us at sim30@crgsim.com. We are especially interested in your comments, any problems you might have with the programs, and things that you like (or don't like) about them.

After spending a large amount of time removing non-flight sim posts (drugs, counterfeit boots, ... for sale) we reluctantly had to convert the web site to read only.