

SetupSndHeader

Set up headers for 'snd ' resources

#include <SoundInput.h>

Sound Manager

<u>OSErr</u>	SetupSndHeader (<i>sndHandle</i> , <i>numChannels</i> , <i>sampleRate</i> , <i>sampleSize</i> , <i>compressionType</i> , <i>baseFrequency</i> , <i>numBytes</i> , <i>headerLen</i>);	
<u>Handle</u>	<i>sndHandle</i> ;	is a handle that is at least large enough to store the 'snd ' header
<u>short</u>	<i>numChannels</i> ;	specifies the number of channels for the sound
<u>Fixed</u>	<i>sampleRate</i> ;	specifies the sampling rate for the sound
<u>short</u>	<i>sampleSize</i> ;	specifies the sample size for the sound
<u>OSType</u>	<i>compressionType</i> ;	specifies the compression type for the sound
<u>short</u>	<i>baseFrequency</i> ;	specifies the base frequency for the sound
<u>long</u>	<i>numBytes</i> ;	specifies the number of bytes of audio data
<u>short</u>	<i>*headerLen</i>	returns the size of the 'snd ' resource header
	returns	<u>Error Code</u> ; 0=no error

You can use **SetupSndHeader** to construct a sampled sound header that can be passed to **SndPlay** or stored as an 'snd ' resource. **SetupSndHeader** creates a format 1 'snd ' resource header for a sampled sound only, containing one synthesizer field (the sampled synthesizer) and one sound command (a bufferCmd command to play the accompanying data). A sampled sound header is stored immediately following the sound command and is in one of three formats depending on several of the parameters passed. The Table below shows how **SetupSndHeader** determines what kind of sound header to create

sndHandle is a handle that is at least large enough to store the 'snd ' header information. The handle is not resized in any way upon successful completion of **SetupSndHeader**. **SetupSndHeader** simply fills the beginning of the handle with the header information needed for a format 1 'snd ' resource. It is your application's responsibility to append the desired sampled sound data.

numChannels specifies the number of channels for the sound .

sampleRate specifies the sampling rate for the sound (that is, samples per second). Note that the most significant bit of this value is interpreted as having the value 32,768 (not as a sign bit)

sampleSize specifies the sample size for the sound (that is, bits per sample)

compressionType specifies the compression type for the sound ('NONE', 'MAC3', 'MAC6', or other third-party types)

baseFrequency specifies the base frequency for the sound

numBytes specifies the number of bytes of audio data that are to be stored in the handle. (This value is not necessarily the same as the number of samples in the sound.)

headerLen returns the size of the 'snd ' resource header that is created, in bytes. This allows you to put the audio data right after the header in the handle. The value returned depends on the type of sound header

created.

Returns: an operating system Error Code.

noErr (0) No error
siInvalidCompression (-223) Invalid compression type

Notes: A good way to use this function is to create a handle that you want to store a sampled sound in, then call **SetupSndHeader** with the *numBytes* parameter set to 0 to see how much room the header for that sound will occupy and hence where to append the audio data. Then record the data into the handle and call **SetupSndHeader** again with *numBytes* set to the correct amount of sound data recorded. The handle filled out in this way can be passed to **SndPlay** to play the sound. Result codes

The sound header format used by **SetupSndHeader**

compressionType	numChannels	sampleSize	Sound header format
'NONE'	1	8	SoundHeader
'NONE'	1	more than 8	ExtSoundHeader
'NONE'	2 or more	8 or more	ExtSoundHeader
not 'NONE'	any	any	CmpSoundHeader