

# Sound Library

A Sound object is a bit like an array and a bit like a file, which means that there isn't much new to learn.

## Creating a Sound object

In the following, `sss` represents the name of the variable used to hold a recorded sound. It is like the name of an array or an ifstream, or any other variable: you can call it whatever you want within reason.

option 1: Making an empty sound object that you can later fill with computer generated samples or samples captured from the microphone.

```
Sound sss(10.0);
```

that makes an object capable of holding a ten second recording at 11025 samples per second.

```
Sound sss(60.0, 44100);
```

that makes an object capable of holding a one minute recording at CD quality, 44.1k samples per second.

option 2: Making a Sound object that contains samples from a pre-existing sound file (only the .WAV format is supported).

```
Sound sss("song.wav");
```

that makes an object holding the entire contents of the named file.

```
Sound sss("song.wav", 20.0, 5.0);
```

that makes an object containing only five seconds of music, starting 20 seconds from the beginning of the track.

## Playing the sound that is recorded in a Sound object

```
sss.play();
```

## Capturing samples from the microphone into an existing Sound object

```
sss.record();
```

The recording will continue until the sound object is full, so if you create a four minute Sound object, you must record a full four minutes into it.

## Getting information from a Sound object

```
sss.getlength();
```

is a function that returns the number of samples in the object.

```
sss.samplerate();
```

is a function that returns the number of samples that will be played per second.

## Accessing the numerical samples

Simply treat the sound object as an array. For example, to make the first whole second be perfectly silent, use a loop like this

```
for (int i=0; i<sss.samplerate(); i+=1)
    sss[i]=0;
```

**Remember** to add `winmm.lib` to the project's properties' linker's command-line's additional options.