

# Introduction

Minim is a library included with Processing that makes it simple to include audio to your sketches.

Documentation:

<http://code.compartmental.net/tools/minim/>

Features include:

- Sample Playback
- Audio Input (recording)
- Synthesis
- Audio effects
- ...

# How to Use it?

Minim is a library and you must first import it:

```
import ddf.minim.*;
import ddf.minim.spi.*;
import ddf.minim.signals.*;
import ddf.minim.analysis.*;
import ddf.minim.ugens.*;
import ddf.minim.effects.*;
```

You don't need to always import all of these. For basic use you only need:

```
import ddf.minim.*;
```

Then you need to declare and instantiate a Minim object:

```
Minim minim;

void setup(){
  minim = new Minim(this);
}
```

# How to Use it? – Sample Playback

For sample playback, you have three options:

1. *loadSnippet(String filename)*
  - This is loaded into the RAM
  - Use for short audio clips
2. *loadSample(String filename)*
  - Also loaded to RAM, but you have access to the actual audio samples
  - Use for small samples that need to be triggered
  - drum sounds, sound effects etc.
3. *loadFile(String filename)*
  - Streamed from the hard drive or URL
  - For larger audio files
  - More latency than with the other options
  - It is recommended to use uncompressed audio (.wav, .aiff)

# How to Use it? – Sample Playback

## Example:

```
import ddf.minim.*;
Minim minim;
AudioPlayer player;

void setup(){
  size(500,500);
  minim = new Minim(this);

  // loadFile loads the file from the data folder
  // you can also pass an absolute path, or a URL.
  player = minim.loadFile("drums.wav");
  player.play();
}

void draw(){
}

void stop()
{
  // always close Minim audio classes
  player.close();
  // always stop Minim before exiting
  minim.stop();
  // The super.stop() makes sure that all the normal cleanup routines are done
  super.stop();
}
```

# How to Use it? – Controls

You can play, pause and loop:

<http://code.compartmental.net/tools/minim/manual-playable/>

You can control the panning and gain of the sample:

<http://code.compartmental.net/tools/minim/manual-controller/>

How to map the mouseX to the gain:

```
void draw(){  
  float vol = map(mouseX,0,width,-60,0);  
  player.setGain(vol);  
}
```

# How to Use it?

<http://code.compartmental.net/tools/minim/manual-minim/>