AIR Lab Workshop 2: Sensors and Sound, Cheat Sheet

1. Sensors

Analog Sensor Parameters

AnalogSensor(Pin to measure on, Position, Activation threshold, Title of sensor):

Pin to measure on	Choose the Analog pin you want to measure input from
Position	Choose where the sensors data is shown in the GUI. This parameter can be 1 to 4. 1 is far left, and 4 if far right.
Activation threshold	Choose the threshold for the Analog sensor to pass, in order to be in its “active” state
Title of sensor	Give the sensor a title for when it is displayed in the GUI

Digital Sensor Parameters

DigitalSensor(Pin to measure on, Position, Title of sensor);

Pin to measure on	Choose the Digital pin you want to measure input from
Position	Choose where the sensors data is shown in the GUI. This parameter can be 1 to 4. 1 is far left, and 4 if far right.
Title of sensor	Give the sensor a title for when it is displayed in the GUI

Sensor Functions (same for both analog and digital sensors)

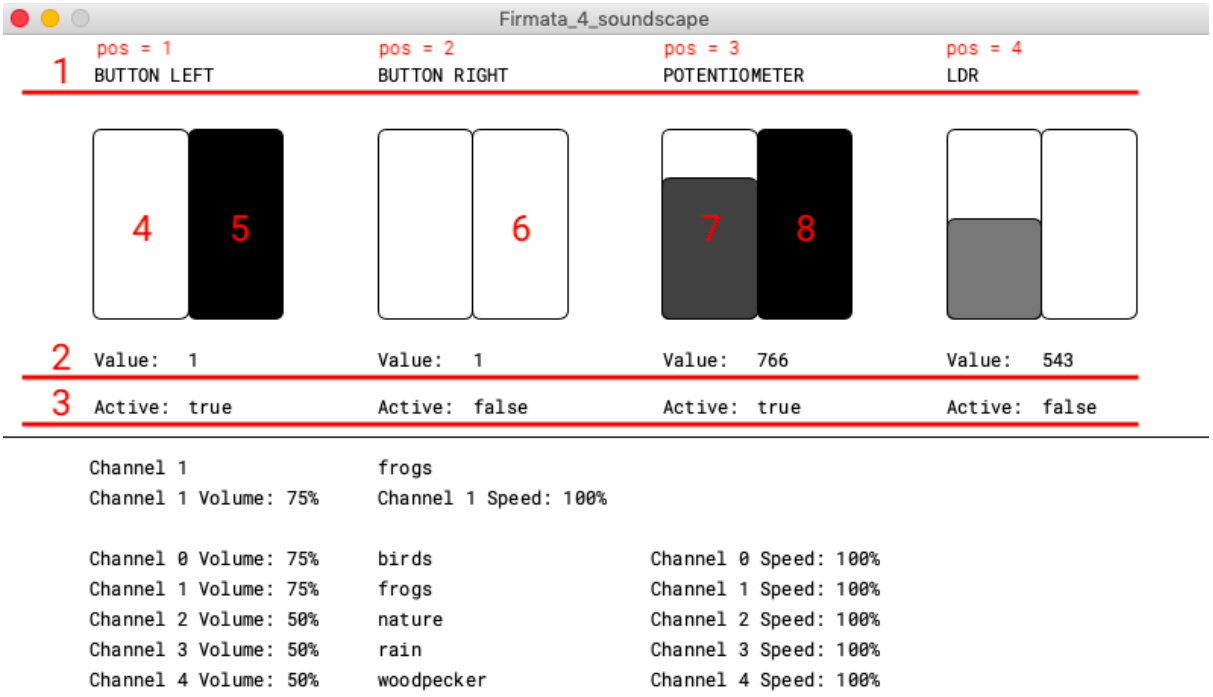
sensorName = name chosen for the sensor when it was defined

sensorName.run	use this to measure input from the sensor (void)
sensorName.sensorValue	get the current input value of the sensor (int)
sensorName.active	check if sensor is in its “active” state (boolean)
sensorName.change	check if sensor has changed, either to or from, its “active” state (boolean)

2. GUI (Continued next page)

GUI Functions

Press the ‘1’ key to toggle the GUI on and off



1. Sensor Titles are displayed here
   Here “Button Left” has the position parameter set to 1, placing it on the far left, “Button Right” has the position parameter set to 2, placing it next to that etc.
2. Sensor Values are displayed here
3. Sensor States are displayed here
4. This shape turns black while the button is pressed
5. This shape turns black if the button has changed state to “active”
6. This shape is white if the sensor’s state is not “active”
7. The analog sensor value is shown graphically here. The higher the value is, the darker it gets (from white to black)
8. If the analog sensor reaches past its threshold parameter, this shape turns black.

3. Processing Sound Library

General documentation

https://processing.org/reference/libraries/sound/index.html

SoundFile functions, e.g. amp(), rate(), isPlaying() etc.

https://processing.org/reference/libraries/sound/SoundFile.html