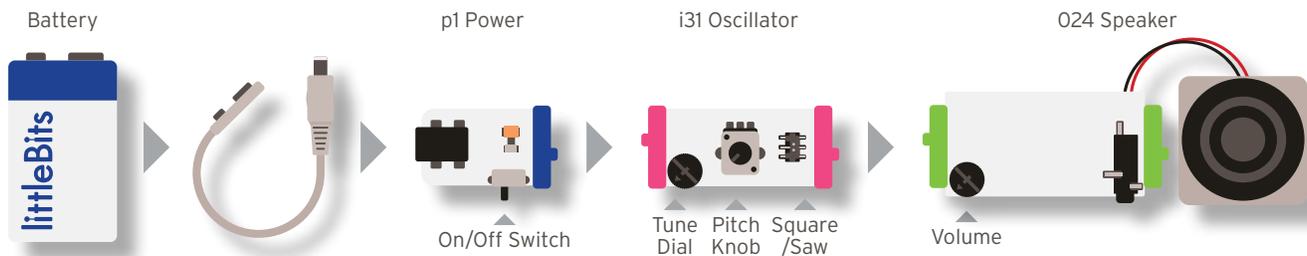


The **oscillator** (pronounced ah-suh-lay-ter) is an electrical circuit that generates sound. The **i31** can produce a sine wave or a square wave in the low frequency or audio range. You'll find electronic oscillators in musical instruments, radio and television transmitters, digital clocks, and more. Just about every beep, buzz, or other sound that you hear from an electronic device is produced by an oscillator.



Tune dial - to match other instruments exactly
Square/Saw - to choose between two kinds of sound

Pitch Knob - to make higher and lower sounds
Volume - to make the sound louder and softer

Can you make sounds like these?



Dripping Faucet



Ticking Clock



Creaky Door



Lawn Mower



Revvng engine



Buzzing Bee



Fire Truck



Squealing Tire



Alarm

Can you think of any others?

Draw or write a story that uses some of these sounds.

Share your story with sound effects from the Synth Kit.

1. Tell your story to a partner
2. Tell your story to your teacher
3. Video yourself telling the story
4. Take a picture of your drawing, put it in an app, and record yourself telling the story



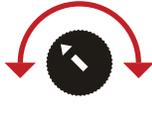
Starting with the i31 Oscillator turned all the way down (counterclockwise) and the waveform switch set to "square," you'll hear a slow ticking sound like a **dripping faucet**.



Turning it up a little further will increase the ticking speed to resemble a **ticking clock**.



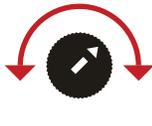
Turning the dial up and down in this range will create the **creaky door**.



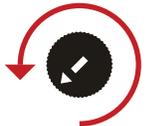
Turning the dial up (clockwise) a little further, the clicks will start to merge into a low rumble, like a **lawn mower**.



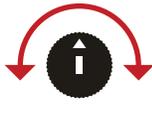
Turning the dial up and down in this range will a sound similar to a **revving engine**.



Turning the volume down low creates an effect like a **buzzing bee**.



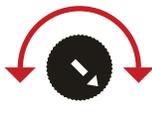
Toward the middle of the dial's range, the clicks will become so close together that your ear will perceive them as a constant pitch. In this range, moving the dial up and down will create the sound of a **siren**.



On the high end of the dial, you'll hear a high pitched **squeal**.



Moving the dial up and down rapidly will create the sound of an **alarm**.



All of these sound quite different if you flip the waveform switch to "saw," so remember to make that part of your exploration. There are many more sounds possible. Hopefully these ideas give you and your students a great launching point for creativity and storytelling.