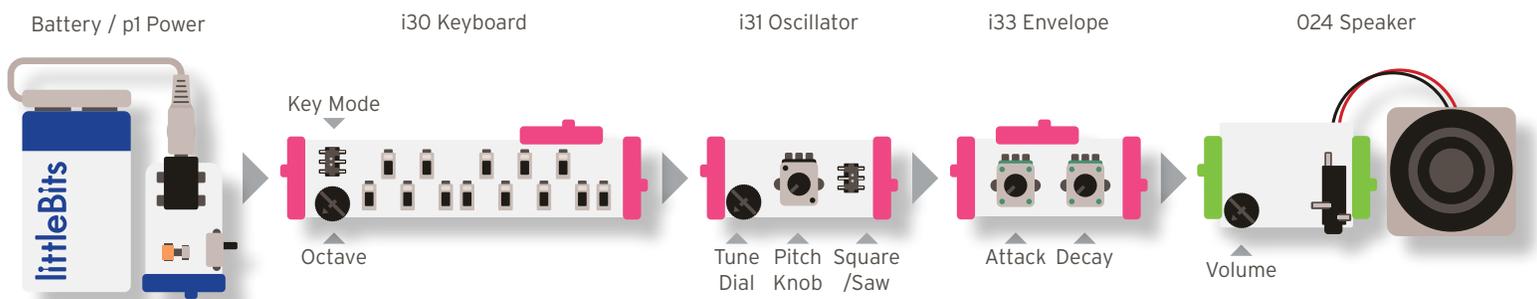


The **envelope** lets you change how the sounds from your Synth Kit begin and end. The beginning of a sound is called the attack, and the end is called decay. The attack and decay can be very sudden or very gradual. Changing these values will let you create many different sounds with your Synth Kit.



Octave - to choose between four octaves
 Key Mode - to choose whether the sound stops when you let go of a button
 Buttons - to create different pitches similar to a piano
 Tune dial - to match other instruments exactly

Pitch Knob - to make higher and lower sounds
 Square/Saw - to choose between two kinds of sound
 Attack - to choose how sudden or gradual the beginning of the sound is
 Decay - to choose how sudden or gradual the end of the sound is
 Volume - to make the sound louder and softer

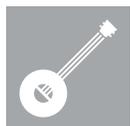
An Envelope of Sound.

Set your keyboard's key mode to hold. This will make exploration of the envelope module easier. Start with both envelope knobs turned all the way down (left/counterclockwise) and then turn the decay knob up just a bit. Playing the keyboard should produce short, staccato tones. That's because the sounds are beginning and ending suddenly. Now take some time to explore the different sounds you can create by changing the envelope module's controls.

Can you create sounds like these instruments?



Bells



Banjo



Piano



Clarinet



Tuba



Violin

What percussive sounds can you make?

Replace the Oscillator with the random module set to "noise."

Share what you've learned:

1. Using one of the percussion sounds you created, tap a beat while a partner or your teacher sings a song, performs a rap, or reads a poem.
2. Trade jobs and do the song, rap, or poem again.



Keyboard
Oscillator

Octave: All the way counterclockwise.
Set the key mode switch to hold.
Pitch: All the way clockwise.



OCTAVE



PITCH



Bells
Oscillator
Envelope

Waveform: Set the switch to square.
Attack - Sudden: Turn all the way counterclockwise.
Decay - Long: Turn all the way clockwise.



ATTACK



DECAY



Banjo
Oscillator
Envelope

Waveform: Set the switch to saw.
Attack - Sudden: Turn all the way counterclockwise.
Decay - Turn slightly clockwise of halfway.



ATTACK



DECAY



Electric Piano
Oscillator
Envelope

Waveform: Set the switch to square.
Attack - Softened: Turn not quite all the way counter clockwise.
Decay - Shortened: Turn not quite all the way clockwise.



ATTACK



DECAY

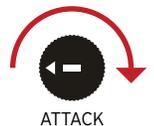


Clarinet
Oscillator
Envelope

Pitch: Turn not quite all the way clockwise.
Waveform: Set the switch to square.
Attack - Softened: Turn not quite all the way counter clockwise.
Decay - Shortened: Turn not quite all the way clockwise.



PITCH



ATTACK



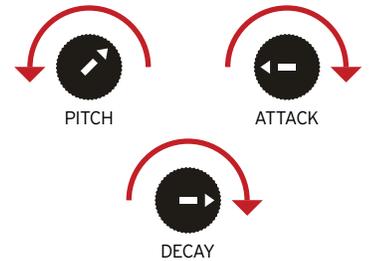
DECAY



Tuba

- Oscillator Pitch: Lowered a good bit from the highest pitch (go lower until you can hear some “rumble” sound, but not so low that the pitch becomes indistinct).
- Oscillator Waveform: Set the switch to square.
- Attack Softened: Turn not quite all the way counterclockwise.
- Decay Shortened: Turn not quite all the way clockwise.

Note: The tuba sound becomes similar to a trombone, bass clarinet, and clarinet as you move the octave selector clockwise.



Violin

- Oscillator Pitch: Turn all the way clockwise.
- Oscillator Waveform: Set the switch to saw.
- Attack Turn just clockwise of halfway.
- Decay Turn to between all the way clockwise and halfway.

