PROCESSING

ARDUINO

The **Processing** script can be found (commented out) at the bottom of the SerialCallResponse script.

It sends a byte to Arduino to indicate that it is ready… and then as it reads the next three pieces of input from Arduino it saves it in an array. Once it gets all three it sends a byte back to Arduino. The value of this byte it can be used to trigger actions on the Arduino.

**The number of values is set to three but this can be adjusted to other values. (It would need to be changed in both the Arduino and Processing scripts.)**

The **Arduino** runs a program based on

SerialCallResponse (in Examples 🡪 Communication). It has been adapted to use the ultrasonic Ping sensor and also to accept input back from Processing.

*“This program sends an ASCII A (byte of value 65) on startup and repeats that until it gets some data in. Then it waits for a byte in the serial port, and sends three sensor values whenever it gets a byte in.”*

**So Arduino sends a byte to Processing until Processing responds by sending a byte to Arduino.** Then Arduino sends three sensor values to Processing. Then Arduino goes back to repeatedly sending the byte and waiting for a response.

Processing will just need to send a byte to indicate that it is ready. The usual is "A" (65) but we can have it send other values to trigger operations on the Arduino.

***WAITING FOR BYTE TO GO***

Act I

**Arduino:** A… A… A… A…

**Processing:** oh hey, yeah, I’m here… “A.”

**Arduino:** OK… they’re ready… “312” “250” “10”

**Processing:** hmm… did I get all three values? Yeah, yeah, they’re all here… OK… “A.”

**Arduino:** OK… they’re ready… “314” “251” “9”

**Processing:** hmm… did I get all three values? Yeah, yeah, they’re all here… OK… check this out: “B.”

**Arduino:** OK they’re ready… wait – “B”? That means I need to turn on that LED… OK whatever, I can do that… “312” “251” “8”

PROCESSING

ARDUINO