

CODE TO NOTE

NO TONE FUNCTION:

```
noTone(pin_number);
```

In circuit 2A, you made songs using a buzzer and the `tone()` function, but you gave the function three parameters: a pin number, a frequency and a duration. You can leave out the third parameter, and the tone will play until you change it or turn it off. `noTone()` turns off a pin that has been activated with the `tone()` command.

CODING CHALLENGES

CHANGE THE SERVO BEHAVIOR: Try changing the way your servo behaves when the distance sensor is triggered.

CHANGE THE ALARM SETTINGS: Try altering the code so the alarm goes off from much farther or closer distances.

ADD A SECOND MECHANISM: Time to use your imagination! Try your hand at making different objects move with your servo motor. Don't have a cat? Make an interactive pop-up story, room alarm, treat dispenser or automatic fish feeder.

TROUBLESHOOTING

The RGB LED colors aren't working or a color is missing

Check the connection for the wire and resistor connected to each leg of the LED. Ensure the RGB LED is inserted in the correct orientation.

The distance sensor doesn't seem to work

Open up the Serial Monitor on your computer. You should see a stream of distances being printed in the monitor. If they are all reading 0 or jumping around, check the wiring on your sensor.

The distance sensor still doesn't work

Ultrasonic noise pollution will interfere with your distance sensor readings. If you aim two distance sensors at each other, they will confuse each other. Some air-conditioning systems may also emit noises in the ultrasonic range. Try pointing your sensor away from the other distance sensors or moving to a different location.