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#include <CapacitiveSensor.h>

/*
  CapitiveSense Library Demo Sketch
  Paul Badger 2008
  Uses a high value resistor e.g. 10M between send pin and receive pin
  Resistor effects sensitivity, experiment with values, 50K - 50M. Larger
  resistor values yield larger sensor values.
  Receive pin is the sensor pin - try different amounts of foil/metal on this pin
  */

#define SPEAKER_Pin 11           // Pin für Lautsprecher

float frequency;                // put out frequency
float volume;                   // put out volume
float distance_pitch;           // distance for pitch-control
float distance_volume;          // distance for volume-control

CapacitiveSensor  cs_4_2 = CapacitiveSensor(2, 3);    // 10M resistor between
pins 4 & 2, pin 2 is sensor pin, add a wire and or foil if desired
CapacitiveSensor  cs_4_5 = CapacitiveSensor(4, 5);    // 10M resistor between
pins 4 & 2, pin 2 is sensor pin, add a wire and or foil if desired

void setup()
{
  cs_4_2.set_CS_Autocal_Millis(0xFFFFFFFF);    // turn off autocalibrate on
channel 1 - just as an example
  Serial.begin(9600);
  pinMode(SPEAKER_Pin, OUTPUT);
}

void loop()
{
  long start = millis();
  long total1 = cs_4_2.capacitiveSensor(500);
  // long total2 = cs_4_5.capacitiveSensor(200);

  Serial.print(millis() - start);    // check on performance in milliseconds
  Serial.print("\t");                // tab character for debug window
spacing

  Serial.print(total1);              // print sensor output 1

```

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    Serial.println("\t");           // tab character for debug window
spacing

// Serial.print(total2);           // print sensor output 1
// Serial.println("\t");

    delay(10);                     // arbitrary delay to limit data to
serial port

    int mapping = map(total1, 20000, 9000, 0, 200);

    tone(SPEAKER_Pin, mapping);    // sending the pitch to the speaker-pin
// tone(SPEAKER_Pin,mapping2);    // sending the pitch to the speaker-pin

}
```