# THE SONG CHANGER!!!

WANNA CHANGE THE GAME?

CHANGE THE SONG!!!

INTRODUCTION---The project is a basically a music player in which we can change our song by our hand's gesture. If we move our hand away from it (in 3 sec) it plays next song if near it then previous song if we keep it as it is then it stops.

Main Components used—

1) Sd card module
2) Sd card
3) Arduino Uno
4) Speaker
5) Ultrasonic Sensor

Working—

It's base is measuring of distance by ultrasonic sensor…….

Ultrasonic Sensors keeps measuring the distance and when it measures any distance between 10-20 cm the Song changer gets  activated and now if we move our hand 5-25 cm away from it then it plays next song….

And if we move our hand nearer to it( more than 5 cm) then it plays previous song. If we keep our hand there for 3 seconds it pauses the song and to play the song we have to do same thing again.

## Code---

```
#include <pcmConfig.h>

#include <pcmRF.h>

#include <TMRpcm.h>

#include "SD.h"

#define SD_ChipSelectPin 10

#include "TMRpcm.h"

#include "SPI.h"

TMRpcm audio;

const int trigPin = 2;

const int echoPin = 3;

long duration;

int distance;

int d2;

int x=10,i,p;

char song[9];

char songb[9];

void setup() {

pinMode(4, OUTPUT);

pinMode(5, OUTPUT);

pinMode( 6, OUTPUT);

pinMode(7, OUTPUT);

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);

Serial.begin(9600);

audio.speakerPin=9;

Serial.begin(9600);
```

```
if(!SD.begin(SD_ChipSelectPin))
{
 Serial.println("SD fail");
 return;
}}
void loop() {
digitalWrite(trigPin, LOW);
delay(200);
digitalWrite(trigPin, HIGH);
delay(1000);
digitalWrite(trigPin, LOW);
duration = pulseIn(echoPin, HIGH);
distance= duration*0.034/2;
Serial.println("Distance: ");
Serial.println(distance);
d2=distance;
if (d2<20 && d2>10){
 digitalWrite(7 , HIGH);
delay(3000);
digitalWrite(7, LOW);
digitalWrite(trigPin, HIGH);
delay(1000);
digitalWrite(trigPin, LOW);
duration = pulseIn(echoPin, HIGH);
distance= duration*0.034/2;
p= distance-d2;
if (p>5 &&p<25){
 digitalWrite(6 , HIGH);
delay(3000);
digitalWrite(6, LOW);
x+=1;
i=x%10;
```

```
sprintf(song, "test%d.wav", i);

audio.setVolume(6);

audio.play(song);

Serial.println("Distance: ");

Serial.println(distance);

Serial.println(song);

}

else if(p<(-5)){ digitalWrite(5 , HIGH);

delay(3000);

digitalWrite(5, LOW);


 x-=1;

i=x%10;

sprintf(songb, "test%d.wav", i);

audio.setVolume(6);

audio.play(songb);

Serial.println("Distance: ");

Serial.println(distance);

Serial.println(songb);

}

else if(p<5 && p>(-5)){audio.pause();

 digitalWrite(4, HIGH);

delay(3000);

digitalWrite(4, LOW);

}}}
```

**An example or importance** – if you are driving a car and suppose you wanna change the song so you have to look for next song switch then change it but you can do it just by gesture…

Thanks

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