

Controlling TV with Arduino using Joystick

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ABSTRACT:Some people like physically affected or those who can not move their hands are rely on other people to their daily routine. In this case we use remote controller. But due to some situation they will not permit the patient to operate even a remote controller,. Patients are typically example. The solution of these people, would be a joystick controlled device. It can achieved by small movement. This paper present the development of a low cost smart joystick designed to help the person who can't move their hands, to perform operations like switch on or off TV .the device can be implemented by anybody to help the patients

KEYWORDS:Control TV using Joystick.

I. INTRODUCTION

In order to assist physically handicapped persons and bed ridden patients, we developed a remote control to voice controlled television by voice commands as inputs. Our research develops joystick controlled TV instead of normal remote controlled TV. .

In comparison between existing method to our original work, progress has made in aspects: the new joystick used to controls the TV is equipped with differential drive in contrast to Ackermann steering in our previous system. This led to a completely different description of the possible motions of the human's actions.

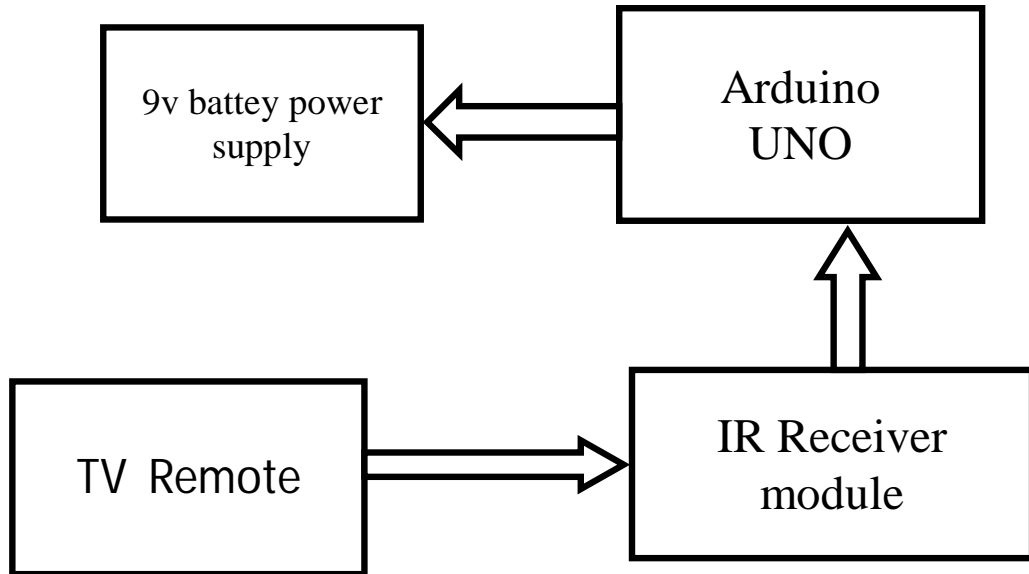
Paper describe overview of the remote controlled TV device. Afterwards, the actual remote sensing module is presented, since we tested it with two different input devices, a short review of special input devices follows. In that, joystick module and arduino IDE both are used multiple ways to use.

II .WORKING PRICIPLE OF HARDWARES

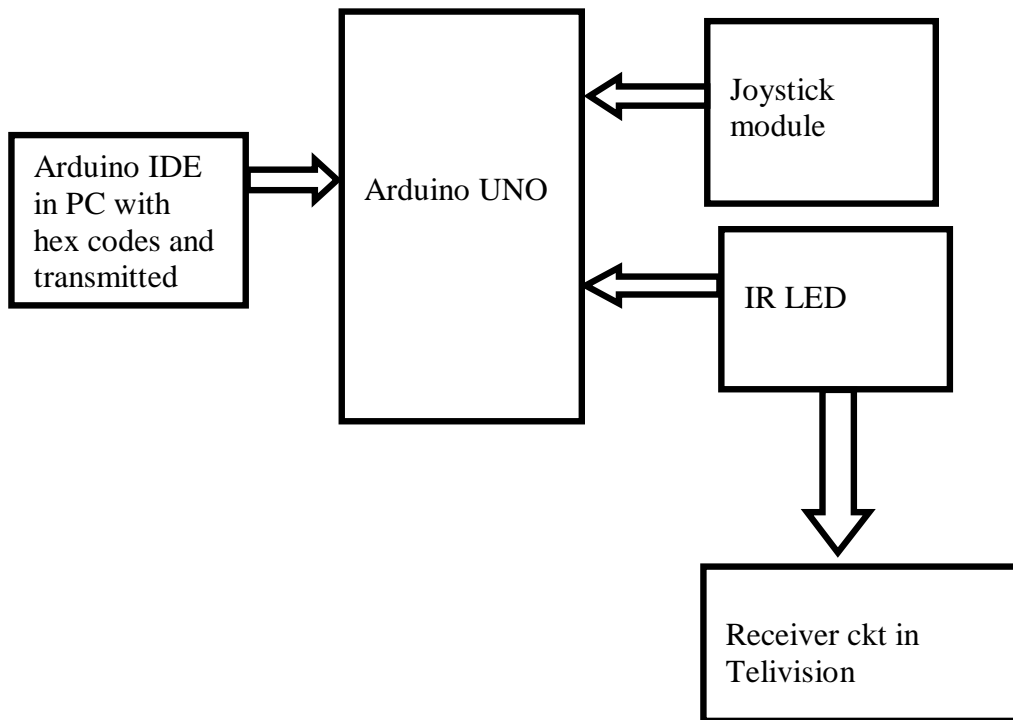
The working of joystick module is simple. It is based on the principle of conversion of physical movement into a digital signal which when accepted by the device produce same results on the screen. The joystic pins are connected to the Arduino analog pins. Then only it can activate.

- IR(Infra Red) radiation is emitted by the LED .Then LED was consisted in IR transmitter. photo diode was received this IR, It act as a IR receiver . IR radiation is the invisible ray so we can use this in wireless communication
- IR transmitter and receiver is main part of the electronic remote device. iinfra red (IR ray) light which is converted into an data or protocol and is received by the receiver module.
- The appearance of IR LED is same as a common LED. IR ray (infra red ray).radiations are not capable to detected by the human eye . so we can detect IR ray by using mobile camera. The IR rays from the IR LED in the circuit are shown in the camera.

II. BLOCK DIAGRAM FOR HEX CODES



III.BLOCK DIAGRAM



IV. CONCEPT OF ALGORITHMS

In this process connect the IR receiver and Arduino UNO each other

- IR receiver side VCC is connected to the +5V of Arduino.
- IR receiver side GND is connected to GND of Arduino.
- IR receiver side signal input is connected to the digital pin 11 of Arduino
- Then arduino is interface with pc or laptop
- Open the Arduino IDE software
- Open file>examples>receiver code>IRrec dump v2.
- Implement the coding.
- Now the receiver code fetched to the Arduino .
- Now Arduino can receive the hex codes of TV

V. CONCLUSION

In that we can easily handle it with our hands by using the joystick. For those people who can not move their wrist. voice recognition control television can resolve this issue. We can also add an sensor unit to this circuit so that it can detect the obstacle in its path.

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