

Control and Remote Operated Spy Robot Circuit Controlled system

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Abstract:

Elementary automatic land rover that can be control remotely using mostly the RF mode. The RF remote control has the advantage of passable range (up to 200m with proper antenna) besides being Omni directional. On the additional supply an IR secluded would function more a restricted array of on 5m and the secluded supply has to be leaning towards the recipient unit exactly. However, the rate engages in by RF element is a lot advanced than that of IR works with as such, We combine the replacement of RF component with their IR counterparts for by the IR remote control.

Keywords — Microcontroller, CCD camera, spy robot.

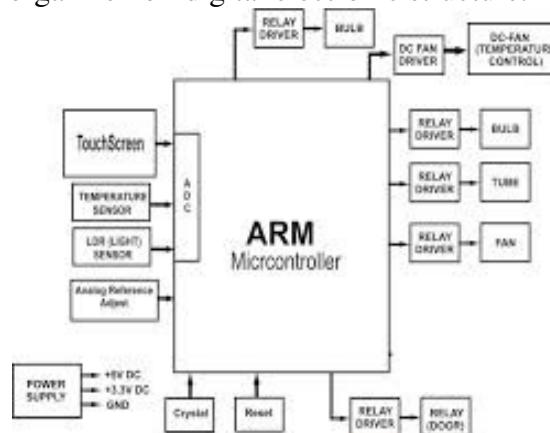
Introduction:

The mini automaton has two tracks, one for the secluded part and other for machine sector. The basic functioning of the machine is that, when the change in secluded is pushed then a indicator is produced and it is then programmed and then modulate and transmit to the automaton and the reception section demodulate and decodes the signal and the indicator in inaccessible is reproduced in the delivery unit. This indicator is applied to the motor through an H-bridge. Here we use HT12E and HT12D as the encoder and decoder. They have 8 bit address and 4 bit data. Hence we can convey 4 signals for the four type travels of the robot such as forward, towards the back and turn left and right. The major elements in the secluded section are an encoder IC, an ASK transmitter and four switches. The four pins, pin no.8 to 13 are the data bits or say terminals. These four pins are related to the four switches. When a switch is closed, that pin is grounded. Thus a signal is fashioned and the encoder convert it into dual indication and this dual signal is modulate and transmit by the ASK receiver.

SYSTEM COMPONENTS:

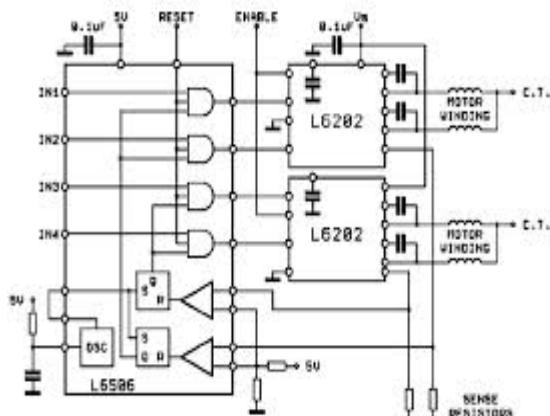
Microcontroller:

Microcontrollers are used in continually controlled generate and procedure, such as motor engine manage structure, implantable strength procedure, remote manage, organization equipment, machine control implements, toys and other rooted structure. By raising the volume and rate difference to a design to uses a element microprocessor, celebration, and input/output procedure, microcontrollers build it rational to digitally manage even more procedure and processes. Varied indication micro manager are common, combine analogue machinery required to organize non-digital electronic structure.



L298N Motor Driver

The Motor protect is build going on the L298, which is a double full connection driver expected to constrain inductive consignment such as transmit, solenoids, DC and tread motors. It allows you constrain two DC motors, calculating the rate and track of every one separately. L298N is double H-Bridge coastline control, so energy the cruise can be proscribed ,within the L298N 4 leader control amps by 5-volt digital input and four high Power, high energy control amplifiers competent of heavy on its own DC motors, and equally unipolar and bipolar motors. The four amps be extra often than not used in join up form an H-bridge to control distribution for to manage the method of a particular DC coast or as two matchup of H-bridges a bi-polar motor. This separation seems to be the a lot treasured of change machine engineer.



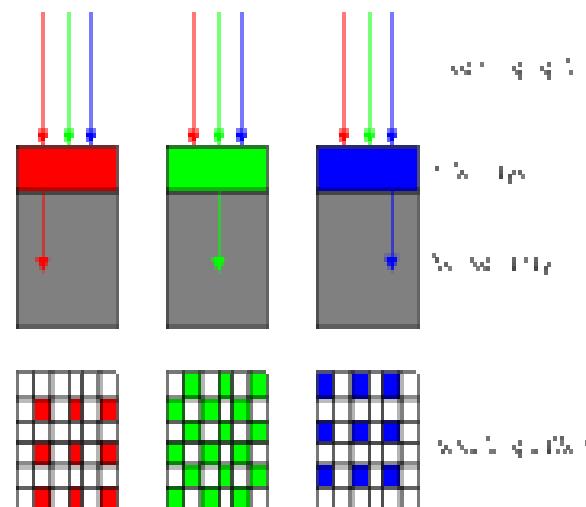
ENA, ENB, and In1-In4 are all typical 5-volt TTL judgment making connection to most micro-controllers easy. ENA will circle on A1 and A2 while with a digital HIGH (5-volts) and off when LOW (0 volts); the corresponding

outputs will be balanced when off. Same be exact of ENB, In3 and In4. ENA and ENB can be linked directly together to enable both channels at once or only tied to +5 volts and both channels creation all four output vigorous at all times.

CCD Sensor

Nowadays, maximum digital still cameras use a CMOS feeler for the reason that CMOS sensor has leapfrogged CCDs in recent years. CMOS imagers offer greater integration, power dissipation and system size at the expenditure of image quality and flexibility. They are the technology of choice for high-volume, space-constrained applications where image quality requirements are low.

CCDs offer more image quality and flexibility at the expense of system size. They endure the most suitable technology for high-end imaging applications, such as digital photography, broadcast television, high-performance industrial imaging, and most scientific and medical applications.



♦ Sensors used in digital cameras

Width (px)	Height (px)	Aspect ratio	Actual pixel count	Megapixels	Camera examples
100	100	1:1	10,000	0.01	Kodak (by Steven Sasson) Prototype (1975)
640	480	4:3	307,200	0.3	Apple QuickTake 100 (1994)
1,280	960	4:3	1,228,800	1.3	Fujifilm DS-300 (1997)
1,600	1,200	4:3	1,920,000	2	Nikon Coolpix 950, Samsung GT-S3500

Hardware Configuration:

Remote Control Section:

Fire-fighting automaton is implemented as a fire engine en route for extinguish the fire. This type of automaton is used in military as well in other sectors for extinguish fire if it happens by accidents such as train accidents. The automatic vehicle consists of a water tank and a pump to shake over water. parallel to the beyond project, this robot can also be prohibited exploit an robot based demand for remote process purpose, but also need an additional motor driver and a motor to function the go down limb in a special track and a force to augment the substance of stream. This robot as well uses a micro director to run in general procedure. By receiving the control hint beginning the machine role via a Bluetooth modem, the microcontrollers change the division of the motor vehicle during a coast

driver IC. Next, the shower bow or arm position of the robot gets adjusted by another motor driver IC that receives instructions from the Android mobile. The microcontroller of this organization is automatic in Keil software and operates the relay for the pump , and also operate two speed driver ICs for moving the vehicle and the sprinkle arm.

Simulation and Text Result:

The system, the imitation result is done by using Proteus qualified schematic software. After the two programs are compiled as hex files, the compile rules throw to a secluded controller to consignment the micro organizer with no error. The program have doing well difficulty and then the route is tested by the proteus software. This remote control system is total tested and can be used remotely to enter

and exit unsafe places. In this system, remote is used as the main manager.

Conclusion:

This type of robot can perform complex and repetitive works for humans. The paper is done to create a story of spying robot that can enable us to view the place of our attention.

A video transmitter mount on top of the robot helps us to see the path of suggestion. The motivation behind manual organizes of the robotis that it will not be lost owing to absence of human involvement. If not for extended range applications it can be use as a spy robot within little distance.

Reference:

- [1]www.circuitstoday.com “Mobile Operated Spy Robot”
- [2]www.retron.com “wireless spy camera robots”
- [3]http://en.wikipedia.org/wiki/DC_Motor
- [4] http://www.campuscomponent.com “L298N Motor Driver.
- [5]Decoder HT-12D, Encoder HT-12Ehttp://robokits.co.in/shop/index.php?main_page=product_info&cPath=14_15&products_id=76>
- [6]A. Khamis, M. Pérez Vern