ISSN (Print) : 2320 – 3765
ISSN (Online): 2278 – 8875

International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering

An ISO 3297: 2007 Certified Organization *Volume 8, Special Issue 1, March 2019*

A Two Days National Conference on Emerging Trends in Electronic and Instrumentation Engineering (NCETEIE 19)

12th & 13th March 2k19

Organized by

Department of Electronics and Instrumentation Engineering, Adhiyamaan College of Engineering, Hosur, Tamilnadu, India

Smart Way to Leave the Space for Ambulance by Using RSSI

Anbarasan.M[1], Naveed Ahmed.V.S[2], Vasim Mohammed.H[3]

Assistant Professor, Department of EIE, Adhiyamaan College of Engineering, Hosur, Tamilnadu, India[1]

UG Student, Department of EIE, Adhiyamaan College of Engineering, Hosur, Tamilnadu, India[2,3]

ABSTRACT: This paper discusses the concept of a Smart way to leave the space for AMBULANCE by using RSSI (Received Signal Strength Identification). The major advantage of used in any Cell phone and doesn't necessarily require an expensive smart phone and not a very tech savvy individual to operate. The purpose of this device is to help patients locate their AMBULANCE with ease. At the moment there are many in the market which help track the daily activity AMBULANCE.

I. INTRODUCTION

In this system, there is driver want to monitor the road and to control the vehicle sometime got accident and also got late to bring the patient to hospital**.**Need to review the road continuously until the patient is tracked.In this system, we are going to finding the ambulance when it came around our vehicle and make a space for that ambulance to reduce the death percentage due to traffic. RSSI (Received Signal Strength Identification) technique is used to finding any ambulance is near our vehicle. If it detects speed of all vehicles around the Ambulance to reduced 50% duty cycle by using PWM technique. After that speaker will play for identification to the driver and making the space for ambulance. In this system, RSSI is used to track another to control the other vehicle.The RSSI technology helps in reading the vehicle which tells the current location.

Considering that the transport sector is responsible for an increasingly important share of current environmental problems,[1] we look at Intelligent Transportation Systems (ITS) as a feasible means of helping in solving this issue, which is a recently proposed infrastructureless traffic control system solely based on Vehicle-to-Vehicle (V2V) communication.[2] Traffic Light Detection is a problem differently approached by many research groups round the world.we present a special technique to detect suspended traffic lights has based on colors and features such as black area of traffic lights or area of lightening lamps.[3] the outside drawback could be a major challenge for drivers and autonomous vehicle systems and it will usually use active sensors such measuring instrument,lidar and radar to perceive their surroundings, the state of standard traffic lights can only be perceived visually.[4] smart driving system providing both safety and fuel efficient advice in real time in the vehicle and it was evaluated in universe on road driving trials to ascertain if any measurable helpful changes in driving performance would be ascertained.

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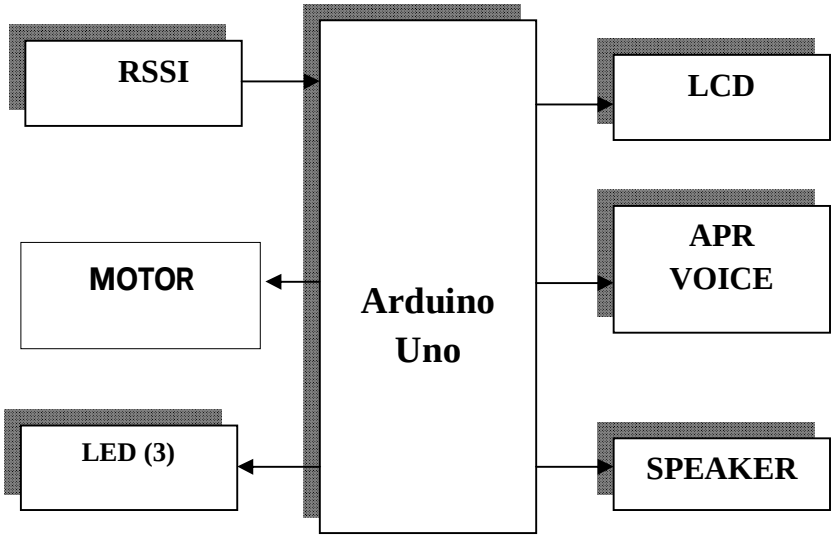
II. BLOCK DIAGRAM



III. HARDWARE DESCRIPTION

3.1 Arduino UNO:

Arduino/Genuino Uno could be a microcontroller board supported the ATmega328P. It has fourteen digital input/output pins (of that six may be used as PWM outputs), six analog inputs, a sixteen rate quartz, a USB association, an influence jack, an ICSP header and a reset button. It contains everything required to support the microcontroller; simply connect it to a laptop computer with a USB cable or power it with a AC-to-DC adapter or battery to induce started. You can tinker with your UNO without worrying too much about doing something wrong, worst case scenario you can replace the chip for a few dollars and start over again.

The Uno board and version 1.0 of Arduino code (IDE) were the reference versions of Arduino, currently evolved to newer releases. The Uno board is that the initial in an exceedingly series of USB Arduino boards, and also the reference model for the Arduino platform; for an in depth list of current, past or superannuated boards see the Arduino index of boards.

3.2 APR VOICE MODULE::

APR9600 could be a inexpensive high performance sound record/replay IC incorporating flash analogue storage technique. Recorded sound is preserved even once power offer is off from the module. The replayed sound exhibits top quality with an occasional amplitude. Sampling rate for a sixty second recording amount is four.2 kilocycle that provides a sound record/replay information measure. However, by dynamic associate degree oscillation electrical device, a rate as high as eight.0 kilocycle are often achieved. This shortens the full length of audio recording to thirty two seconds.

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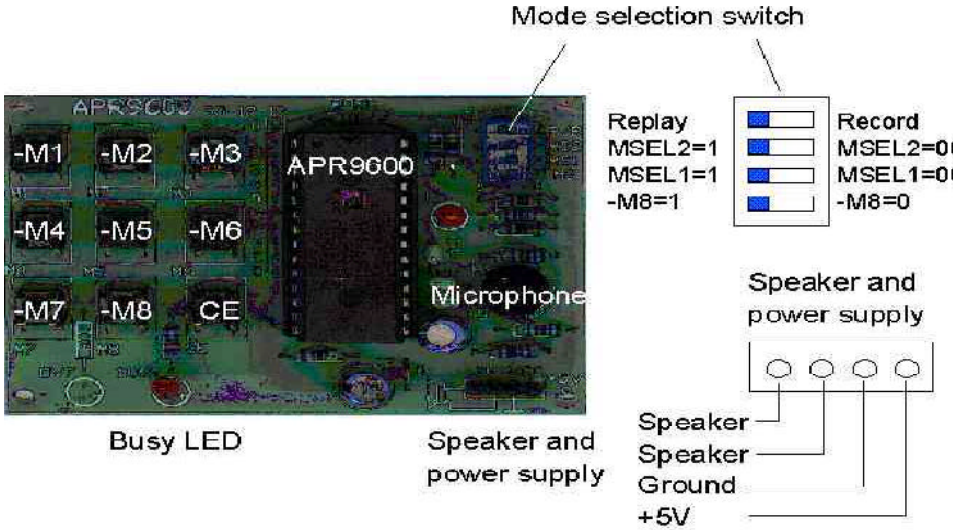

Figure three APR9600 module with connection details (to record in parallel mode, the switch setting ought to be same as displayed higher than. To record, the highest switch ought to air the right-hand aspect. To replay, the highest switch ought to air the left)

3.3 DC MOTOR:

A DC motor is meant to run on DC wattage. Two examples of pure DC designs are homo polar motor (which is uncommon), and the ball bearing motor, which is (so far) a novelty.

By far the foremost common DC motor sorts ar the brushed and brush less sorts, which use internal and external commutation respectively to create an oscillating AC current from the DC source—so they're not strictly DC machines during a strict sense.

3.4 LCD

LCD (Liquid Crystal Display) screen is Associate in Nursing electronic show module and notice a good vary of applications. A 16x2 LCD display is extremely basic module and is extremely ordinarily utilized in numerous devices and circuits. These modules ar most popular over seven phases and different multi segment LEDs. The reasons being: LCD`s ar economical; simply programmable; don't have any limitation of displaying special & even custom characters (unlike in seven segments), animations then on.

IV. RSSI

RSSI is that the relative received signal strength during a wireless atmosphere, in arbitrary units. RSSI is a sign of the facility level being received by the receive radio once the antenna and doable cable loss. Therefore, the upper the RSSI variety, the stronger the signal. Thus, once associate RSSI price is diagrammatic during a negative kind (e.g. -100), the nearer the worth is to zero, the stronger the received signal has been.

RSSI is used internally during a wireless networking card to see once the quantity of radio energy within the channel is below a definite threshold at that purpose the network card is clear to send (CTS). Once the cardboard is obvious to send, a packet of data is sent. The end-user can possible observe a RSSI price once measurement the signal strength of a wireless network through the utilization of a wireless network watching tool like Wire shark, Kismet or Insider. As associate example, Cisco Systems cards have associate RSSI most price of a hundred and can report one hundred and

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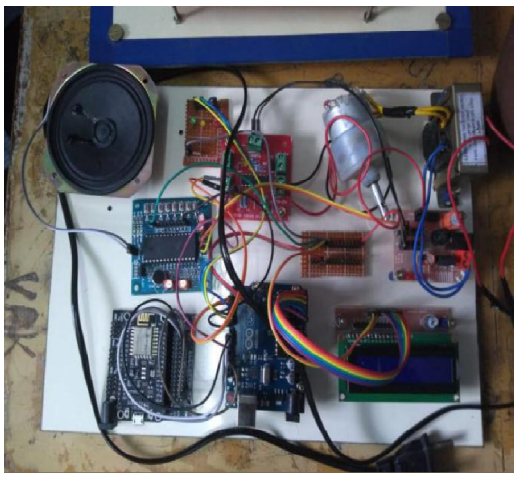
one completely different power levels, wherever the RSSI price is zero to a hundred. Another popular Wi-Fi chipset is made by Atheros. An Atheros primarily based card can come associate RSSI price of zero to 127 (0x7f) with 128 (0x80) indicating associate invalid price.

VI. RESULTS AND DISCUSSION



VII. CONCLUSION

Now a days, this system is most needed and useful one for all the people`s to save the unwanted death due to late treatment. So, this system is mostly develop for the emergency purpose and to give the treatment for the patients at a correct time. The drivers are also find the ambulance easily, when it at a nearby distances and the system give the alert to the driver with the APR voice. The driver will identify the ambulance and react to give the way for ambulance. Here, the range of the ambulance will split to the three parts for take the necessary actions to avoid the accident. This system is so simple to use on all ambulances via smart phones and it is fix to all vehicles mandatory at the production companies.

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