

Active Mobile Detection with Information Provider System

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ABSTRACT:-

The aim of the paper is that preventing the use of mobile phones and thus detecting them in the restricted areas like examination halls and confidential rooms. As we know that mobile transmission detector can sense the presence of activated mobile phones. The range of this detector is one and half meter. This can also be used for detecting the use of mobile phone for spying and unauthorized video transmission.

The circuit can sense the incoming and outgoing calls. It can also sense SMS and video and image transmission. This circuit can sense in the silent mode also. LED starts blinking when bug detects RF transmission signal from an activated mobile phone. Information provider system with the detector circuit is provided. The detector sends the signal to the receiving antenna which is sensed by the info provider system. Result is displayed on LCD and the buzzer starts beeping. In this, first of all 220 V Ac supply is given to step down transformer. The ac signal is rectified by rectifier which is further processed by the regulator. Frequency is amplified by the amplifier and the pulse for 555 timers is generated. The signal is given to microcontroller. System checks the signal and displays it in LCD and beeps the buzzer. The range of info provider system is 20 meters. Further we can increase the range of the sensor up to three to five meters.

I. INTRODUCTION: - The frequency band of the mobile phones is GHz that cannot be easily It cannot be detected by the RF detector which used simple RC circuit.

0.9 to 3 GHz is the range of transmission frequency of mobile phones. The wavelength of this transmission frequency is 3.3 to 10 cm. So a circuit detecting gigahertz signals is required for the detection of mobiles. There are five major parts in the case of cell phone detector. They are:-

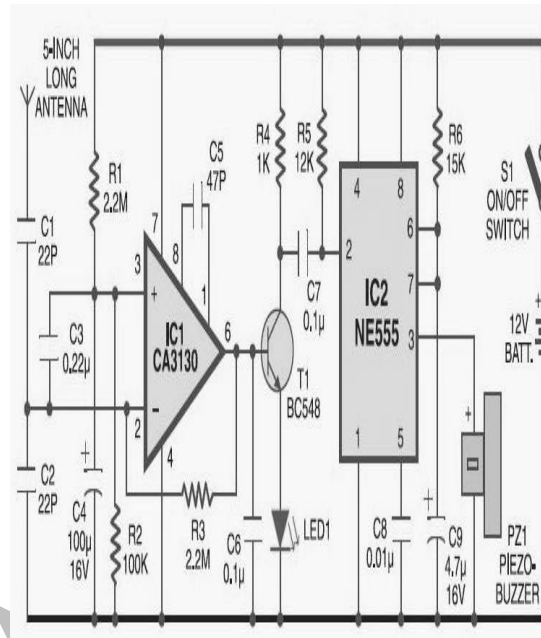
- (i)Antenna
- (ii)LC tuner circuit
- (iii)Current to voltage converter
- (iv)555 mono shot circuit
- (v) Output stage

OPERATION:-

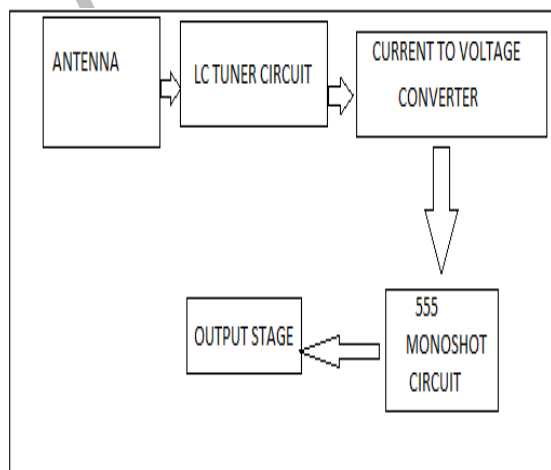
First of all an antenna is provided. Mobile phones send the frequencies. These frequencies need to be received. Receiving antenna is that part which received the frequencies of active mobile. There is a capacitor present to capture the RF signals. Operational amplifier is used to convert the current to voltage. In between the inverting and non inverting inputs there is a capacitor. Capacitor is used for storing the energy. This energy is transferred to operation amplifier in the form of current. This will upset the balanced input and convert the current into output voltage. Capacitor with High resistor keeps the o/p to high state. The negative pulse is used for triggering the 555 timer through capacitor.

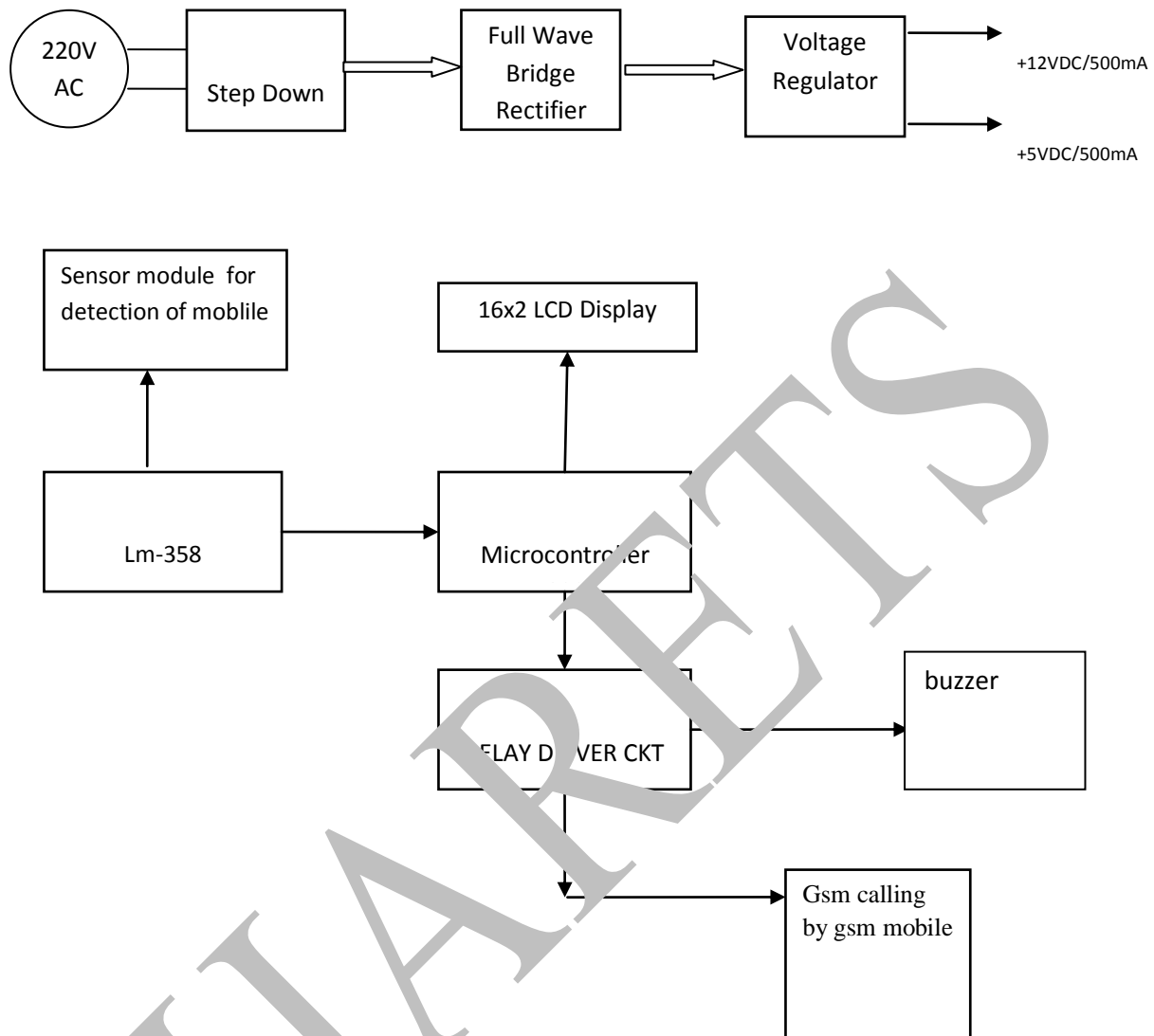
The 2nd circuit is the information provider circuit. In this two antennas are used that is transmitting and receiving antenna. Transmitter sends the signal and receiver receives the signal. The negative half of the pulse is required for the triggering of timer. In this, the timer works in astable mode. For converting series voltage into parallel a decoder HT12D is used. The voltage is then driven to the voltage regulator. Voltage regulator regulates the voltage. The microcontroller finally senses the signal. Machines cycles are provided by the crystal oscillator to provide to microcontroller. Once the mobile is detected, the result will be displayed on the LCD and buzzer will beep on the other circuit. The buzzer will automatically stop beeping due to astable mode of timer.

CIRCUIT DIAGRAM



BLOCK DIAGRAM OF CELL PHONE DETECTOR

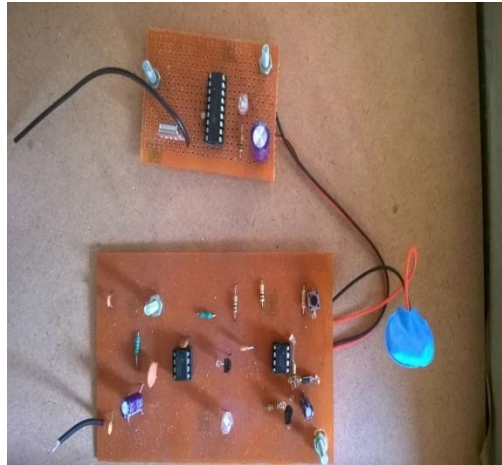


BLOCK DIAGRAM OF INFO PROVIDER SYSTEM

II.CONCLUSION As discussed in the paper several future scopes are expected .We have many examples where the mobile detection technique can be utilized like universities, theatres, airplanes, conference rooms, petrol stations, prisons and hospitals. In future the range of detection can be increased by modifying the circuit. In this paper, we proposed the prototype of a mobile phone detector that detects the presence of mobile phones in examination halls and conference rooms. The detector is not only for detecting mobile phones at the entrance but rather throughout examination time. Active phones which come under the range of the detector will be detected. The detected mobile phone can be then given to the invigilator for appropriate action. In addition the information provider system has a wider range. It is an advancement we have made in the mobile detection system.

RESULTS

CELL PHONE DETECTOR



INFO PROVIDER CIRCUIT



III. REFERRENCES

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