IJIRCCE

e-ISSN: 2320-9801 | p-ISSN: 2320-9798

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

Volume 11, Issue 11, November 2023

INTERNATIONAL STANDARD SERIAL NUMBER INDIA

Impact Factor: 8.379

International Journal of Innovative Research in Computer and Communication Engineering

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 | Monthly Peer Reviewed & Referred Journal |

|| Volume 11, Issue 11, November 2023 ||

| DOI: 10.15680/IJIRCCE.2023.1111052 |

Implementation of Mobile Signal Jammer

Shwetha S[1], Chinmayraj J N [2], Monisha N S[3], Tejaswini G C[4], Shivam R Chavan[5]

Assistant Professor, Dept. of Electronics & Communications, Bapuji Institute of Engineering and Technology, Davangere, Karnataka, India

Dept. of Electronics & Communications, Bapuji Institute of Engineering and Technology, Davangere, Karnataka, India

***ABSTRACT*:** Mobile jammer is used to prevent mobile phones from receiving or transmitting signals with the base stations. Mobile jammer effectively disables mobile phones within the defined regulated zones without causing any interference to other communication means Mobile jammer can be used in practically any location, but are used in places where a phone call would be particularly disruptive like Temples, Libraries, Hospitals etc. As with other radio jamming, mobile jammer block mobile phone use by sending out radio waves along the same frequencies that mobile phones use. This causes enough interference with the communication between mobile phones and communicating towers to render the phones unusable. Upon activating mobile jammer, all mobile phones will indicate "NO_NETWORK". Incoming calls are blocked as if the mobile phone were off. When the Mobile jammers are turned off, all mobile phones will automatically reestablish communications and provide full service. Mobile jammer's effect can vary widely based on factors such as proximity to towers, indoor and outdoor settings, presence of buildings and landscape, even temperature and humidity play a role. The major advancement will be that emergency services can be availed which is very crucial in case of any calamity and also it has a lesser power consumption than existing models. This technique has infinite potentials and sure can this be modified to match all our imaginations.

I. INTRODUCTION

A mobile phone jammer or blocker is a device which deliberately transmits signals on the same radio frequencies as mobile phones, disrupting the communication between the phone and the cellphone base station, effectively disabling mobile phones within the range of the jammer, preventing them from receiving signals and from transmitting them. Jammers can be used in practically any location, but are found primarily in places where a phone call would be particularly disruptive because silence is expected, such as entertainment venues.

Because they disrupt the operations of legitimate mobile phone services, the use of such blocking devices is illegal in many jurisdictions, especially without a licence. When operational, such devices also block access to emergency services. The main purpose of a cell phone jammer is to jam a cell phone signal in a designated area. Cell phone jammer is radio frequency equipment which produces a RF signal to beat the cell phone frequency and effectively jam the signal which results no service to any type of cell phone such as CDMA and GSM in the range of 800MHz to 900MHz. Once the cell phone jammer is operating, all mobile phones present within the jamming coverage area are blocked and cellular activity in the immediate surroundings is jammed.

A jamming device transmits on the same radio frequencies as the cell phone, disrupting the communication between the phone and the cell phone base station in the tower. This is called as denial of service attack. The jammer denies service of the radio spectrum to the cell phone users within the range of the jamming device. As with other radio jamming, cell phone jammers block cell phone use by sending out radio waves along the same frequencies that cellular phones use. Most cell phones use different bands to send and receive communications from towers. Jammers can work by either disrupting phone to tower frequencies or tower to phone frequencies. Use the enter key to start a new paragraph. The appropriate spacing and indent are automatically applied.

Fig.1. Typical Jammer device.

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 | Monthly Peer Reviewed & Referred Journal |

|| Volume 11, Issue 11, November 2023 ||

| DOI: 10.15680/IJIRCCE.2023.1111052 |

A. The main features of this project.

i. User friendly operation.
ii. Very easy to operate.
iii. Switch ON-OFF.
iv. Activities display on Phone display.
v. Jammer activation using relay switch

B. Signal Jammer Definition

A Jammer is a device that blocks transmissions by creating interference. The jammer emits signals in the same frequency range that cell phones uses, and within the range of a jammer a cell phone user may lose their signal. Jammers are usually undetectable, and users may experience minimal effects such as poor signal reception. The most common types of this form of signal jamming are random noise, random pulse, and stepped tones, warbler, random keyed modulated CW, tone, rotary, pulse, spark, recorded sounds, gulls, and sweep through. Signal Jammer were originally developed for law enforcement and the military to interrupt communications by criminals and terrorists. Some were also designed to foil the use of certain remotely detonated explosives.

OUTPUT	FREQUENCY	AVERAGE OUTPUTTING POWER	CHANNEL OUTPUTTING
CDMA	850-880MHz	33dBm	6dBm/30KHz(min)
GSM	930-960MHz	33DbM	5dBm/30KHz(min)

Table.1. Gsm and Cdma properties

II. METHODOLOGY

Under design, factors like the cost of the components, behavior each component in the circuit, adjustment and modification of the existing design, time needed to complete the design were all put under consideration as we shall see details in the appendices of this report. Other components of this plan of action include; system implementation, system testing and others which we were able to carry out all.

Jammers can broadcast on any frequency and are effective against AMPS, CDMA, TDMA, GSM, PCS, DCS, iDEN and Nextel systems. A cell phone works by communicating with its service network through a cell tower or base station. A jamming device transmits on the same radio frequencies as the cell phone that is 900MHz disrupting the communication between the phone and the cellphone base station in the town. It is a called a “denial-of service attack”. The jammer denies service of the radio spectrum to the cell-phone users within range of the jamming device.

The circuit consists of Arduino microcontroller, flame sensor, Bluetooth module And jammer circuit as shown in fig.4.2.2. The jammer will be turned ON/OFF with the use of Bluetooth module. In case of emergencies like fire, the flames sensor detects the flames and sends the signal to the Arduino, the Arduino send the actuation signal to the Jamming circuit and Jammer will be turned OFF.

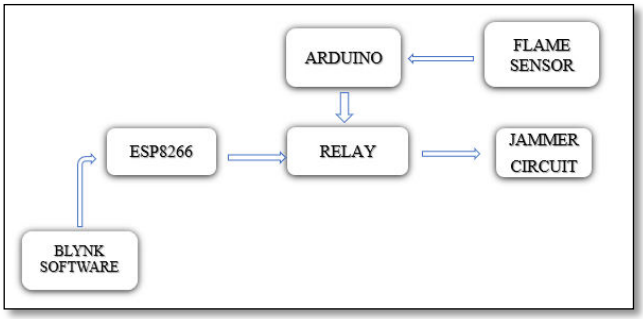

Fig.2. Block Diagram Of the proposed project.

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 | Monthly Peer Reviewed & Referred Journal |

|| Volume 11, Issue 11, November 2023 ||

| DOI: 10.15680/IJIRCCE.2023.1111052 |

III. SYSTEM DESIGN OF SIGNAL JAMMER

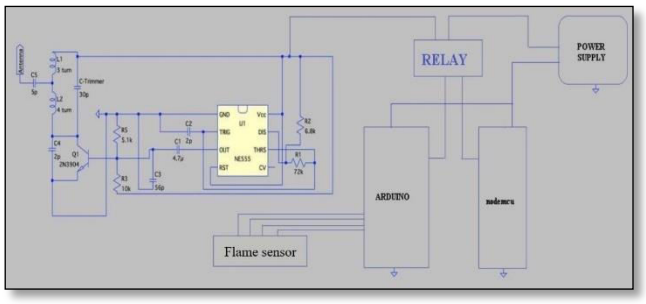

Fig.3. Circuit Diagram of proposed project.

The proposed system obtains the power supply and turns on. Through the nodeMCU the signal is sent to relay to power up the device. When the flame is detected, the Arduino sends the signal to break the Jammer circuit. When the Jammer is turned-on, the pin-6 of the is connected to 72kΩ with discharge pin-7 connected to 6.8kΩ, pin-8 is connected to V_{cc}, pin-1 is connected to ground along with a Capacitor of 2pf to pin-2 which produce the triggering values. The output is obtained through pin-3 which is sent to the amplifier circuit i.e., npn-transistor. The inductors are made to produce the high frequencies and the signals are sent to the antenna as show in figure 3.

IV. TYPES OF MOBILE JAMMER

There are two types of cell phone jammers currently available. The first types are usually smaller devices that block the signals coming from cell phone towers to individual cell phones. The frequency blocked is somewhere between 800MHz and1900MHz. Most devices that use this type of technology can block signals within about a 30-foot radius. Cell phones within this range simply show no signal. The second type of cell phone jammer is usually much larger in size and more powerful. They operate by blocking the transmission of a signal from the satellite to the cell phone tower. Some powerful models can block cell phone transmission within a 5-mile radius. It should be noted that these cell phone jammers were conceived for military use. Once again, It should be noted that operating or even owing a cell phone jammer is illegal in most municipalities and specifically so in the United States. Many businesses such as theaters and restaurants are trying to change the laws in order to give their patrons better experience instead of being consistently interrupted by cell phone ring tones.

V. COMPONENTS USED

i. Hardware Components.
   a. Arduino Uno.
   b. Flame Sensor.
   c. ESP8266.
   d. Jammer Circuit (555 timer, NPN bipolar transistor, resistor and capacitor, Antenna).

ii. Software Components.
   a. Arduino IDE
   b. Blynk software

VI. APPLICATIONS.

It can be used in

i. Armies, public security department's important conference rooms.
ii. Libraries Tests places, examination centres.
    School classrooms and training organization classrooms.
iii. Temples, Mosques and Churches.

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 | Monthly Peer Reviewed & Referred Journal |

|| Volume 11, Issue 11, November 2023 ||

| DOI: 10.15680/IJIRCCE.2023.1111052 |

VII. CONCLUSION

This is primarily intended to inhibit the use of mobile phones in areas within its coverage without interfering with communication channels outside its range, thereby providing dependable way for blocking mobile communication in a reasonable manner.

Although we must be aware that a large number of mobile phones that can easily negotiate the jammers effect are now available, advanced measures should be taken to jam such devices.

REFERENCES

[1] P. Naresh, P. Raveendra Babu, K.Satyaswathi. " Mobile Phone Signal Jammer with Pre-scheduled Time Duration using ARM7" International Journal of Science, Engineering and Technology Research (IJSETR) Volume 2, Issue 9, September 2013 ISSN: 2278-7798.

[2] Shaikh Sajid Ahmed Abusiddik, Ibrahim Abdul Majid Shaikh and Geetha D Salunke. "mobile signal jammer", International engineering research.

[3] E Divya , R. Ashwin., " Desain of user specific intelligent cell phone jammer", 1st Int'1 conf. on Recent advances in information Technology |RAIT-2021|.

INNO SPACE
SJIF Scientific Journal Impact Factor

Impact Factor: 8.379

doi cross ref

ISSN INTERNATIONAL STANDARD SERIAL NUMBER INDIA

निस्केयर NISCAIR

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

9940 572 462 6381 907 438 ijircce@gmail.com

www.ijircce.com

Scan to save the contact details