

COLLEGE OF ENGINEERING & TECHNOLOGY

Department: Electronics and Communications Engineering, Cairo



Graduation Project Description Form

Project Supervisor: Prof. Hesham ElBadawy

Project Title: Multi Band Mobile Jammer

Duration from mo/year 9/2013_____till mo/year 7/2014_____

Product Category

Algorithm_____ Hardware_____√ Software_____

Standards:

Safety: UL, CE_____ IEEE √_____ FCC__

Other _____

Practical Realization Form

PCB √_____ Firmware____ Embedded CPU Kit (ARM, ..etc):_____

PC Software _____ Ready-made Package_____ DSP Kit____ FPGA Kit__

VLSI Schematics ____ VLSI Layout _____ VLSI Silicon (ASIC)_____

Language

VHDL/Verilog_____ Matlab √_____ C/C++/Java _____

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Productization

Finished Product Form: Circuit Possible Commercialization YES

Amount of Funds Needed for buying components: 1000LE

Testing

Functional √ Simulation Parameters Final Hardware √

Lab Test Setup

EMC √ Environmental Microwave Analog Lab

CAD Tools *(No unauthentic software is allowed):*

Elective Classes Required:

NO

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Abstract

Nowadays, mobile (or cell) phones are becoming essential tools in our daily life. Needless to say, the wide use of mobile phones could create some problems as the sound of ringing becomes annoying or disrupting. This could happen in some places like conference rooms, law courts, libraries, lecture rooms and mosques. One way to stop these disrupting ringing is to install a device in such places which will inhibit the use of mobiles, i.e., make them obsolete. Such a device is known as mobile phone jammer.

The aim of this project is to:

This project aims to the design, implementation, and testing of a multi-band cell-phone jammer. This jammer works at different frequencies such as: GSM 900, DCS 1800, and UMTS 2100 simultaneously. The main steps that may be followed in this project are as follows:

- Studying the mobile communication spectrum to find out the most suited jamming technique for different access technologies.
- Establishing the system design and selecting suitable components.
- Circuit design, schematic, and implementation.
- Fabricating the PCB layout and assembling the system prototype
- Performing measurements and finally testing the mobile jammer.
- Investigate the concept of jamming and compare between mobile accesses techniques according to its immunity to jammers.

Number of Students:

- The project group will be 4 students

References and Links