Jamming UAV

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Abstract—**Jamming UAV is basically plane where a nord mcu microcontroller has been fixed. A UAV is an unmanned aerial vechicle The nord mcu is a microcontroller which can jam wifi networks as well as create several duplicate wifi networks which cannot be connected. Jamming Uav can be used for security purpose where we can fly the plane and jam the networks of that area.**

Keywords—**microcontroller, jamming, Nord Mcu, unmanned aerial vechicle.**

I. INTRODUCTION

Jamming UAV is a device which can be used for jamming wireless networks in a particular area by flying the plane over that area. It can be used while conveys are being passed through a particular area. We can also fly it along with the convoy to jam the wireless networks all through the path. We are jamming the wireless network using a Nord MCU microcontroller. The Nord MCU microcontroller jams the wireless networks as well as it also clones the networks which cannot be used.

Till date there have been several researches done on the Unmanned Aerial Vehicle but all of them are either in the field of jamming the UAV itself or jamming the wireless networks used by the UAV. There are also some research work which has been done jamming attacks, jamming strategies in wireless networks and mobile jamming attack.

Therefore, Jamming UAV can be used for security uses where big and costly jammers cannot be used, this generates a void for some cost-effective wireless network jammer and wireless network clones. This gap has been filled by the Jamming UAV.

II. METHODOLOGY/EXPERIMENTAL

A. Materials and Components
- Electronical speed controller
- Servo motor x2
- Coroplast sheet
- Aluminium rod
- Carbon fibre rod
- 1000Kv motor x1
- 10inch propeller
- Nord MCU
- Radio Controller
- 11V 1200mah 3s battery

We choose coroplast sheet for the building of plane due its salient features such as-
- Can withstand humidity
- Easy to cut
- Incredibly shock absorbent
- Pliable
- The density of Coroplast is comparatively less as compared to other materials affordable at the same cost.
- Lightweight
- Durability
- Maintains its shape over the time

Specifications Of Nord MCU microcontroller-
- Operating Voltage: 3.3V
- Input Voltage: 7-12V
- Digital I/O Pins (DIO): 16
- Analog Input Pins (ADC): 1
- Flash Memory: 4 MB
- SRAM: 64 KB
- Clock Speed: 80 MHz

B. Design
A steel rod is used for the mounting of all the parts including the wings and all the electronic components. The basic design of a UAV consists of wings, propeller, ruuder and elevator.
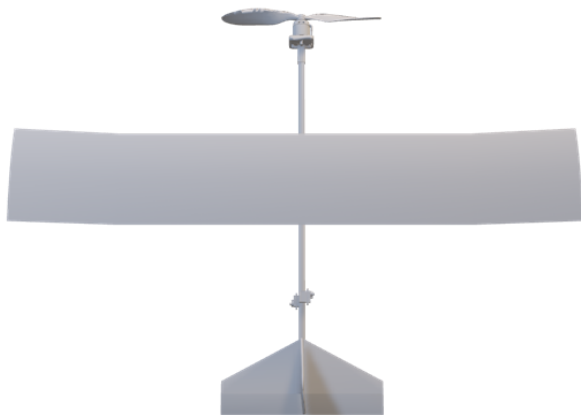
Fig. 1. Basic design of an UAV

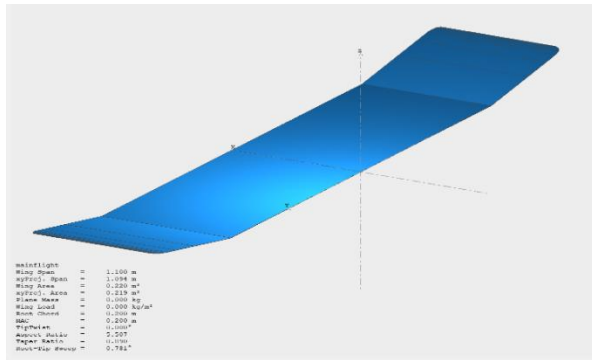The wings of the UAV has been designed and analysed on xflr software

Fig. 2. Design and analysis of wings.

Positioning of the motor has been at the front, two servo motors at the back of the plane to control the rudder and elevator, nord mcu microcontroller has been fixed on the center of the plane, electronic speed controller has been fixed in the front of the plane just behind the motor, receiver is fixed below the nord mcu microcontroller, two servo motor are fixed at the back of the plane and battery is placed depending on the center of mass.

Fig. 3. Final product after mounting of all the parts.
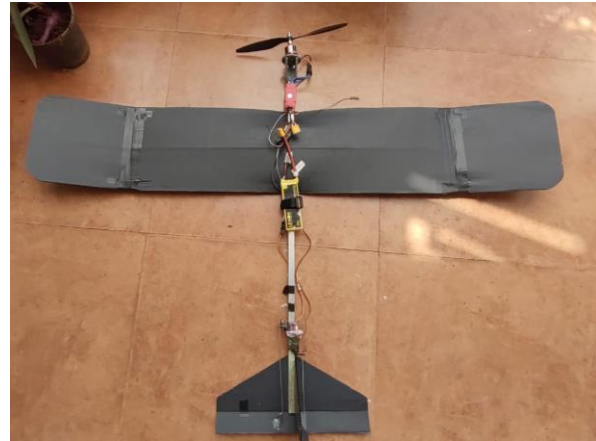

Fig. 4. Mounting of Nord mcu microcontroller

C.   Testing

Testing of the UAV has been done on a open ground and it has been seen that the UAV can fly perfectly without any failures. Testing of the nord mcu microcontroller has also been done it has been that it works perfectly in the jamming of wifi and also cloning wifi's.

III.   RESULTS AND DISCUSSIONS

It can be seen that the UAV can fly and jam and clone the wifi networks aerially. This can be used for security purposes where costly jammers cannot be used and also used in security convoys to jam the networks along the route.

IV.   CONCLUSION

As we know that UAV have become quite popular and are also used for purposes including domestic, commercial as well security purposes. This research work will further contribute mainly towards the security purpose.

V. ACKNOWLEDGMENT

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