



# RECOVERY TEAM



Week 6



# Last Week's Objectives

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- Ejection Charge Tests #26
- Wrap Around Patch Antenna #20
- Drone Test Preparation #32
- Power Requirement and Battery Sizing #7
- Documentation on Guru Meditation

# Ejection Charge Tests #26

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The Ejection charge tests were performed on Friday:

- Plastic firebolts burn together with the nichrome wire
- The videos are for 2.5 grams of crimson powder

Recommendations to test.

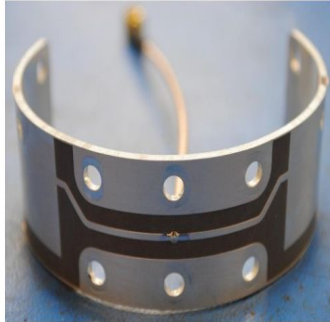
1. Line the inside with aluminium foil to prevent the plastic from burning
2. We will use a larger bore in the fire bolt to contain a larger amount of explosive charge.

<https://discord.com/channels/@me/1064824425020657676>

## Wrap Around Patch Antenna #20

We set down the parameters for the N3 Antenna, based off the previous antenna used during N2.

The design for the antenna is currently underway



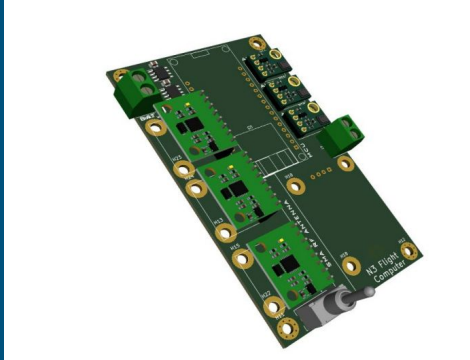
Proposed design

	Ufl IPX WIFI Antenna	N3 InHouse Antenna
Gain	2.5 dBi	5 dBi
Bandwidth	150 Mbps	200 Mbps
Frequency	2.4 GHz	2.4 GHz
VSWR	1.7	1.5
Impedance	50 ohms	50 ohms
Connector	UFL connector	UFL Connector

Antenna Comparisons

# Drone Test Preparation #32

- Finished the Flight computer PCB design



- Laid out the specifications for the Power Distribution Board #7
- Laid out the tasks to be completed by then

# Power Requirement and Battery Sizing #7

The power requirement sheet was laid out and a schematic of the power distribution Board designed.

Nakuja N3 Power Requirement Sheet			
Module	Current	Voltage	Wattage
BMP 180	0.5 uA * 3	3.3	4.95 uW
MPU 6050	3.9 mA *3	3.3	38.61 Mw
Flash Memory	1uA	3.3	3.3 uW
Total Power Draw from ESP			0.0386 W
ESP 32	600 mA	5	3W
GPS	67 mA	5	0.335W
Nichrome Wire	2A	5	10 W
Total Power			13.374 W
Total Current Draw			2.674 A
Expected BatteryRun Time			1 hr 49 mins

## This week's Objectives

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- Ejection Charge Tests #26
- Drone Test Preparation #32
- Antenna Patch Design #20
- Fabricate Power Distribution Board #7
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Thank You