

# "TURBULATOR"

Newsletter  
of the Rio Rancho  
Radio Control  
Flying Club  
AMA Club #2770

WATERMAN FIELD

ELEVATION 5840 FEET

35° 17.2'N 106° 44.8'W



## PRESIDENT'S CORNER

### "Da Prez Sez"

Fears in flying: 1) I don't want to crash or destroy a plane. Doug! - get over it you are going to crash! (Pilot and Mechanical) BUT practice the fundamentals.  
2) Shy - You have to ask and learn from others. Everyone had a starting point.  
3) Don't be a "Ya Ya Got-it" You Don't! From experience, when things go south panic sets in! Practice and auto reflexes need to take over. 4) "You have to understand from the time you layout the plans, the clock is ticking on the model. It's not a matter of if, but when." 5) You got them to fly them. 6) Fall off a horse - get a pony ... then build a stallion.

Fly them if you got them DOUG!

## Coming Events

1. Next Meeting 5 Jun 10am at the Field.
2. SWAP Meet 19 June Gates Open 0700
3. Family Day 3 July @ 10:00

## Is it LiPo Battery Replacement Time?

by Don McClelland

This week at the field I was asked to test a few batteries for some club members. I always have my LiPo Internal Resistance Meter in the Van so its pretty easy to test batteries at the field. The battery IR decreases the ability of the battery to either accept a charge or to efficiently Discharge ultimately affecting total charge time and the ability to deliver power to your planes motor. It is one of a number of factors that you should consider when determining the time for replacing your LiPo Batteries.

First and foremost any deformations of the battery pack or plastic wrap is of immediate concern an is a reason to retire that Lipo. If your battery has dents, bulges, smashed corners or tears in the casing or looks like a log(Puffy) The Gas that causes puffiness is Hydrogen or Lithium Oxide and is very flammable and is caused by electrolyte decomposition of the cells. Just properly dispose of it.

Let's talk Internal Resistance.

### **Good rules of thumb**

a) Packs that are as good as new: between 0 and 5 milliOhm/cell

b) Packs that have been used dozens of times, but still feeling fairly good: between 5 and 10 milliOhm/cell

c) Packs that have been used even more, and start to feel weak: between 10 and 20 milliOhm/cell

d) Packs that give poor performance or take extra long to charge: over 20-25 milliOhm/cell

How do you measure internal resistance????

First most chargers these days measure internal resistance of your batteries as they charge. If your charger does measure IR then the most accurate measurement is displayed at full charge(End of the Charge) The other way is to use a LiPo IR Meter which calculates the Internal Resistance of your battery by putting a constant load on the battery and the meters computer uses Ohms law to calculate the IR. These meters are about \$150. I carry one of these meters in my van so you don't need to buy one yourself. Both your charger and the meter will also measure the wires and connectors when performing the IR check. I mention this because some members

solder their own connectors on their batteries and a bad solder connection will affect the measurement for IR. If you're not proficient in soldering there are plenty of club members with tons of experience that will solder for you. Hobby Pros will also solder your battery connectors, just talk with Bobby or Skylar.

Remember that the cells are wired in series, and the resistance values of the cells need to be added up to know the total resistance of the pack.

For example: a 3S pack with IR cell 1 = 4, IR cell 2 = 6 and IR cell 3 = 5 will have a total IR value =  $4 + 6 + 5 = 15$  milliOhm. The majority of chargers will give individual cell measurements, though there are some that just give you the IR of the entire pack.

I find it best to change my packs out every two years so I mark each pack with the purchase date so I know when to change them out. I have an engineering friend who marks the cell IR on initial charge when he purchases a new pack then he tracks the IR every charge through the life of the pack. This may seem overboard and isn't necessary for the normal sport flier but he does quite a bit of racing and knows which pack performs the best and why. The lower the IR the higher current output of the pack.

These days 3s 2200 LiPo packs are pretty inexpensive. I have seen packs as cheap as \$9.99/ea through \$39ish.

In Conclusion: Even if your bought the cheapest battery you could, it lasted for only a year before replacement its still way cheaper that the \$250 Foamy that your're flying it in !! Would it be worth the loss of a plane because you are using batteries past their useful life? Can you extend the useful life by discharging your batteries to a "Storage Charge." Some people sear by the "Storage Charge" and we have members that do this and members that don't. I haven't seen a difference in battery life. What seems to be the major difference is the quality of the manufacturing process. Thunder Power is very good and Gens Ace probably the worst. The others are in between these in my observations.

Also nothing in this article pertains to NiCad, NiMh or LiFe batteries as their chemistry is different than the LiPo Batteries we've been talking about.

# MINUTES

## Minutes from the November 2020 Club Meeting

Calling of meeting to order at 10AM With 12 Members

Pledge of Allegiance

**Minutes:** Accepted as Published

Treasurer's Report: Accepted as Presented

Membership report: 44 Members on Roster

Field Report:

Safety: Perform basic safety inspection of your plane prior to flight

Completion of unfinished business:

1. Puck lock on shed all club officers have keys. Combo lock still on gate.

Shank on Container has been repaired. Lock demonstrated.

2. Container painting will be scheduled and membership notified via email.

3. Jun 19th Gates open @ 7 Club SWAP Meet and will invite other local clubs

4. Family Day - 3rd of July, starts @ 10am.

5. July 4th Watching fireworks at field.

6. Cochiti Tetilla Peak status unknown for flying. Zia lake closed due to covid. Looking for alternative Float fly sites. Update: Corp of Engineers waiting on road repair approvals from

Cochiti Pueblo Council. Tetilla Peak side remains closed due to the condition of the road.

Club communications:

Committee Reports:

New Business:

1. Schedule workday to dig cable on road side of field. 22th of May starting at 0900. Rain date the following weekend(29TH). Trying to find sport boosters to do work if we can.

2. Field Paint - Motion to authorize purchase of paint for field. APPROVED.

The meeting adjourned

1032 am



Rudy's New Super Cub at a float fly in Cali.  
Electric: Power 160 on 10 Cells

### Turbulator:

Editor Don McClelland

We are always looking for articles, pictures and your input!

For comments, or suggestions

Please Email Don at

[macmoke1@gmail.com](mailto:macmoke1@gmail.com)

### Please support our sponsors:

#### Hobby Proz

2225 Wyoming Blvd NE # J  
Albuquerque, NM 87112-2638  
(505) 332-3797

## RIO RANCHO RC CLUB

AMA Charter #2770

[www.rioranchorcflayers.org](http://www.rioranchorcflayers.org)

### Next Club Meeting

June 5th 10:00am at Waterman Field