

# Crash 'n' Splash

Nelson Model Aero Club

<http://nmac.org.nz>

October 2017

## President's Piece

Hi everyone

It's been a quiet two months for our club due to the atrocious weather. Our flying field has more often than not resembled a lake, severely limiting our flying time. As always the keen and the hardy do find a way to get in some flying. We had a float fly at the Nile Road site and this provided plenty of hilarity. You know it's going to be a fun day when upon arrival you find one plane disabled on the water and another stuck while trying to push it in to shore.

I've walked out to the sand flats a few times and enjoyed some good flying conditions despite the soggy ground. Others have taken small models to drier grounds. The WhatsApp is a great help in organising groups for flying, so if you haven't yet installed it on your phone I encourage you to do so. Phil Jordan and Murray Irvine will be able to invite you to our group.

With the weather curtailing flying, several of our members have taken to aircraft construction and a tempting array of models have made photogenic appearances via WhatsApp. Of great interest is Murray's Meteor. Several members got the chance to view this model close up after our latest committee meeting and it really is a wonderful looking plane. Can't wait to see this in the air.

I did get two weeks of gorgeous weather by leaving our soggy shores and heading for Bali. Not many RC aircraft to be seen, but plenty of kites. It was nothing to seen upwards of fifty filling the sky. We often hear concerns about drones near airports, well in Bali the aviation authorities are primarily concerned about kites. So if you are leaving Denpasar Airport, look out for string wrapped around your Boeing's wing!

With the warmer weather arriving, I'm sure we will all be driving out to the sand flats soon.



Murray with the Meteor before the maiden flight.  
Successfully up and down –pew!

Happy flying,  
Andrew.

## Committee

Your committee members elected at the May 2017 AGM are:

President	Andrew Reeve		
Vice President	Ron King		
Treasurer	Peter Stevens		
Secretary	Brian Ransby		
Power Captain	Murray Irvine		
Heli Captain	Lance Walford		
Committee	Doug Stratton		
CnS Editor	Murray Irvine		

The CnS newsletter is published every two months; Feb, Apr, Jun, Aug, Oct, and Dec.

## Important Notices

### Care of Your Strip:

**Spring** is here! – **as usual** - if it has rained any time in the 24 hours preceding your intended flying session can you please check the condition of the track **before** you drive out to the pits – *that especially includes 4WD owners.*

If you can see your footprint clearly in the mud, there's every chance your vehicle will leave a mark as well and it weighs a lot more than you do! Please don't 'rut up' our access road any more than it already is. Thanks.

**Without the opportunity to get out to the strip recently, and with spring arriving, the pits area has become overgrown and is in need of a good tidy up. As soon as the area dries out the committee will organise a **working bee** one Saturday afternoon – hopefully before the end of October.**

**Please keep an eye out for the email and try to make yourself available.**

### FPV Pilots:

With the growing number of FPV quads and planes flying at the club the FPV pilots have asked that to avoid video conflicts that you **do not turn on your video transmitter** until you have checked frequencies with other FPV pilots first and agreed a separate video channel.

The **process is 'self-managing'** so please remember to check before flying.

### Dates for Your Diary:

- **Second Sunday Series Dates: Sunday 8<sup>th</sup> October and 12<sup>th</sup> November;**  
Keep an eye on your emails and the WhatsApp channel for updates on events.

### Special offer for NMAC Members

**COOL POWER** – 1 Gal (US) or 3.785 litre containers **\$65 each**

**BACK IN STOCK - NITRO ~ \$35 per litre**

I don't have any bottles for the nitro so it's BYOB (Bring Your Own Bottle).  
Contact Peter Stevens

# Power Flying News

Hi everyone

Once again the wet weather over the past couple of months has curtailed our flying. But spring is here and I'm optimistic that good flying weather is on the way. Wet weekends have meant plenty of workshop time and I've got several models waiting to have their first flight or ready to try out new modifications. I'm heading down to the Darfield "Jet and Scale Weekend" in mid-October where I'll hopefully find some dry feet and get some good photos for you for the next edition.

**CnS Survey:** Members often ask me club related questions and if I say "didn't you see it in the CnS" I almost as often receive a blank look. The newsletter has several goals including; informing members about relevant club matters, highlighting member projects and member flying activities, and some general information on aspects of our hobby. If members aren't reading it then it's not doing its job and the committee will need to change it.

So if you've this far – great! Now, go back to the email you received with the CnS, click on "reply", and type "read it", and click "send". That'll send an email back to me. I'll let you know the results of the survey next edition.

**Training Course:** In the last CnS I mentioned that my "Introduction to RC Planes" training course at Waimea College Community Education was fully booked with 10 people enrolling. The course went well and was a lot of fun - I think the attendees all really enjoyed it. Thanks to Doug and Phil who helped me out. As soon as the weather improves I'll be in touch with the class and encourage them to come along to the club to find out more and get them flying. Hopefully some will want to take the next step and get in the air on a regular basis.

**WhatsApp Group:** The WhatsApp group is growing in size and is becoming an excellent method to share information and flying outings. If you haven't got WhatsApp on your smart phone you should install it. It provides "free" voice calls, video calls, and messaging to/from anywhere in the world.



Phil Jordan and Murray Irvine are the administrators and can add you to the group. So install WhatsApp and then text Phil (027 758 2386) or Murray (021 457 663) and ask them to add you to the group. If you're technically challenged speak to one of us to help you get it going.

Until next time, safe flying and have fun!

Cheers  
Murray



The first class of the "Introduction to RC Planes Course" enjoying the Wakapuaka flying site.

# LiPo Battery Tips

*In the last CnS Paul Troon supplied an article about LiPo batteries. Here's some additional information about storing and disposing of your LiPo's. There are useful suggestions in here – it's not necessarily all 'gospel' but there are some useful ideas are worth considering.*

*As an aside I never get around to 'store charging' my batteries (at around 60%) - although it looks like I should. I do try to keep them discharged (which for me is usually around 20%). I typically charge my batteries just before I leave for a flying session. I try to never leave them at full charge – but I occasionally do forget to discharge them (i.e. I have charged the battery but not used it at the field; as the wind has come up or I've trashed a plane). LiPo's that puff have either been over discharged or have been stored fully charged. I always dispose of puffed batteries even if they are only a bit puffed. Cheers – Editor.*

## Proper Care & Treatment: Storage

In the old days, we used to run our cars or airplanes until the batteries died, then just set the batteries on the shelf at home, waiting for the next time we could use them. We just stored them dead. But you should not do that with LiPo batteries. Nor should LiPo batteries be stored at full charge either. For the longest life of the batteries, LiPo's should be stored at room temperature at 3.8V per cell. Most modern computerized chargers have a LiPo storage function that will either charge the batteries up to that voltage, or discharge them down to that voltage, whichever is necessary.

### Proper LiPo Storage Voltage = 3.8V per cell

It is recommended that LiPo's are put in storage mode after every run. This isn't necessary per se, but it does build up good habits. If you do it every time, you don't have to worry about whether or not you remembered to put it in storage. LiPo batteries can be damaged by sitting fully charged for as little as a week. This doesn't mean they will get damaged every time you leave them for over a week. It just means they can.... So don't forget to put your LiPo's at storage voltage when you're done using them.



They should also be stored in a fireproof container of some sort. Most people tend toward leaving their LiPo's in a LiPo bag. I have also seen people use empty ammo boxes, fireproof safes, and ceramic flower pots. Whatever you have (or can buy) that will prevent any fire from spreading will be worth it in the unlikely event that anything untoward should happen.

## LiPo Battery Disposal

So you have a bad LiPo battery? No one really wants to keep them around (fire hazards that they are). So what is the process to get rid of a bad LiPo battery safely?

- Discharge the LiPo battery as far down as you safely can. You can do this a number of ways. Most computerized LiPo chargers have a discharge feature in them. If you don't have a charger with a discharge feature, you can run down the battery in your plane (take care to have the necessary safety equipment around).
- Place the LiPo in a salt water bath. Mix table salt into some warm (not hot) water. Keep adding salt until it will no longer dissolve in the water. Ensure that the wires are all entirely submerged. The salt water is very conductive, and it will essentially short out the battery, further discharging it. Leave the battery in the salt water bath for at least 24 hours.
- Check the voltage of the LiPo. If the voltage of the battery is 0.0V, great! Move onto the next step. Otherwise, put it back in the salt water bath for another 24 hours. Continue doing this until the battery reaches 0.0V.
- Dispose of the battery in the trash. That's right - unlike NiMH and NiCd batteries, LiPo's are not hazardous to the environment. They can be thrown in the garbage with no problem.

## A Letter from our 'Foreign Correspondent in Britain'

*Our (English) 'Foreign Correspondent' Brian Edwards was back in Nelson in January 2016 and we enjoyed many flying sessions with him. Here is his latest news and photos. Thanks Brian.*

Hi Boys ,

After missing your last issue I'm back (you can't keep a good pom down).

I have had a couple of crashes with my models (all pilot error), but as they were not my favourites they got the bin-bag treatment.

I have visited 4 model shows this year; Wings and Wheels North Weald, Cosford Large Model Show, Ragley Hall Show, and Southern Model Show Headcorn. The weather was not that good so the photos are not that sharp, but lots of Jets and some interesting scale models.

I just finished (and crashed ☺) a Fun Fly Mustang. My Sea Fury is down the shed awaiting spraying, and I just started a Pientopol Aircamper - and the winter project will be a 1/4 scale Albatross. I will be selling my 1/4 scale Tiger Moth without the Laser 180 which I need for the Albatross.

I made a 5 day trip in my mates Quantum Flexwing – the trip included running out of fuel over Exmoor which created an exciting landing.

We've been enjoying some warm weather at present - I may even have to get the shorts back out. Hope your weather warms up and you can get a lot of flying in.

Cheers

Brian

*Some amazing photos below from Brian's camera at the model shows. It's astonishing to realise that these are models and not full-size planes...*



Aerokot



Canadian Aermacchi



Fokker 70



VC 10



Fokker D1



Vulcan (1 and 2)



Pitts (1 and 2)



Starfighter



Lightning

# Manoeuvre of the Month: First Aerobatic Moves

*I found this introductory article that covers your first aerobatic moves. It has some useful tips to use.*

Once you've learned how to fly and you can easily handle your airplane and fly it straight and level, you'll soon start looking for more challenges to regain the excitement that you felt in the beginning. Learning the basics of aerobatics is the best way to up the excitement and, while you're at it, increase your piloting skills and precision. This article will introduce you to three basic manoeuvres any aspiring aerobatic pilot will need to know. After mastering these, you'll be able to string various segments of these and make your own advanced show stopping moves. But first, let's see what's needed.

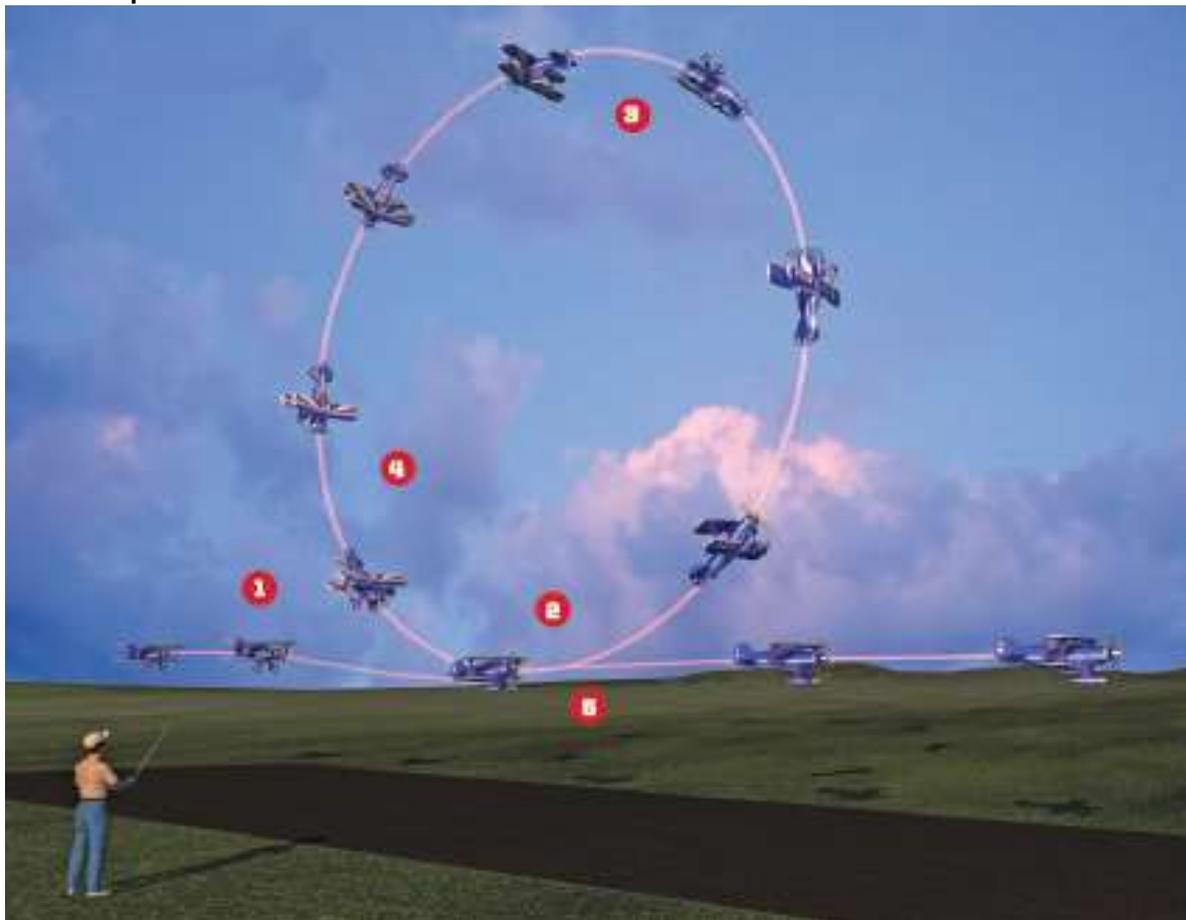
## GETTING STARTED

Aerobatic airplanes need to have a good power-to-weight ratio, with enough power not only to perform your chosen manoeuvres but also to fly out of problem situations. All of your plane's control surfaces should be set up and hinged correctly and, of course, move in the proper directions. The model's centre of gravity (CoG) should be set at the recommended position. High-wing trainer and sport aircraft can do basic aerobatics, but for more advanced manoeuvres, a shoulder-wing or low-wing plane is preferable.

## MANOEUVRES

Here are the three basic aerobatic manoeuvres: the inside loop, the roll, and a combination of the two—an Immelmann turn. These create a solid foundation on which to build your future aerobatic routines.

### Inside Loop



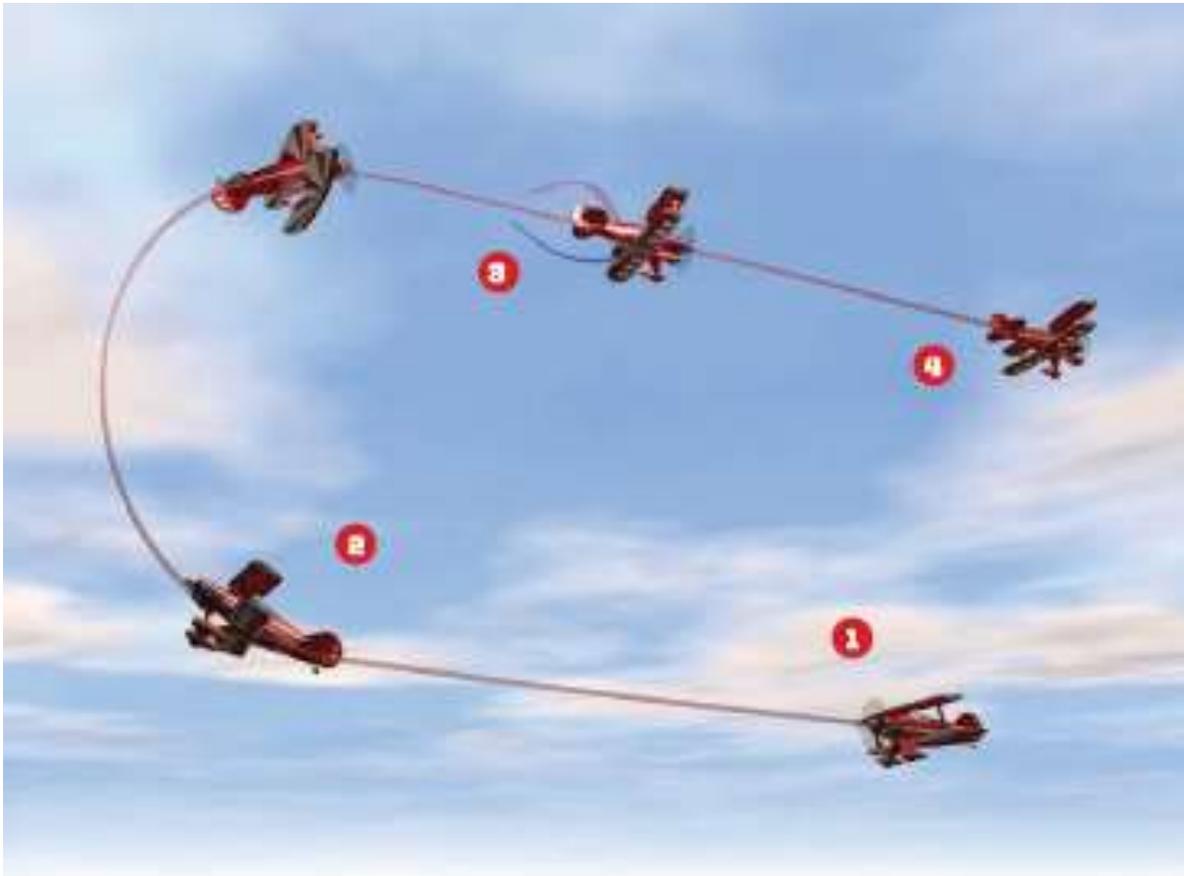
In an inside loop, the plane's canopy faces toward the centre of the loop during the manoeuvre. This move requires that you are proficient with basic straight and level flight. Graceful, smooth flying is your key to success for this classic move.

1. Step 1. Enter the manoeuvre flying parallel to the runway in upright and level flight.
2. Step 2. When the plane is directly in front of you, gently pull the elevator stick back (up) to begin the loop. You might need to increase throttle to maintain maximum power as the model nears the top of the loop to maintain a constant flight speed.
3. Step 3. Start decreasing throttle as the plane begins to come over the top of the loop. When you are on the downward segment, the throttle should be close to idle. Continue to adjust up-elevator to maintain a perfectly round loop.
4. Step 4. As the model approaches the last quadrant of the loop, release elevator input so that the plane maintains the same altitude as it entered the manoeuvre while flying upright.
5. Step 5. Increase power to 60 percent after your model passes your centre. Exit straight and level in upright flight.

#### PRO TIPS

- Elevator plays a major part in flying a loop. Make all of your inputs gradually and smoothly because the model will reflect all of your inputs.
- If you find that your model's heading is drifting during the manoeuvre, apply rudder inputs to keep its flight path parallel to the runway.

#### Immelmann Turn



Originally a combat manoeuvre developed to change heading 180 degrees and gain altitude quickly, this manoeuvre has become one of the most recognisable turnaround moves in aerobatics. It is actually a half loop followed by a half roll. You usually enter an Immelmann turn when you are flying into the wind. It is also a perfect transition from a low-exit manoeuvre to a high-entry manoeuvre.

1. Step 1. Begin the manoeuvre flying straight and level at half throttle.
2. Step 2. Pull back on the elevator, and begin a half loop while controlling your tracking with rudder.
3. Step 3. When you are inverted directly above the starting point, execute a half roll so that the plane is flying in the opposite direction in which it started and at a higher altitude.
4. Step 4. Maintain straight and level flight, and exit the manoeuvre.

## The Roll



Because the roll is used in so many other manoeuvres, it's important to perfect it and add it to your foundation repertoire. High-speed rolls are generally easier to start with because inertia is a tremendous help. Long, graceful rolls are usually done at medium-to-high speed to allow inertia to help keep the manoeuvre axial. Keep the midsection of the roll (when the plane is directly inverted) centered on your position.

1. Step 1. Begin the manoeuvre by flying straight and level either into the wind or downwind, then initiate the roll with a little aileron (constantly maintain that throughout the manoeuvre).
2. Step 2. As the roll begins, apply rudder to maintain a straight and level heading. (If the roll is to the right, use left rudder and vice versa.) The maximum amount of rudder will be required when the wing reaches vertical (knife-edge).
3. Step 3. As the plane continues to roll past vertical, start to ease off on the rudder and begin to apply down-elevator until the plane is inverted. At this point, you should have no rudder input, and you should have applied the maximum down-elevator input needed to maintain level flight.
4. Step 4. As the roll continues, begin to ease off elevator and apply the appropriate rudder (at this point, right rudder for a roll to the right) to maintain altitude as the plane rolls around again to wings vertical (knife-edge). When the wing is in the second vertical position, the plane should again have the maximum amount of rudder to maintain level flight, with no elevator input necessary.
5. Step 5. Continue the roll until the plane is again in the upright position. Slowly release the rudder stick so that there is no rudder input when the plane reaches its upright and level position. Exit the manoeuvre at the same altitude at which you started.



## For Sale.

The club has been contacted by Dave, who has a lot of RC items for sale on behalf of his older brother.

Here's the list

- 1 partly (80%) completed balsa Pietenpol. It is very well built.
- 1 new Spectrum DX6 system still in box
- 1 new balance charger still in box
- Several electric motors and batteries
- A pile of balsa sheets
- A big box of assorted RC bits and pieces such as wheels, linkages, rods etc

You can contact Dave....



Steve and Phil enjoying a sunny winter's afternoon on the Appleby River elbow – a great float fly spot (as long as the plane doesn't get dragged downstream and out to sea ☹ – but that's a story for another edition ☺)