

ROTORUA MODEL AIRCRAFT CLUB (INC)

August 2020 NEWSLETTER

Secretary Andy Watson

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Sub for the 2020 - 2021 year are	RMAC	MFNZ	TOTAL
Family	\$120	\$100	\$220
Senior	\$115	\$95	\$210
Junior	\$45	\$30	\$75
Associate	\$50	-	\$50

Payment can be made to ANZ account # 116102_ 0913131_ 11 Include your name in the details

Welcome to the August 2020 newsletter. The weather is slowly improving although we have been sitting round in fog until 10.30 on a few recent days. Usually a calm day has followed and plenty of flying enjoyed.

Welcome to new member Ashley Perera. Ashley has been flying a very nice electric pusher with the Spektrum safe assist system and doing very well. Ray P Test flew Ashley's foam electric Little Stick earlier in the month and wore a smile for some time after as it proved to be an excellent set up. On Tuesday he had a new foam electric T28 which was ably test flown by Andy W.

Back again on Wednesday Ashley was flying the T28.

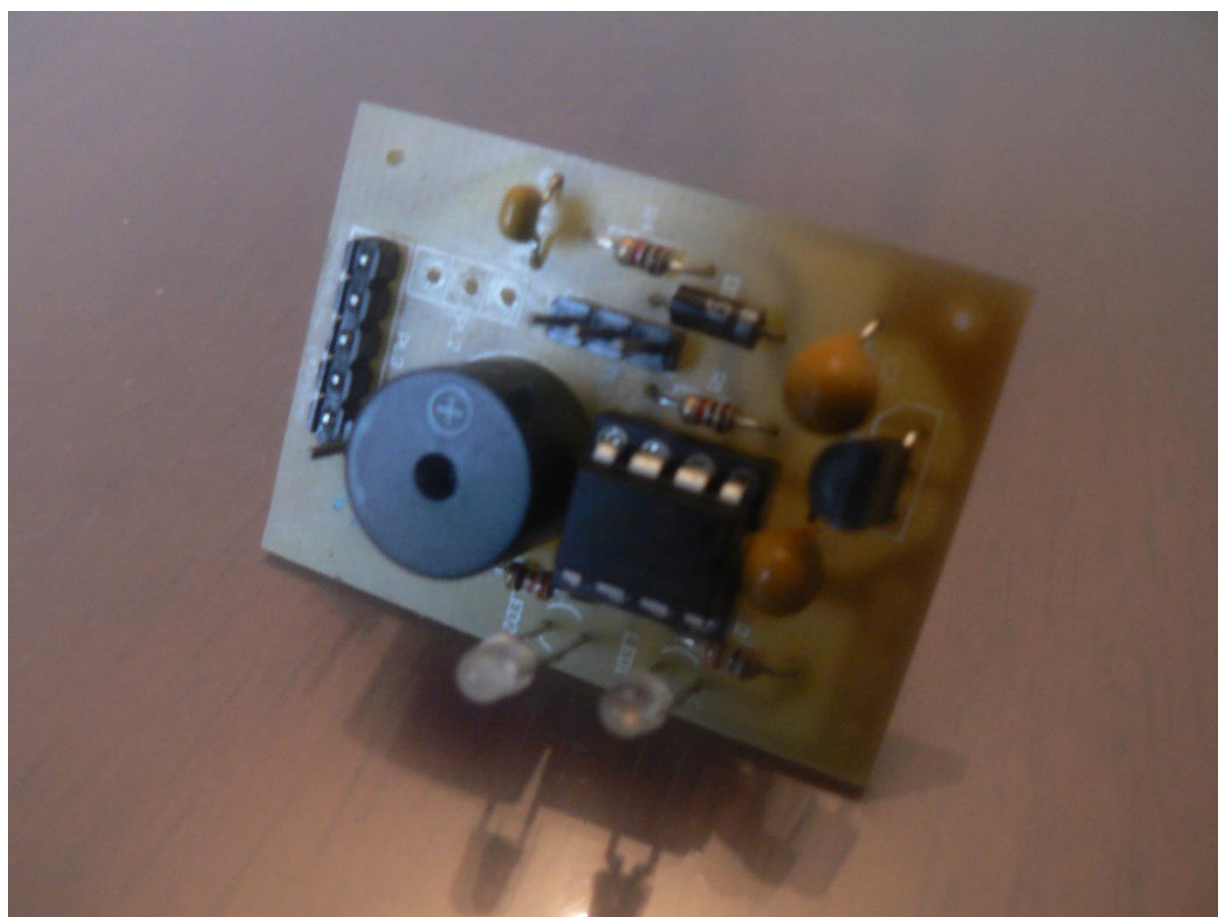
Two members recorded some times for one of the NDC events only to discover your scribe had picked the wrong month. Never mind the event is this month so we will have another go.

Dave T has yet another story about someone trying to start a fire charging a transmitter. It reinforces the old **RTBI rule** (read the bloody instructions) when dealing with battery charging. **Always follow the manufactures instructions** or risk setting fire to the show.

Our Club dinner is on the 29th . See details further on. Please let Dave T know if you are going.

As usual Brian has another excellent photo spread of activities throughout the month

And finally, can anyone tell me what this little device is for.



Waharoa Warbirds

Saturday October 17th

114 Jaggers Rd, Waharoa



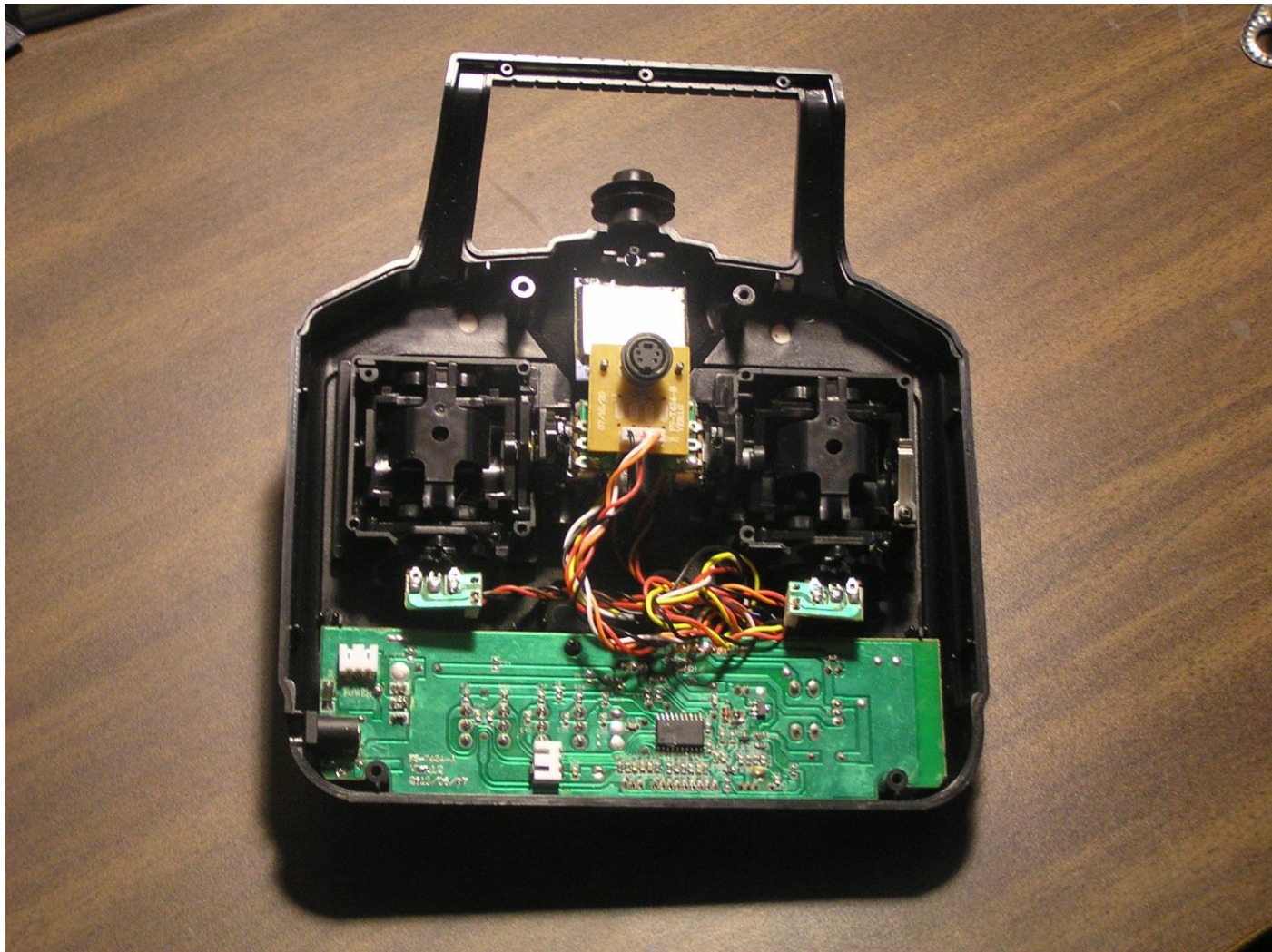
**BBQ lunch
Prizes on the day
9am gates open
Fly until dark
Camping available
Welcome to fly at club day on Sunday**

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Model Flying World

From the President

Battery Learnings



What you see above is the remains of a transmitter after a ruinous and unenlightened user tried to charge it's Eneloop batteries in situ in the Tx.

The unfortunate owner of this Tx actually sails RC yachts and until a short while ago used NiMH for his Rx power in the boat along with NiMH Eneloops in his Tx. A similar setup to many of us RC pilots.

Unlike model flying, RC yacht racing requires the Tx and Rx to be powered up for maybe two or three hours continuously. Obviously, the batteries must be in good condition to meet the extended demand. Many skippers have moved to LiPo or LiFe to meet the demand and this is what this skipper did. The upgrade meant that his normal charger needed to be changed, so he bought a new multi-purpose charger similar to the AccuCell or GT Power type and their derivatives. After carefully noting what was needed for the 6.6v LiFe battery he programmed the charger for a quite reasonable input current of 1 amp. Everything went fine and the obvious next step was to use the charger for the 8 cells Tx Eneloop pack. The charger was programmed for the correct voltage and since 1 amp was fine for both LiFe and LiPo that would be OK for the Eneloop as well.....or so our hapless skipper thought.

After a couple of hours, he went to check the charging and found the garage filled with smoke and the Tx sitting in a pool of melted plastic.

Unlike Lithium batteries which can handle amps of charging current, NiMH batteries should only be charged at 1/10 of their capacity (C rating; see below) so a 1500mah cell should only be charged at 150mA or 0.15A. In this case the high current overheated the batteries and the concentration of 8 cells crammed into the back of the Tx escalated the problem so that it was inevitable that that things started to melt. A fire was probably only minutes away.

Unbelievably to me, the owner never worked out why the melting had happened! When I recently happened to visit him at home, he showed me his new Tx and the remains of the old one and then proceeded to tell me that it was dangerous to charge Tx batteries in situ because they overheated and melted. He believed the only safe way is to remove them and charge them individually in a standard NiCad charger. I quickly established what had happened and hopefully he now understands that batteries of different chemistry need quite different charging procedures.

Always remember, depending upon the specification, Lithium batteries can be charged at quite high amps (most standard chargers are limited to 5 or 8amps) but check the manufacturers recommended current, whereas NiMh are limited to a **fraction** of an amp, generally 1/10 of the capacity C Rating.



The battery C rating is obtained by dividing the capacity (in mAh) by 1000 to obtain an amp hour figure. The C rating is this value. Here is a typical LiPo battery which on the back gives a max charge rate of 5C. The capacity is 2,200mAh and the 1C rating of 2.2 is shown in large figures on the front. 5C means that you **could** charge this pack at 11amps (equals 11,000mA)

If you did use 11amps to charge this battery from empty it would take $2,200/11000$ hrs to charge up, or 0.2hr or 12 minutes!

The max output of my LiPo chargers are 5 and 8 amps but I would never attempt to charge a LiPo like that above at even these currents. High charge rates stress the battery, shorten its life and increase the risk of a fire. 1C is acknowledged as the safest charge current for LiPo batteries.

For safety and hopefully a long battery life I use 0.5C at home and maybe 1C for a faster charge at the field.

Let's expand on the charging example above. If the battery was actually empty, your charger's safety function would refuse to let you charge it because it would be irreversibly damaged, and become dangerously unstable (fire, explosion, hardly any capacity) even if you could get charge into it.

You must never let your LiPo run down below 3v per cell which occurs at about 15% remaining of the rated capacity.

It's worth spending \$20 on a cellmeter to easily measure the state of charge of the battery and the individual cell voltages. Cellmeters also have a handy servo tester built into them.

Also, always balance charge Lithium batteries, after use discharge them to storage condition and again never ever let them run completely down since they will then be ruined.

Next month I'll write a bit more on how to use a cellmeter, setting up the user battery parameters in chargers and battery connections.

Hopefully, you will have noticed that I mentioned that the Tx used 8 individual Eneloop batteries for power. These clip alongside each other between spring loaded contacts in the battery space. This method is used on many of the bottom end Tx types and works fine until the contacts get a bit oxidised and you lose good contact. (Rotorua thermal disease possibly) The plane then goes down. It's highly recommended that a proper Tx pack with soldered or welded cell links and a single output plug is used for aircraft.

And now its confession time. As mentioned above, my new RC yacht came with a LiFe battery but I did not appreciate that at the time.



The picture shows the two cell yacht battery above one of my LiPo glider batteries. I noticed the extra servo type connector on the LiFe battery but naively ignored the 6.6V marking. A cellmeter check showed it was only 2% charged so I stupidly charged it up using my basic Eflite (fixed low charge rate) LiPo charger. After shut off, the cellmeter still showed 2% charge. It was only then that I realised I had to select the **mode** for LiFe on the cellmeter to give a correct reading. Obviously, a measured voltage of 6.6v when a normal LiPo has 7.2v is bound to show a fully discharged condition.

To set the generic Chinese LiPo chargers (eg Accucel and GT Power) for LiFe requires one to go into the special user set menu which is what I missed.

Can you see that the LiFe battery is looking a little puffy? That's because it is now damaged through overcharging and will probably have a fraction of its service life. Another \$30 lesson learnt!

LiFe batteries are becoming increasingly popular for Rx use, recognise them by the extra servo connector and the voltage identifier and program your charger to suit.

Dinner

Our annual midwinter dinner will happen on Saturday August 29 at the Lone Star Restaurant. This year we can take advantage of a post lockdown special of a full three course meal plus drinks for \$40 provided there are more than 12 dining. The menu is restricted for the special, but still looks adequate. You never leave Lone Star feeling hungry!

If you'd like to treat your employees, or need an excuse for an overdue catch-up with family and friends that you haven't seen for a while, then we've got you covered.

For July and August only, we're delighted to be able to help you celebrate with a 3 course meal including a drink for **\$39.90 PP.**

We've featured our classics, so you can still have the true Lone Star experience, all for a price point you won't find anywhere else. because too much Lone Star still ain't enough...

T&Cs Promotional price applies when 12 or more are dining, booking essential. Cannot be used in conjunction with any other offer, discount or reward.

Happy Mid-winter Christmas

The Lone Star team

[See the Mid-Winter Menu Here](#)

[Book your table here](#)

Mid Winter Christmas Feast Menu



3 course meal plus a drink for just

\$39.90 For the months of July and August 2020 only.

T&Cs Promotional price applies when 12 or more are dining, booking essential. Cannot be used in conjunction with any other offer, discount or reward.

STARTER (between 4)

BAKED ARTISAN GARLIC LOAF

A traditional seeded ciabatta loaf, hand-crafted exclusively for Lone Star. Oven baked with a lashing of Lone Star garlic butter.

Mains (your choice)

Stir Crazy Sirloin

250g of premium-aged NZ sirloin, cooked how you like it. Served with sautéed onions, buffalo chips, Lone Star coleslaw and your choice of steak sauce. Steak Sauce Options: Chunky Mushroom or Garlic Butter.

Rock the boat

Fresh fillets of market fish, dusted in seasoned flour, then grilled with fresh herbs and parmesan. Topped with a lemon and caper sauce. Served with mashed potato and a fresh green salad.

DIXIE CHICKEN

Free Range Chicken breast poached in a creamy sauce of white wine, garlic, spring onion, fresh herbs, corn and carrot. Served with buffalo chips and Lone Star coleslaw.

Redneck Ribs

Six Porky Pig's ribs blanched in honey and spices. Blasted in the Lone Star fire, piled high then smothered in our famous hoisin, orange and sesame seed sauce. Served with buffalo chips and Lone Star coleslaw.

CAMPFIRE BURRITO

Rolled flour tortilla filled with seasonal roasted veges, spicy bean mix, greens and rice. Topped with Lone Star burrito sauce, grilled cheese, salsa, sour cream and jalapeños. Served with buffalo chips and Lone Star coleslaw.

Desserts (your choice)

LONGHORN CHEESECAKE

Our legendary Kahlua and Moro Bar cheesecake. Served with chocolate sauce and whipped cream.

KIWI PAVLOVA

Mini pavs filled with whipped cream. Served with vanilla bean ice cream, fresh fruit and berry coulis.

Plus a drink (tap beer, Selected wine or soft drink)

Please let me know if you will be coming, at the moment I have:

Thornley x2, Little x2, Wanklyn x2, Ryan x2, Watson x2, Teasedale x2, Laing x1, Towers x2

Model Flying World.

On July 15 Paul Clegg the membership secretary sent out the following email:

Model Flying World to remain digital for this financial year

At the recent MFNZ committee meeting following the AGM it was decided that the MFW magazine would remain being a digital publication for the rest of the financial year.

We are looking for feedback from membership about this but the majority of feedback we, thus far, have received seems to be mild acceptance to positive . I'll write an article in the MFW in September laying out this decision in full and it's effects on the budget...

We are hoping to improve the delivery of the magazine for the September issue.

- the online format will change to a inbuilt magazine reader
- update the front page of the website with a prominent link to the magazine
- modify the email notice to get better delivery of the emails
- use text notifications to spread the word that the magazine is available

MFNZ have now stealthily extended the digital format introduced during the March lockdown to the rest of the year and I am sure that the intention is to go permanently digital next year. You will see that Paul is requesting feedback on the subject and I have already submitted mine with a strong preference that the hard copy edition be retained.

Please send your feedback on the proposal to Paul at members@modelflyingnz.org

A Word from the Club Captain

Just a refresher on safety..

Members are reminded that an aircraft under power should never be pointed at anyone or in the direction of the pits.

Likewise taxiing out, the aircraft, while under power, should never be pointed in the direction of any person flying at the time.

Taxiing back under power can be undertaken if necessary by ensuring the return path is at a shallow angle relative to the pits, such, that should the throttle be accidentally bumped, radio failure or the flier trip there is no chance for the aircraft to enter the pits or endanger people.

The easiest, is to shut down at the flight line and carry it back or wheel it back. Many members seem to be doing that which is by far the safest option.

Basically treat it like a loaded gun and never point it at anyone, particularly as we are starting to see more powerful engines in use now.

Although that said, a small engine at high rpm is just as dangerous.

Thanks and happy flying..

Ray
Club Captain.

Coming events

August NDC R/C vintage precision

September NDC R/C ½ Texaco

CLUB FUEL

METHANOL \$2.50 PER LITRE (OWN CONTAINER)

MIXED:

1 US GALLON = 3.785 LITRES (3.8L)

70% METHANOL, 20% COOLPOWER, 10% NITRO

**\$40.00 [US GALLON
\$10.00 per LITRE**

**FUEL WITHOUT NITRO
82% METHANOL, 18% COOLPOWER oil
\$25.80 US GALLON
\$6.80 PER LITRE**

Or, MIXED TO SUIT YOUR REQUIREMENTS

**ALL PROFIT GOES TO THE CLUB
PLEASE BRING YOUR OWN CONTAINER**

Contact: ALAN SMITH. 347 9312