

Voice<<<<<<>>>>>>>>pipe

The Newsletter of
The Mid-Thames Model Boat Club



October 2020

Issue 168

Chairman's Corner

- Operating under Covid rules
- Weed
- Club boats
- High capacity battery build

Fast Electrics

- Autumn 2020
- Fast Electric Submarines

Tug Towing

- Tug Towing report

Yachting

- Autumn 2020

Scale Matters

- Autumn 2020

Saga Sailing

- Autumn 2020

Dates for your diary

- **Sun 4th Oct** 10am & 1pm
Yachting Round 3
Fiesta/Victoria
Handicap (Any type of Yacht)
- **Sun 11th Oct** 10am & 1pm
Scale & Tug Towing: Round 3
Free sailing & competition
- **Sun 18th Oct** 10am & 1pm
Yachting Round 3
DF95s and IOM
- **Sun 25th Oct** 10am > 4pm
Fast Electrics Round 2
Club500 & F600B, Wacky
Races & Run What Ya Brung.
- **Thur 11th Feb 2021** 8pm
MTMBC AGM. Venue TBA



Chairman's Corner by Tony Simons

As I write the government rules for groups has been changing and at the moment we are not allowed to have more than six at any one organised event. We have to adapt because many of us fall in the "Vulnerable" category. If numbers for an organised activity exceed six, I suggest we split the event to hold it in two sessions e.g. one in the morning and the second in the afternoon or indeed another day, your thoughts would be appreciated.

With regard to Tugs and Scale I offer to run both as usual on a Sunday with a session for both in the morning and another session for both in the afternoon, please let me know in advance which session you would like to attend.

The rules about social distancing apply but at the moment as an outdoor activity face masks are not compulsory.

One of the big concerns with not being free to continue with hobbies outside the home is mental welfare. We have still got access to water for our boats, also meeting others to discuss something else can be a great help, let's keep the momentum going even in the face of adversity.

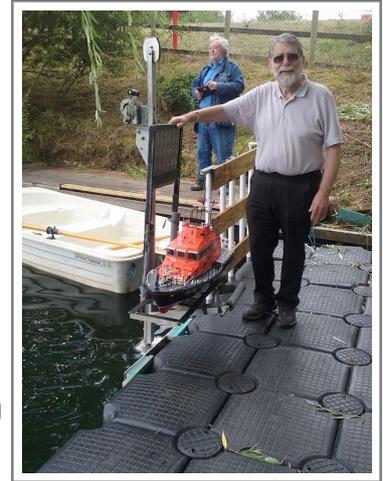
Winter meetings at Tidmarsh village hall have been cancelled this winter as the numbers that could use the hall even prior to the change to a rule of six made it difficult to run a meeting. The kitchen was not allowed to be used, cleaning between groups had to take place. (Normally we follow a keep fit class straight afterwards, delay would be incurred while the hall is cleaned for us.)

Committee meetings take place on "Zoom" it maybe we can have the AGM on "Zoom" but that's a bridge to cross later.

I am pleased to have seen good numbers attending once we were up and running.

The pontoon has enabled easy access to the water and a boat lift has been added for the heavier models. It needs stiffening up but I have it on my list. In the interim hold the lift near the top to prevent models being tipped off the launching cradle.

A big thank you to all who have made access to the water possible by removing brambles and or assembling and launching the pontoon plus many other jobs to make the whole possible.



Weed

Weed has been an issue for most of us. John and I have removed large amounts using the rescue boat and an oar to drag floating weed into the boat for disposal ashore. Others have raked it out when it has been possible to reach from the bank.

We need a club effort to build a weed cutter, anyone who can help please contact me.

At the moment I am looking at something like a punt with a conveyor belt mounted over the front that is the same width as the punt. Normally hedge cutter type blades are used to cut weed but the cost to buy in stainless steel is way outside of our budget. Plain steel will rust and seize unless someone adopted the blades to dry and lubricate after each use. The weed can be collected in the punt for removal by garden fork or rake onto the bank.

Club boats

I have been changing the battery in the white radio-controlled rescue boat when on site to leave a fully charged battery.

The buoy laying tug has a Lipo 14 Ah battery which I again rotate with a spare charged battery. In both cases to use them turn on the respective radio transmitter, connect the battery and test, they should be ready to go.

The "Club 500" is now operational, it will require batteries and binding to the radio set used for the white rescue boat. If you wish to use it and need instruction, please contact me.

We seem to be blessed with some good weather interspersed with too much wind, let us hope it continues for another month or more.

We have a wonderful facility please make use of it before the weather turns or Boris decides "A meeting of more than one constitutes a mutiny."

High capacity battery build

Lipo battery packs for use in non-high-performance boats.

Safety: Many step away from Lipo batteries because they are perceived as dangerous but they are no more dangerous than other types of battery. In common with other batteries they can become dangerous during rapid charge or discharge, those who partake of "fast electric" racing will have witnessed how hot they

Trading Post

Trading Post is an area of Voice Pipe where members can advertise their model paraphernalia. So if you have any you would like to sell, swap, buy or just want something send contact details, brief description and a picture if possible to:-
parker42@btinternet.com

are after a race but also F600 racers know how hot the metal hydroxide batteries also become during the race.

One area of concern that other battery types don't share is that a Lipo battery charged to 100% and left for long periods may suffer from crystals growing in the Lipo paste between positive and negative electrodes, these crystals can puncture the membrane between the electrodes causing a dead short, rapid discharge, heat and fire. To avoid this the cells I use are fully charged at 4.2 volts, I stop the charge at 4.0 volts.

Many will have heard of Tesla electric cars, their battery management operates the batteries between 20% and 80% of the full charge, apparently you can program a 100% charge but must use that extra 20% within a day to avoid potential battery damage.

What is the advantage to us compared to the traditional lead-acid.

I am looking principally at the 7Ah lead acid batteries we fit in tugs, "Hudson Bay" and "Challenger". If we hope to get the battery to last 4-5 years or more it shouldn't be discharged to not more than 50% of capacity e.g. 3.5Ah but in reality we run them lower as we don't normally fit low voltage alarms.

I took the dimensions of a 7Ah battery as a box to fit Lipo batteries in, I purchased individual battery cells that give 2Ah but can also be discharged up to 10Ah briefly.

It worked out that I could fit three rows x seven rows of these cells in the same size case.

Each cell can be fully charged to 4.2 volts but to keep below the 80% charge I elect to not exceed 4.0 volts.

Three rows @ 4.0 volts = 12 volts

Seven batteries/row @ 2Ah = 14Ah

I can use approximately 60% of the 14Ah

It becomes apparent that to keep within the best operating limits of the batteries I have over three times the useable capacity of a lead acid battery of the same physical size.

It costs about three times the price of a 7Ah battery to build the Lipo battery pack but used within its operating limits it can last 20 years plus.

After watching many YouTube tutorials most by Americans building battery packs to store solar energy, I gleaned the principals and means of construction including a recommended spot welder to weld the nickel strips to the batteries. Use pure nickel strip not-nickel plated steel.

Samsung were recommended as one of the best cells for this kind of project, to avoid cheap replica batteries badged as Samsung I located a wholesaler in this country.

I purchased plastic trays that interlock to mount the individual cells in, it happens that mine are 4 rows x five, I cut them to give 3 rows x seven, made two identical





English Language stuff !!
This took a lot of work to put together!

- 1) The bandage was **wound** around the **wound**.
- 2) The farm was used to **produce** **produce**.
- 3) The dump was so full that it had to **refuse** more **refuse**.
- 4) We must **polish** the **Polish** furniture.
- 5) He could **lead** if he would get the **lead** out.
- 6) The soldier decided to **desert** his dessert in the **desert**.
- 7) Since there is no time like the **present**, he thought it was time to **present** the **present**.
- 8) A **bass** was painted on the head of the **bass** drum.
- 9) When shot at, the **dove** **dove** into the bushes.
- 10) I did not **object** to the **object**.
- 11) The insurance was **invalid** for the **invalid**.
- 12) There was a **row** among the oarsmen about how to **row**.
- 13) They were too **close** to the door to **close** it.
- 14) The buck **does** funny things when the **does** are present.
- 15) A seamstress and a **sewer** fell down into a **sewer** line.
- 16) To help with planting, the farmer taught his **sow** to **sow**.
- 17) The **wind** was too strong to **wind** the sail.
- 18) Upon seeing the **tear** in the painting I shed a **tear**.
- 19) I had to **subject** the **subject** to a series of tests.
- 20) How can I **intimate** this to my most **intimate** friend?



trays to hold the battery cells top and bottom. The interlock feature allows trays to be joined to form larger trays as long or wide as required.

Before assembling remove metal rings and bracelets and metal tools from the area, the voltage maybe low but the current will be high if accidentally shorting across cells, such items will become very hot very quickly.

Place cells in a row of seven with the positive electrode at the top, I checked each cell for voltage all were exactly the same. (If buying second hand it is wise to check each cell as many come from faulty computer battery packs, often the fault is one or two failed cells the rest are okay)

The next row of seven place the negative end upwards, third row positive upwards.

Place the second tray on top and gently tap firmly to ensure the trays are seated tightly to the cells.

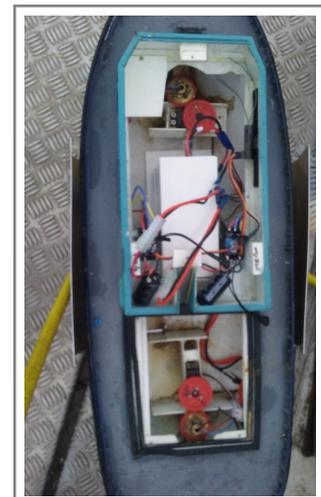
Weld the nickel strips as shown, it is possible to solder but this means a lot of heat in a local spot which is potentially explosive, spot welding is hot but very localised & cools quickly.

Solder the positive and negative wires to the appropriate nickel strips, terminate the wires to suit your model.

Solder a plug that comes with the wires attached, this gives provision for monitoring each row with a test meter, the test meter often incorporates a low voltage audible alarm.

This plug will provide the means of using a hobby charger to balance the cells if their voltage drifts too far apart. **NB** a BMS Battery Management System is often installed to keep the cells balanced, they can be bought for £5 upwards, but they can bleed charge if the battery isn't being used, the cheaper ones can fail but unless you examine the boards you wouldn't know.

Some say a BMS isn't required, I am monitoring my packs to decide if a BMS is required but occasional use of a hobby charger should suffice according to many to rebalance the cell voltages. (I will let you know)



My tug fitted with a 14AHr Lipo pack in place of a 7AHr lead acid.

Tony

Club Contacts - Your Committee



**Chairman & Tug Leader
Tony Simons**

Tel: 07747 642234

Email: tony406@btinternet.com



**Club Secretary, Voice Pipe
Editor & Fast Electrics Leader
Dave Parker**

Tel: 0118 9700162

Email: parker42@btinternet.com



**Club Treasurer
Peter Butler**

Email:

ox119py.mtmbc@gmail.com

Fast Electrics by Dave Parker

The first organised Fast Electrics event took place on Sunday 30 August and events have continued throughout the quarter. I have not been able to attend so a big thank you to Tony who has organised the fun and games on each occasion.

Because of Covid 19 only two race meetings are possible this season, which is not enough to constitute championships, so there will be no formal class competitions this year. Numbers of competitors have also been variable but events have been run successfully thanks to the patience and co-operation of those attending. Flexibility has been the key with members discussing and changing the order of events to suit and making it an enjoyable days racing.

The general consensus was it would be best to keep Club500 and F600B races in the morning and Wacky Races, Mono 1 and Run What Ya Brung in the afternoon as we have done previously.

Using the new Marker Buoy deployment system, various course lay outs have been tried for the 'M', and the higher speed oval racing course.

Fast Electric Submarines



Last year I witnessed two fast electric 'out of control' events one of them resulting in the loss of a boat by sinking. More recently at Hi5 there was another 'periscope depth' submarine event which fortunately ended well. (See the MTMBC facebook page for a short video)

Each of these was characterised by the boat running under power in tight circles which tends to lift the stern and drive the bow underwater. If it doesn't collide with anything, and is well taped up, the batteries will probably run flat and the boat can be recovered with no harm done. But the potential for expensive damage or complete loss is evident.

I don't know what caused these particular incidents but here are a few things that could help to make sure you don't join the submarine commanders club.

Assuming the radio equipment and ESC are set up correctly in the first instance some common causes for loss of control are typically:- water getting into the receiver and loss of signal from the radio transmitter (Tx) to the receiver (Rx). This could be caused by a number of issues from low batteries on the Tx to the signal being obstructed or the Rx being out of range.

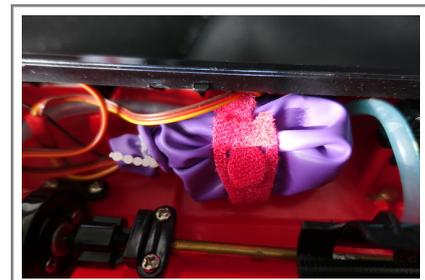
Water ingress

The risk can be minimised by sealing the Rx in a balloon and tightening a cable tie or similar round the neck where the wires exit.

Tips:-

Balloons made for Helium inflation are best because they are stronger and more flexible.

Don't forget to set up the Tx, Rx and ESC before sealing in the balloon.



Club Contacts - Your Committee



**Yachting Leader
John Price**

Tel: 0118 941 4766

Email: jetpipe@talktalk.net



**Ladies & Associates Rep.
Janet Burch**

Tel: 01635 34403

Email: janetburch5@gmail.com



**Saga Sailing Co-ordinator
Alan Whitbread**

Tel: 07765 263718

Email: orsonkarte@btinternet.com

Mount the Rx above the water line. 2.4GHz signals will not penetrate water and it is good practice to keep the electronics clear of any water slopping about in the bilges.

If the Rx gets wet or is stored in a damp environment it is a good idea to thoroughly dry it out by removing it from the balloon and drying it slowly before re-installing.

Where a balloon is not desirable, perhaps because of the need to keep an antenna exposed, the Rx can be completely sealed by the application of a Silicon sealing compound to all the joints in the plastic casing and around all the connections and wire exits.

(A method I use on my race boats)

Tips:-

Use a Silicon compound suitable for electronics because domestic sealants often have corrosive ingredients which can damage the electronics.

Don't forget to set up the Tx, Rx and ESC before sealing.

Mount the Rx above the water line.

Loss of signal - Fail Safe

Set up and test the Fail Safe function of the R/C equipment.

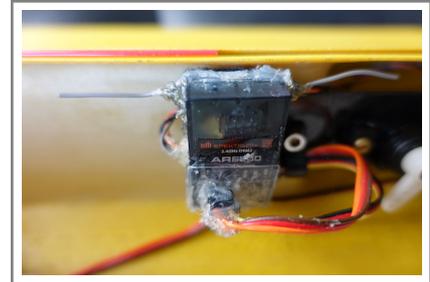
Most, **but not all**, modern radio gear 'fails safe' in the event of signal loss. i.e. The throttle output reduces to zero if the signal from the Tx is lost. With many modern radios the positions of the controls can be pre-set in the event of signal loss. e.g. My boats are set to reduce the throttle to zero and set the rudder straight ahead. Whether this facility is available or not a test is necessary to ensure that the Fail Safe works. A quick and easy way is to run the boat at about half throttle out of the water. Note the rudder position, move well away from the boat with the Tx and then switch it off to kill the signal. Check that the throttle cuts and the rudder responds as expected.

Los of signal - Dive, Dive, Dive

Another aspect of signal loss worth noting with 2.4GHz radios is the delay after the signal is lost before the throttle is reduced to zero. In the event of a boat taking a dive underwater at full throttle the signal will be lost when it submerges. If the throttle is not closed by the pilot before it goes under it will remain at full throttle until the Fail Safe operates. My Spektrum Dx6i takes about 1.8 seconds. With a boat at 30mph plus, it can travel a long way in that time. On a number of occasions boats have been driven into the mud at the bottom of lakes and have been lost. I have had boats stuck in the mud for many tense minutes but they have eventually returned to the surface covered in mud. *A good water tight boat with positive buoyancy is essential in these circumstances.*

Loss of signal - Range Test

Before running a boat make sure the range of the radio gear is satisfactory for the lake being sailed on. Set up the boat for running and agree some simple tests with an assistant who will hold the boat. e.g. two blips on the throttle and left & right a couple of times with the rudder. Walk to the other end of the lake and ensure the tests are repeatable.

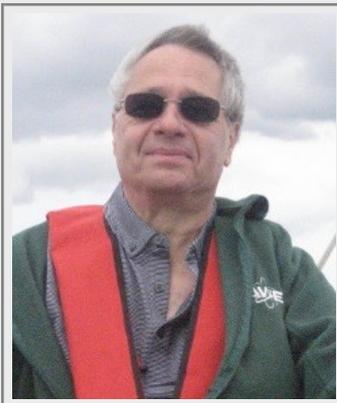


Club Contacts - Your Committee



Membership Secretary
Jeanette Hughes
membership.MTMBC@gmail.com

Club Contacts - Volunteers



Webmaster
Chris Withey
 Tel: 01264 362652
 Email: chriswithey@sky.com

Follow these simple steps and don't become another F/E Submarine Commander.

See you lakeside soon **Dave**

Tug Towing & Scale by Tony Simons

I have been running "Tugs" and "Scale" together using the same course for both as both are a test of boat handling skill.

Numbers attending have been good given the Covid19 issues and the move

to Sunday for Tugs, with an interesting variety of craft on the water.



While no formal competition has taken place, we all have enjoyed the meetings and actually getting our boats on the water at last, and the repartee has been excellent, worth attending even if a boat didn't touch the water.

As can be seen on the MTMBC Facebook page the radio-controlled buoy layer has been deployed successfully to lay the course markers. The process of laying the buoys is becoming quicker as more members gain knowledge of the operation. The green para cord was sold as being nylon, this should sink while polypropylene will float, this cord obviously is not nylon. I have since added 50m of white nylon cord to the reels, this is the genuine article as it readily sinks saving the need to add an extra weight on the shore end before tying off.

Scale

This event has suffered poor attendance despite anyone who attends having a good time, I intend to keep it running but it would be good to see more numbers. (Current meeting number cap aside)



For those not familiar with this event you can bring any craft yacht, tug, speed boat or use one of the club boats.

The course one month will require you to pilot your boat around the course e.g. Clockwise, a time will be recorded from start to completion back in the

starting gate, repeat the course but this time anticlockwise, the time taken is recorded. The winner is the person nearest to matching their time out and back.

Another month it will be steering through a series of buoys, parallel tubes some to be hit others if hit gain penalty points, again the course is driven clockwise and anti-clockwise.

Both variations provide a stage to operate your boat and demonstrate your ability as a skipper, it is very informal, no pressure, we are after all there to enjoy time with others with a shared interest.



1. Just ate a frozen apple. Hardcore.
2. Bought a litre of Tipp-Ex yesterday. Huge mistake.
3. I've started a business building yachts in my attic. Sails are going through the roof.
4. I stayed up all night to see where the sun went. Then it dawned on me.
5. I tried to catch some fog today but I mist.
6. I bought a dog from my local blacksmith. When I got it home it made a bolt for the door.
7. Last night I went to a comedy and philosophy convention. Laughed more than I thought.
8. Just watched a wildlife documentary on beavers. Best dam programme I've seen in a long time.
9. Jokes about German sausage are the Wurst.
10. I was trying to explain puns to my kleptomaniac friend today, but she kept taking things literally.
11. I stole a rabbit today. Then I had to make a run for it.
12. A woman told me she recognised me from the vegetarian club, but I'd never met herbivore
13. I told my friend she drew her eyebrows too high. She seemed surprised.
14. What does a clock do when it's hungry? It goes back four seconds.
15. My wife told me I was a fool to build a car out of spaghetti. You should have seen the look on her face when I drove pasta.
16. Just watched a documentary on how ships are kept together. Riveting.

I am open to suggestions for running other scenarios.
Competition isn't mandatory, just have fun running the course.

Tony

Yachting by John Price

YACHTING IN WINDY WEATHER.

One Friday, late last month (September) Peter and I went to Hi5. The BBC forecast was for NW winds of 22mph gusting to 42! I had texted Peter early in the morning hinting that it might be a bit much but he had sorted out his number 2 rig and wanted to try it out. (This is a smaller set of sails.)

When we got there the wind wasn't too strong but it increased and became gustier during the morning. Peter was sailing his One Metre and I had a DF95 with a number 2 suit of sails that I had never tried before.

In recent years the club has had very few windy regattas and certainly none as windy as this. We didn't put any buoys out but used the Hi5 buoys to sail round.....just the one near the pontoon and the one much further out near the Hi5 shipping lanes. There was one small patch of weed which we both encountered once but the rescue boat was not launched that day.

It took quite a few tacks to get out to the far buoy, then the boats flew back towards us going downwind.

In the past, racing with a number 1 rig on a windy day, we were



used to the boats refusing to tack and then nosediving when the wind was behind them. With our Number 2 rigs, neither of these things happened at all, even in the stronger gusts. Both boats would always tack and never nosedived. It was an exhilarating morning's sailing. If we had had a regatta that day the racing would have been marvellous.

So the message here is that windy days should be embraced



- 17. I used to have a problem where I couldn't stop naming classic American sitcoms, but I'm over it now. Happy Days.
- 18. My wife's working in a bowling alley. Ten pin? No, permanent.
- 19. I thought my wife was joking when she said she'd leave me if I didn't stop singing 'I'm A Believer'. Then I saw her face.
- 20. How do you approach an angry Welsh cheese? Caerphilly.
- 21. Jokes about opticians just get cornea and cornea.
- 22. A steak pun is a rare medium well done.
- 23. I was walking the dogs the other day when all of a sudden they vanished into thin air. Not sure where they went, but I've got some leads.
- 24. Did you know that owls can't breed in the rain? It's too wet to woo.
- 25. When my wife told me I had to stop impersonating a flamingo, I decided to put my foot down
- 26. Dad: I've just been diagnosed with Tom Jones syndrome. Mum: Is it common? Dad: It's Not Unusual
- 27. Police just caught a man stealing 50 helium balloons. They had to let him go.
- 28. I used to be addicted to the Hokey Cokey, but I turned myself around. And that's what it's all about.
- 29. I'm giving up spray deodorants at the end of the year. Roll on 2021
- 30. If you want a job in the moisturiser industry, the best advice I can give is to apply daily.

and that it is well worth getting a second suit of sails. The lake is somewhat protected by all the trees and buildings so the wind speed is reduced. I don't think we are ever likely to need an even smaller number 3 rig.

Let's hope for some windy but warm days this winter.

John.

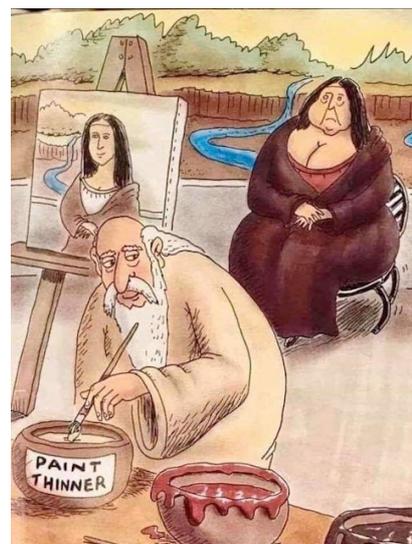
Saga Sailing

The season finely got off to a good start at the new lake on the 8th July with 5 members attending. After that attendances improved and on the 15 July 11 members, 22 July 13 members, 29th July 10 members and Aug 5th 9 members. Then things started to go downhill a little and for the next few weeks down to 6 then 4 and the last meeting on the 23 Sept just 2. No real problems on the lake except a couple of times we had some weed trouble but that soon cleared. The large yellow buoy was a bit of a hazard with one member hitting it and when asked what happened he said I did not see it. At 6ft long x 2.5ft in diameter I think a visit to spec savers is on the cards.

Hope to meet up soon. **Regards Alan**



Well done Tony - that's the weed rescued now where is Tim's Mono 1. - - - Alternative captions anyone?



Thanks Jon. I couldn't resist putting this one in.