

head for the beach!



A quick word and then let's go sailing!

by Peter Tait

Issue No 32 of AABB covered how to complete your 2.4 metre Firebug, making the rudder, centreboard including shaping foils, an option on making your own stainless steel fittings and assembling the spars and rigging. Then attaching all the fittings, and putting it together on the lawn at home. Fantastic - it's a boat!

The final article in this series explains some design features, gives some learn to sail basics and ideas on how to get the best out of your new boat.

AFTER ALL THAT BUILDING - WHAT YOU HAVE GOT?

A lot of sports and pastimes involve sweat and hard slog for months and all you have in the end is sore knees and a heap of sweaty towels. With

boatbuilding the results are more tangible and you can see where you have been. In this case it's a little yacht just waiting to be enjoyed!

If you have built your own Firebug from start to finish you will be feeling pleased with yourself. Boatbuilding is fun - there is a lot of satisfaction to be had from creating a boat. As one builder put it, "I haven't finished it yet. I have only been working slowly. I have

enjoyed the experience so much I don't want it to finish!"

Before we head for the beach let's look at some of the more unusual features. Stand back and have a look. Designer John Spencer did a good job.

The Bow: Those unfamiliar with small boats say, "Why doesn't it have a pointed bow?" The wide



LIFTING
on the
bow
wave

bow is necessary to give maximum buoyancy and lift forward. At only 2.4 metres long it is approaching minimum length for a sail boat. If it was any shorter or if it had a pointy bow (assuming a similar sail size) it would be difficult to sail, there would be a lot of bobbing about and major control problems downwind. The Firebug is mostly sailed heeled, so it doesn't often 'bulldoze' water. Think of it as having two bows, one for each tack.

Flat deck: Keep in mind the fact that the design is for amateur construction. The fact that the deck is flat is an enormous help. During construction the deck is the measurement datum, making marking out and assembly a simple procedure.

No Need for Shouting. Your Firebug is ideal for teaching. Both teacher and learner jump aboard. There is no need to shout from the beach. After a while the learner has a try at steering and can soon have a go on their own.



COMFORTABLE with the flat deck

Underwater shape: The shape in the water is also unusual. The hull shape is such that as the load increases both waterline length and beam increase rapidly. This means good performance with light or heavy loads on board (30-100kg).

The extra buoyancy for'wd means extra power and lets the boat track well. The shape in the water is symmetrical about the course being steered, not unlike a fat catamaran.



ALL aboard!

So, moving on, if you're an experienced sailor, take it for a spin and have fun! Or, if you have built the boat but are not yet a sailor it is time to acquire some sailing skills.



EXTRA buoyancy for'wd

There's a choice :

- Buy a book and teach yourself.
- Arrange lessons from a friend.
- Try the local sailing club.

Most clubs run learn to sail courses. These may take place in another class of boat but that's okay.

PREPARATIONS

Learning to sail well can be both a pleasure and a frustrating experience. Skill levels like you see in almost every bay during the summer don't necessarily come easy. Be prepared for some disappointments and some unexpected swims but you should soon get the hang of it. Enthusiasm is the big prerequisite. You'll need heaps of it.

WEATHER

It is most important that the weather is just right for the first sail, especially so if the sailors are not experienced at all. The breeze should be light and steady, ie not gusty. Wind direction should be either along the beach or onshore. If it's not like this don't go. Try again later. A disappointment is preferable to a disaster! You need a day when sailing is easy and anyone can have a sail to try out the new boat.

RIGGING THE BOAT

Rig your Firebug as described in the previous article. For best performance there are several points which need to be checked:

- The mast should rake (slope) back about 100mm.
- The foot tension on the sail (tightness along the boom) must be tight for winds of moderate strength, looser for light winds but never looser than 150 mm at the mid point.
- The kicker should be tight at all times.
- Rigging secure and reasonably tight.
- Centreboard bungee in place to hold centreboard in centrecase.
- Bailer to keep cockpit empty. A cut down plastic bottle will suffice. Attach with a cord.
- Rudder safety clip operating correctly.
- Sail pulled up as far as it will go.
- Mainsheet rope set up correctly. This must run freely and not tangle in any way.
- Tow rope tied or spliced on.
- Lifejackets in good condition.

The rudder blade when in the 'down' position should be no further forward than vertical.



GOOD learning weather

CHOOSING A BEACH

If possible choose a beach that has soft sand and only small waves. It can be very difficult sometimes coming back into a rocky place or concrete ramp but with a beach, if all else fails you can just sail up onto it. It might not be very graceful or seamanlike but there shouldn't be any damage.



ALL ready to go sailing!

THE BASICS OF SAILING

Sailing is nothing like just sitting back and getting blown around like feathers floating on a pond. It takes years to get really good. There are more than a few tricks involved. Part of it is simply being able to sail around but you also need to understand how your boat works and keep it in good condition. You also must have a good awareness and be constantly thinking ahead. As in "I can easily get out there but what happens when I want to turn around and come back?" Or "What's the wind doing next?"

The basics however can be picked up quite quickly.

Sailing across the wind is the simplest way to go. The following describes the most basic manoeuvre - 'out and back'.

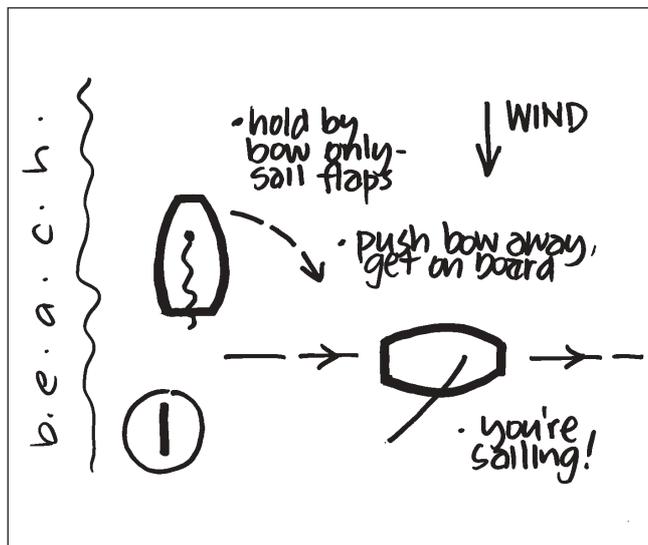
Assume that a light wind is blowing along the beach.

1. Launching and getting on board

Rig and launch the boat. Ask someone to hold it in knee deep water by the bow only. Let the sail flap in the breeze with the mainsheet rope about half out.

Get on board and keep your weight central. How and where you sit is important. If you're big, kneel in the cockpit with one knee each side of the centreline.

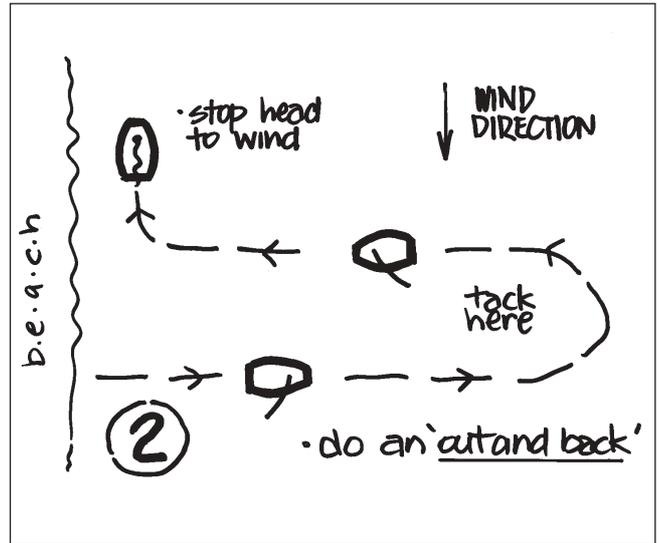
Move your sitting position to counteract any heeling.



HOLDING bow to wind, sail flapping, then you're away

2. Get sailing

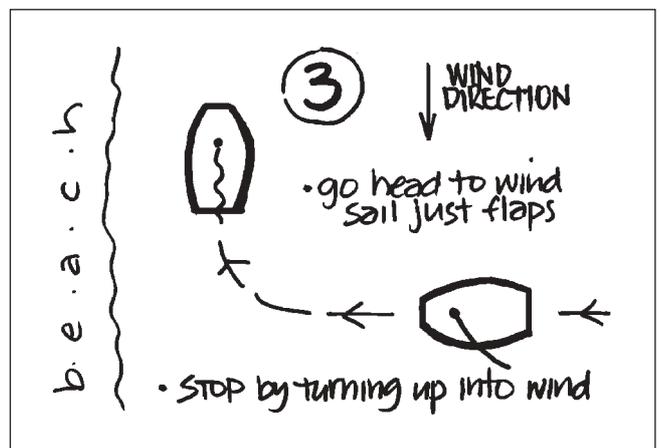
Put the centreboard and rudder at least half down, hang on to the mainsheet rope in one hand and the tiller in the other, turn the bow away from the beach, the sail will set and you're away! The large rudder makes steering easy.



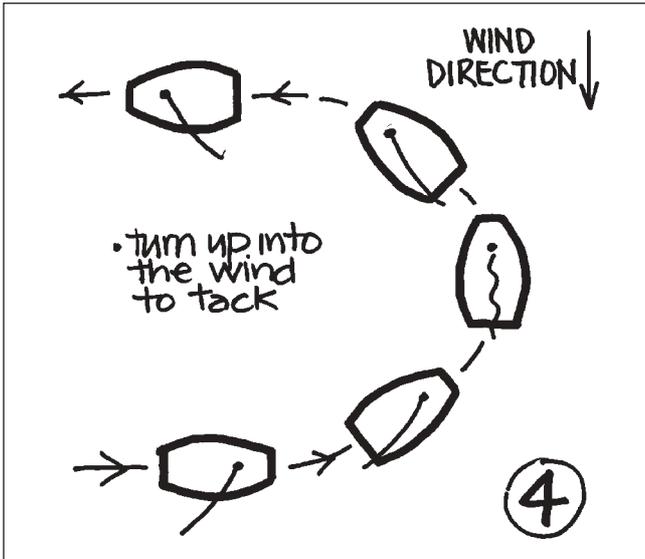
SAILING out and back

3. Turning around

Don't go too far. Turn up into the wind. You will need to pull the sail in a bit to keep it setting. Keep turning, the sail will begin to flap then fill again on the other side. This is called 'tacking'. The new course will take you back to the beach. Well, hopefully it will! Otherwise, it's probably next stop New Zealand. It could be worse - do you play cricket?



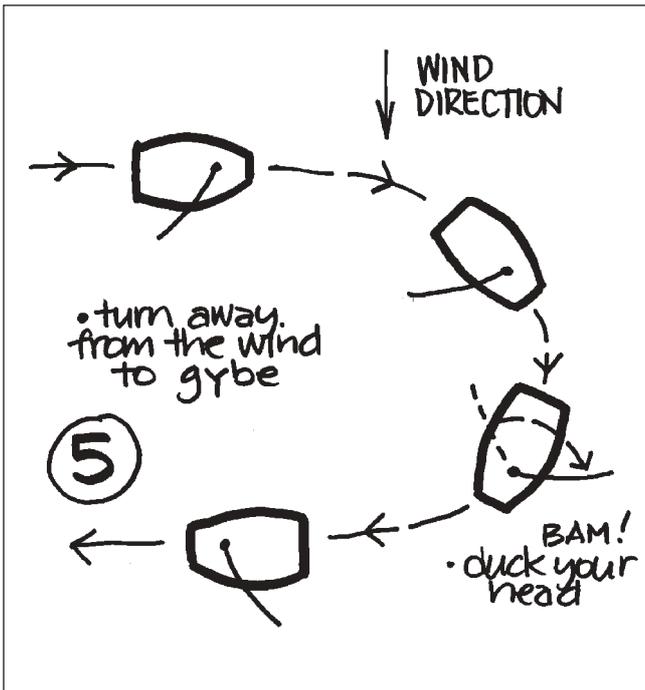
TURNING into the wind (tacking or going about)



Stopping at the beach

You could also turn away from the wind, let the sail out further, until it is right out with the boom touching the side stay. The wind will now be coming from behind you.

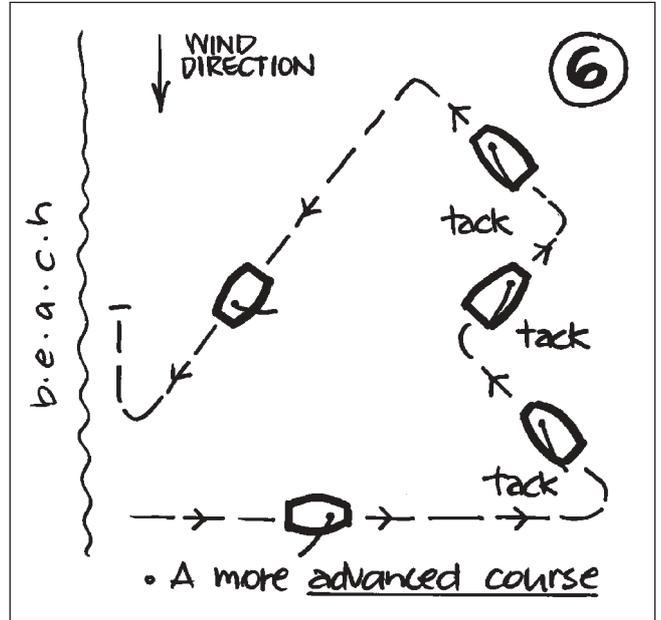
If you keep steering this way, get your weight central in the cockpit and get ready to duck, the sail will change sides with a bump as the wind gets on the other side of it. This is called 'gybing'. The new course should also take you back to the beach.



TURNING away from the wind (gybing)

4. Practice

Practice this until you're comfortable with it, then perhaps graduate to a triangular course which would include some tacking (zigzagging) to windward.



THE triangle course includes going to windward

It's fun to create a race track with marks. These can be existing buoys or piles or plastic bottles anchored with cord and half a brick. Simply sail around and around your 'racetrack'. Others can



FIRST sail

join in - someone who can sail takes out those who can't. This is more fun with two or more boats. (Build another?) Keep the legs of the course short - about 100 - 200 metres. Go around more than once to include a gybe.

Time on the water is the way ahead. Don't be afraid to go club racing. Clubs are always pleased to see new members turning up. It will help to have other yachts to follow and copy.

Good Luck!

COPING WITH THE CONDITIONS

The weather is constantly changing. The tide too. When you're on the water, every day is different.

Sailing in Light Winds

The Firebug is well balanced and nice to sail. Much faster than some other similar sized craft. You will be surprised how little wind it needs to get along. Sit well forward and lean the boat over to let the sail set correctly and to 'narrow' the hull in the water.



SAILING well heeled in light air

Sailing in Stronger Winds

Take care here - strong and gusty conditions can be a challenge. If you are inexperienced don't go out! There are limitations on small boats in windy and rough conditions simply because of their length and light weight. The waves are relatively so much bigger.

On the positive side, for a very small boat the Firebug performs well in a blow *provided the sailor has experience*. In a recent winter racing series at

the Point Chevalier Sailing Club in Auckland the better Firebugs were getting around the course unscathed in wind strengths of 25 - 30 knots. Many of the larger dinghies had all sorts of gear breakages and capsizing troubles.

The Firebug is surprisingly stable and dry. The helm is light and responsive and the more experienced sailor will be able to get up and plane for long periods across the wind. This is an unusual characteristic in a small boat. The FB's wide bow and 30 degree bilges lift the boat letting it sled along on top of its bow wave leaving a very wide wake.

Staying Right Side Up

There are however some tricks to staying right side up!

Some Do's and Dont's for windy weather:

- ✎ Do fit cockpit coamings and use a bailer. These are necessary to keep water out of the cockpit in choppy water.
- ✎ Do use the reef points in the sail. This reduces sail area making the boat easier to handle.
- ✎ Don't sail downwind with water in the cockpit as this can surge forward and cause nosediving.
- ✎ Don't sail directly downwind if there is a control problem - sail a zigzag course.



WINDY day at PCSC

- ✈ Don't gybe if it is blowing hard. Go about (tack) instead.
- ✈ Do move your weight around and sit well aft when necessary to counter any tendency to nosedive.
- ✈ Do not heel the boat when sailing downwind, sail it flat for maximum lift.
- ✈ Do tie safety cords between the chainplates and bridle eyes on each side of the boat. This provides a hand hold or foot hold which may help in righting the boat after a capsizes.

Reefing

The Firebug sail is supplied with a set of reef points. The reef reduces sail area allowing inexperienced or lightweight sailors to de-power the boat for learning purposes in moderate winds. Reefing is also an option for the better sailors in windy conditions to make handling easier.

Capsizing

In all small boats, capsizing is easy. It's a lesson each time. Do something silly - splash, you're in the tide! Do something else silly - oops, in the tide again! (Life should be like this.) It is never very graceful and sometimes it is difficult to get up and going again. But it is fast track learning and after a time capsizes are rare.

When you get a chance it is important to practice capsizing and recovery. Do it on a nice day. When the Firebug comes upright the sloping

cockpit sides drain all the water out. There is no need for bailing.

Tuning

You will find that rig adjustments affect performance, sometimes dramatically. In the quest for nicer handling or extra speed you can try all of the following adjustments:

- Mast position.
- Mast rake.
- Sail foot tension.
- Sail hoist tension.
- Amount of bridle slack.

If you can't make it sail right, don't blame the boat. The design is well proven. The problem is either with the way it is set up or the way it is being sailed. Read the instructions carefully and/or ask for help from someone who knows small boats.

WHAT'S BEST FOR ME?

Family Fun Sailing

General family fun sailing and knocking about at the beach is enjoyable but it is only a very small part of the total sailing scene.

Club Sailing and Racing:

When your confidence is up a bit consider doing a race. Most sailing clubs conduct learn to sail programs which lead into racing. Your skills will develop rapidly as there is always someone to ask or to follow! But again choose a nice day to start and don't be concerned about getting in the way - for the first race, last place is the norm!



CAPSIZE and up again





AT the beach

Cruising

With kindly weather guaranteed, several boats together and a 'mother ship' of some sort preferable motor powered to carry the tents and food, cruising is great fun.



LAZY cruising

Camping

Camping and sailing is a nice combination but again is better in a group of several boats. Our experience camping with five Firebugs in the Bay of Islands, was great fun. We camped on the beach, cooked on a fire, explored a shipwreck,

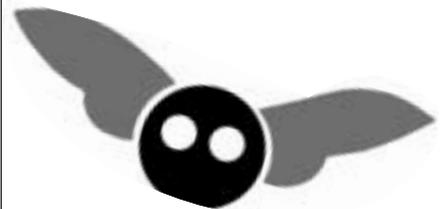


CAMPING fleet with interesting 'mother ship'

anchored the boats out over night, explored the area and even caught fish by sailing around the bay trolling with a plastic spinner.

Enjoying

Sailing is for enjoying. Never push people into having a go. Give them a chance to think it through. The will to go out in a small boat must come from within.



BAY of Islands -
an ideal small
boat cruising
and camping
place

SAFETY

There is a set of basic rules for small boat safety. Check the boating safety rules in your area. The basics are:

NEVER TAKE RISKS For the inexperienced, the sea can be a dangerous place. Be sure you understand the situation - you can't pretend to know. You will be caught out every time.

MUST BE ABLE TO SWIM All people using the boat must wear a lifejacket (even Dad), must be able to swim at least 50m in choppy water and be able to support themselves in the water if necessary without a buoyancy aid.

TELL SOMEONE Always tell someone you are going out, and should you get into trouble stay with the boat, don't try to swim for it. It is always much further than it looks.

LOOK AFTER YOUR BOAT Always keep the boat well maintained and seaworthy.

WEATHER FORECAST Check the forecast and don't go out in strong winds, or in some situations even moderate offshore winds, or when strong winds are predicted. Be aware of the weather - it's important!

BE PATIENT Take it easy, sailing skills don't come quick. You will find that the good sailors will have years of experience. Some say it takes 10 years to become fully competent.

This is the final in the series How to Build and Sail A Firebug. If you have followed all the way, thanks, I hope it all made sense. Planpacks have gone to all four corners of Australia. Some to schools and clubs. The first boat will have been launched by the time you read this. Don't hesitate to contact me for further information.

PLANS AVAILABLE NOW

For those who are keen to get started, planpacks with instructions and where to buy stuff are available now. Special Offer - FREE set of full sized patterns with all planpack orders received within two weeks of publication date, issue No 33 (value \$20). FBHQ is funded from sales of planpacks. Only A\$50 (a normal cheque works okay) to:

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