Albatross

Volume 33 **No 09** **October 2007**

The Duck Pond – September 9th 2007. Loading Sagres' crew. Photo: Andrew Boon

Newsletter of the Cruising Yacht Club of Tasmania

THE CRUISING YACHT CLUB OF TASMANIA INC.

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Photo - Steve Darden

Editorial

Thanks to the wonders of technology, this edition of 'Albatross' is being prepared half way around the world in Histon, near Cambridge, where I am staying with family. Yesterday we got back from two weeks in France (near Bordeaux) where another sister lives. Ensuring that members of your family are strategically placed in interesting parts of the world is something I heartily recommend.

The downside of being away is – being away. With the advent of spring, most boatowners (especially those with wooden boats) start thinking about the work that needs doing to get back on to the water. So while we are having a great holiday in Europe (and trying to ignore the damage to liver and weight that forms part of the experience), part of me is making a mental list of all the jobs that await me on *Margaret Ellen*. Not least of these is a haul-out and repainting the topsides, as well as the usual underwater anti-fouling job.

No such concerns for John and Sue Cerutty, who have provided the next instalment of their cruising adventures in Vanuatu. Great reading, and some wonderful photos as well. I am sure that all Club members reading these articles find their imagination working overtime conjuring up warm breezes and the sound of gently lapping waves on a sandy beach.

Also in this edition, an article on position fixing. In this day and age of GPS systems, it is easy to overlook the importance of keeping up one's basic coastal navigation skills. This article should help in this regard.

This month sees the CYCT with a number of changes in the make-up of the Committee. The new Committee details are shown on the opposite page, and the Minutes of the 2007 AGM are to be found towards the back of this newsletter.

Lastly, there is an interesting article on electric power for boats. Given the price of fuel and emphasis on minimising global warming, this is a subject we may be haering more of in the future.

Please enjoy this edition of Albatross. As always, your comments are welcome, and contributions are even more welcome.

Now I must excuse myself and pop down to the 'Red Lion' for a quiet pint (or perhaps two) with my brother-in-law. Cheers!

Chris Palmer
editor@cyct.org.au

Commodore's Report

A changing of the guard brings a new face to this page and position. It's my honour to be elected Commodore, and I thank members for their support. Immediate-Past Commodore David Bryan has left the Club in good shape, so my task will be to keep it running smoothly – and to ensure members are getting what they expect from the Club. Thanks to all Committee members for putting their names forward for positions, and a particular welcome to new Committee members Caroline Dutton and Mike Temple-Smith.

At the Annual General Meeting, we did not fill the Quartermaster or Warden positions, and those positions were dealt with at the first Committee meeting last week. Chris Creese takes over as Warden, and Ian Fletcher joins the Committee as Quartermaster. Thank you to both of you and welcome to Ian. Particular thanks goes to our retiring Warden, Keith Wells, who did not stand for Committee this year, but has done so every year for the past decade. A huge 'thank you' to Keith for his efforts.

We have one vacancy to fill yet, though, and that is Secretary. It is an important position, and I ask that you consider whether you can assist. I assure any prospective person that they won't have an excessive load dumped on them, but I believe the Club can operate very well if each of us does a little to help.

Opening Day is upon us again. This spectacular day on the Derwent shouldn't be missed. It's a highlight of the yachting calendar. All the organization, the planning, the attention to weather details, the setting of a safe and suitable course, and the orderly procession of boats to take the Governor's salute descends into chaos as classes and Clubs jumble into a confused mass of water craft jockeying for best position near the *Egeria*. It shouldn't be missed! It's colourful, exciting and fun.

Look for the Albatross flying near the tail-end of the fleet, where all good cruisers are to be found, and join in, particularly at the raft-up and celebrations after the sailpast.

Our cruising program will then be properly under way. I'll leave it to Vice-Commodore Andrew to talk about destinations, but please support cruises whenever you can. It is, after all, the primary reason for us to exist. Come along and enjoy.

See you on the water.

Leo Foley

Vice Commodore's Report

Thank you to the half-a-dozen members who attended the MAST meeting to discuss the projects proposed for funding by the Recreational Boating Fund. We got a good hearing for all of our proposals with quite a bit of discussion about the jetty at Partridge Island.

Thank you also to the person who suggested a trip up the Derwent River (as far as Bridgewater). I have put this on the calendar in November.

Picnic in the Duck Pond (Sun Sep 9th)

On a magnificent day, 7 boats (*Alcairo, Freelance, Rhona Marion, Neptune, Sagres, Talisman II* & *Windrush*) anchored in the Duck Pond and crews came ashore for a very pleasant lunch. Capped off by a sampling of chocolates from Keith, of course!

Combined Clubs Opening Day, Sat Oct 6th

The combined clubs celebrate the opening of the new sailing season with a sailpast in the Sullivans Cove area. All Club members are invited to join in the sailpast. Fall in line behind the Commodore on Talisman II or his deputy, sail past the Governor then head for a sheltered anchorage for afternoon tea. I believe the sailpast starts at 1400, with boats assembling off the regatta grounds prior to moving to Sullivans Cove.

On Sunday October 7th, a picnic will be arranged for those boats returning to the Channel. Listen on VHF Channel 16 after 1103 for details.

Mid-Week Cruises out of Kettering

The next one is on Wed October 10th, then every fortnight. Meet outside the Oyster Cove Chandlery at 1000. Details are finalised on the day - destination, whose boat and duration. If more people turn up than can comfortably fit on one boat, we'll take two. Bring lunch and a drink (as well as warm clothing, wet weather gear, etc). If your boat is moored/berthed at Kettering, be prepared to be the host for the day. Any queries, ring me (0400 651 532) or call *Reflections* on VHF 16 (I'll have a handheld only, so don't try calling from outside Little Oyster Cove).

Hobart Show Long Weekend (Oct 25-28)

On the Hobart Show long weekend (Oct 25-28), we will try for Norfolk Bay again. Listen on VHF Channel 16 after 1003 and 1103 for details (or call *Reflections*). We will leave on Thursday 25th, giving us 4 days (in case someone has to get back for work on Monday!).

November Cruises

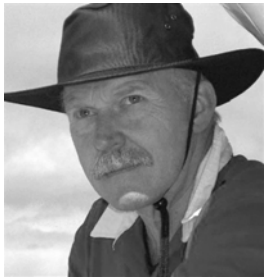
There is a day trip to Killora Bay on Sunday 11th and a trip up the Derwent River as far as the Bridgewater Bridge on the weekend of 24/25th. We plan to overnight somewhere near Cadburys.

Cruising Calendar

The Cruising Calendar for 2007_08 is now available on the website.

Andrew Boon

Rear Commodore's Report



This is the start of the year for the clubs' new committee but the third and final for me as Rear Commodore. I would like to thank members for their support in the past and look forward to your continued support for the forthcoming year. Your ideas for guest speakers and club functions would be appreciated.

2 October 2007 – General Meeting

The October general meeting will be held at the DSS at 8.00pm. The guest speakers are Pat Price and Penny Lade who have won the CYCT Cruising Trophy for consecutive years. Pat and Penny will speak to members about cruising the Pacific aboard their yacht Pendulum.

6 November 2007

The November general meeting will be held at the DSS at 8.00pm. The Commodore, Leo Foley will be the guest speaker for the meeting.

4 December 2007

There will not be a specific guest speaker at the meeting however our guest speakers over the past year will be invited. It is an opportunity to mingle and ask questions about issues that you may wish to raise with them.

Club Christmas Function - 15 December 2007

The club has held differing functions for the end of year Christmas function. It is appreciated that it is a very busy time of the year and attendance at our Christmas functions have not always been as expected. This year the CYCT Christmas function will be a midday barbeque to be held at Dru Point on Saturday, 15 December 2007.

Milton Cunningham

Aurielle in Vanuatu - July & August 2007

John & Sue Cerutty

We departed Luganville on Sunday 15th to sail south to Port Vila during the next two weeks. Claire's friend, Jess, had joined the crew and was keen to improve her tan prior to returning to Tassie to commence work as a RN at the Royal Hobart Hospital. This proved to be a challenge for Jess for although the temperature was 28-30 each day, the Vanuatu Group lies in the convergence zone between the SE trades and depressions coming down from the Equator so this produces strong trades from the SE and usually 70% cloud cover, but little rain.

Our first anchorage at Asari Bay on Aore Island was a bay protected from the SE due to extensive reefs which you must zig-zag through to enter. Once inside the reefs, the depth is 10 -12 m of sandy bottom which was a very welcome change from Luganville where we anchored in not less than 30 m on coral rubble.

Wala Island transport (No safety regs here!!! 12 in the tinnie and 11 in the duckie) for school children as their outboard was being fixed. The more water that came over the side the more the kids enjoyed the trip. It was like crossing the Derwent in a strong sea breeze.

A walk on the reef at low tide to find some hidden treasures was rewarded with Jess and Claire finding many colourful and different shells.

After a couple of days at Asari, so Jess could get her sea legs, we continued south against trade winds of 20 -25 knots to Wala and Rano Islands which are on the eastern side of Malakula Island. These Islands are separated from Malakula by a narrow, deep channel which the islanders crossed in their dugout canoes each day to take their piccaninnies to school or to work in their gardens. The islands set a tropical scene with steep terrain and the tropical vegetation extending up from the coral sand beach. We anchored off the village in sand which extends from the shore for about 50m before the depth plunges to 50 -60m. Luckily you can bank on the winds not changing direction as you have to drop the anchor on the sandy platform and hang back in the channel. The islanders were very pleased to see us, as they were keen for us to repair their canoes (and sandals) with epoxy glue, outboards which had various issues and to trade anything we had. We have gradually worked out, over the last 3 months, how to get value when trading, but it is very hard to equate the value of

their survival items such as food to our material items like batteries, clothing, fishing tackle etc. For example you may pay $2 for 5 kg of bananas at Luganville markets, but you may trade a $10-15 T-shirt for the same in the islands.

Claire and Jess beach combing Maskalyne Islands

From here our plan was to go to a Cultural Festival on Ambrym Island which was 40 mile due SE but with the wind still blowing strongly from the SE we opted for to Bannam Bay on Malakula Island instead. Sue keeps reminding me that cruisers and gentlemen don't go to windward! This bay is very similar to Adventure Bay on Bruny Island except that you need to anchor well off shore because of the fringing reefs and coral heads.

Also anchored at Bannam Bay was *Alvie,* a 120ft steel schooner owned by Evan, a guy from NZ. He was being chartered by Project MARC (Medical Aid for Remote Communities) to provide inter island transport for equipment and volunteers who would undertake projects at remote village areas. At Bannam Bay Claire and Jess were entertained by traditional dancing and we all attended church on Sunday. At the conclusion of the service we were invited to stand outside with the minister where we met the whole congregation by shaking hands with each individual as they came out of the church. Sue says she now has a lot more sympathy for the Queen with her meet and greet duties. The singing by the children's choir was fantastic and their very down to earth approach to the sermon was a pleasure to listen to - or was that because it was all in Bislama?

Sue's mates helping her look for shells on Rano Island

Having travelled only a third of the distance to Port Vila, the Maskelyne Island group and Lamon Bay on Epi Island were next on our itenary.

The Maskelyne Islands are a group on the southern end of Malakula Island and rarely visited by yachts. We anchored off Sakao Island for the next few days and visited various surrounding reefs and islands in the dinghy. Sakao Island is owned by one family group but currently has a caretaker family living on it. Chief Willy visited us several times during our stay with various requests for help, from mending solar panel connections to again testing our skills to the max on outboard motors. There is one other building on the island, owned by an Australian, which has a magnificent outlook over the Maskelyne group. We asked Chief Willy about the ownership and evidently he has a rent agreement with the Aussie that he may build on the island and use it indefinitely for $3000 a year rent, but when he leaves all improvements stay. I think the chief got a very good deal.

Adis Jack's father baking our bread at Lamen Bay. Cost 120 vatu. $1.20Aus

Having overstayed our time in the Maskelyne Islands we thought we would head straight to Port Vila some 90 miles to the SE, how ever 'Hui' had decided to rev up the SE winds and sea state, so after 2 hours of 3m plus waves, 25-30 knots of wind, adverse current and three ladies saying 'enough is enough' we tacked over to head for Lamen Bay on Epi Island which proved to be a truly a lovely place to visit. Safe, non rolly anchorage and a black sand bottom. With Independence Day activities in full swing the village was brimming over with neighbouring islanders. Major events were athletic competitions held in the morning and football (soccer) and volley ball in the afternoons. These were all held on the High School oval which was situated right behind the beach. They certainly take their sport seriously, and there was island music, food stalls, parading of the teams, coaches and trainers with supporters sitting all around the oval in picnic mode making up a great atmosphere.

Again Island hospitality was in abundance with us being befriended by Adis Jack who found and provided us with vegetables from the gardens and bread made by his father as our supplies were dwindling. Sadly Jess's time with us was nearing

an end so on a beautiful moon light night we departed Lamen Bay for Port Vila at 1.00am to ensure a day entry into Port Vila. The conditions were reversed to the previous day with a balmy trade wind sail all the way to Port Vila. As we neared the Efate Island the waters were so still that Jess likened it to sailing on silk. We were treated to a wonderful display by three young dolphins who broke away from a huge pod travelling north to cavort around our bow wave for a good twenty minutes until a big, older looking dolphin swam over and must have told them to stop messing about as they left us as soon as he swam off.

Port Vila. What a contrast to Luganville and the rest of Vanuatu. Cosmopolitan, westernized, people in abundance and you are able to purchase anything you wish. They say there are 40 restaurants (Luganville has one that is not attached to a resort) and many up-market accommodation places. So it was a bit of a shock for us after three months of native tradition, trading for food, being the local repair man and living without everything on tap.

Claire and Jess enjoying sunset on Lamen Bay, Epi Island. The sun is setting over Lamen Island

Port Vila was farewell for Jess and Claire with Jess returning to Tassie to start her career and Claire, well she just happens to be flying to Japan to meet up with Craig and Mat for two weeks holiday before returning to Tassie. (and she thought Port Vila was overcrowded!). Thanks John and Sue McCuaig for providing Claire with accommodation and support in Sydney for the few days before her flight to Japan.

From Port Vila we ventured north again to Port Havannah which is the largest protected waterway in Vanuatu. Although only a 30 minute bus ride from Port Vila or a three hour sail, the islanders live the traditional island life where they all have their own vegetable gardens and use dugout canoes for transport and traditional housing using woven pandanus leaves as roofing. Here we finally caught up with another Tassie boat, *Intrepid IV* from Kettering. We had spoken to them many times when reporting into Tas Coast but had never met them. Graham, Alice and their two children left Tassie in November 2006 and sailed to the Whitsundays, then to Noumea and onto Vanuatu. They will be back in Kettering by the end of October 2007.

From Port Havannah we headed further north to Emae Island in the Shepheard Island group where we spent four delightful days in the company of Alice and Daniel who welcomed us into their village and taught us much about their life and traditional ways. Once again our repair skills were put to the test with a request for help on a chain saw and a generator being two of the more major items requiring attention.

We left Emae Island and headed once again back into the boisterous SE trades to return to Port Vila where we are currently reprovisioning and sorting out inter island clearances (and Duty Free shopping) so that we can travel down to Tanna to visit its active volcano and explore the other four islands that make up the Tafea Province before farewelling lovely Vanuatu and heading off to more adventures in New Caledonia.

John & Sue Cerutty at Port Vila

SAILING

I like sailing. The tilt of the yacht, the wind whistling in the rigging, the yells of, "Heads down, tacking to starboard, we're nearly there!", "Passing the Iron Pot, heading South!" and the like, still heard over a 20 knot wind which stings your face. The seagull's calls carrying on the wind in the world of swishing waves and flapping sails. Only the happiest being could have seen this and not felt moved. The waves lap against the hull and turn white on the top as they try to surge forward and overtake one another.

Lucy Bain

Application for membership

Dennis & Jenni Walker

Ocean Child

This nomination for membership will automatically be accepted within 14 days of the next General Meeting immediately following this issue of 'Albatross', subject only to any Member lodging an objection in writing to the Secretary no later than that date.

Chart Work and Position Fixing

The following article covers some basic navigational skills in a easy to understand format. While many Club members will be familiar with its content, it never hurts to refresh one's knowledge once in a while (for example – how many members can do a running fix without reference to a text?). For Club members with families, this article could serve as a good starting point for passing on coastal navigational skills.

Chart Work

Accurate chart work is the basis for good navigation.

Before going to sea, a course is plotted on a chart noting bearings, distances and expected times for each leg of the trip. While at sea, position is fixed at regular intervals and the course adjusted when necessary. This is safe, sensible practice. It is a 'general safety obligation' of the person in control of the vessel and applies to both large ships and smaller recreational craft.

Some important points to note about working with charts are:

1. Latitude and longitude scales are divided into minutes and then *tenths* of minutes (seconds are not used on charts). So a latitude may be given as 34°28.5' and this should be able to be determined from the scale on the side of the chart.
2. When determining distances on the chart use *only* the latitude scale on the side of the chart.
3. Remember one minute of latitude equals one nautical mile.

   1 minute of latitude = 1 nautical mile = 1.852 kilometres

4. Transfer distances to the latitude scale *directly beside* the chart area from which the distance was lifted. Make this a habit. It is good practice as the latitude scale is *not constant*. The effect of the Mercator projection, from which most nautical charts are produced, is to stretch the scale slightly at higher latitudes. This is because the angle at the center of the earth increases towards the poles and the cylinder of the projection, when unwrapped from around the spherical earth, distorts the latitude scale.
5. Take care to read the chart details carefully and note whether soundings are in *fathoms* or *metres*.
6. A chart is always *true*. A compass course is always *magnetic*. Be sure to take account of these two facts in your chart and navigation work. Conversions must be done correctly.

7. Some charts will have more than one compass rose displayed. This is because variation (declination) is not constant. It is changing continuously and it varies from place to place. We say that the Queensland coast has a variation of 11° easterly, but this is just an approximate value. In the Torres Strait variation is approximately 5° easterly. Always use the compass rose closest to the area you are working in and be sure to note the variation details on that compass rose and apply them consistently to your bearings.

8. Variation (declination) changes continuously because the magnetic north pole is moving around. It was drifting away from the geographic (true) North Pole and so our charts for the Queensland coast showed variation as '....., *increasing* x minutes annually'. The magnetic north pole is now drifting back towards the geographic pole and variation is now '....., *decreasing* y minutes annually' in Queensland. If the chart you are working from is very old, the variation statement cannot possibly be correct. Variation cannot keep increasing, or decreasing, indefinitely. Current chart information is published fortnightly by the Australian Hydrographic Service RAN in the section 'Notices to Mariners'. It is also available from *Queensland Transport: Maritime* in the section 'Notices to Mariners'.

9. For formal chartwork the following symbols are used:

Name	Symbol
Fixed Position (FP)	
Estimated Position (EP)	
Dead Reckoning Position (DR)	

Position Fixing

Fix by cross bearings

This fix requires visible landmarks (at least two, but three is better) from which to take bearings. The back-bearings are calculated and adjusted for variation (and deviation if necessary). Lines are drawn on the chart from the landmarks so that they intersect at a common point. It is more usual for there to be a small error and the resulting intersection to form a small triangle called a **'cocked hat'**. Position can be taken to be the centre of the cocked hat. The time of this position fix is noted on the chart.

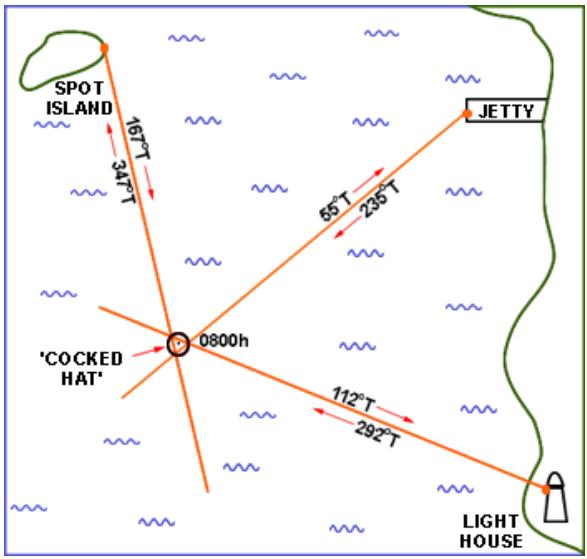
Example:

At 8.00a.m. the eastern tip of Spot Island is sighted at 336°M, a lighthouse is at 101°M and the end of a jetty at 044°M. Variation is 11° easterly. Fix the position of the vessel on the chart.

First convert the bearings to true bearings before plotting them on the chart. Always remember the compass reads *magnetic* but the chart maps *true*.

336°M = 347°T
101°M = 112°T
044°M = 055°T

The following diagram demonstrates **fix by cross bearings** using this example.



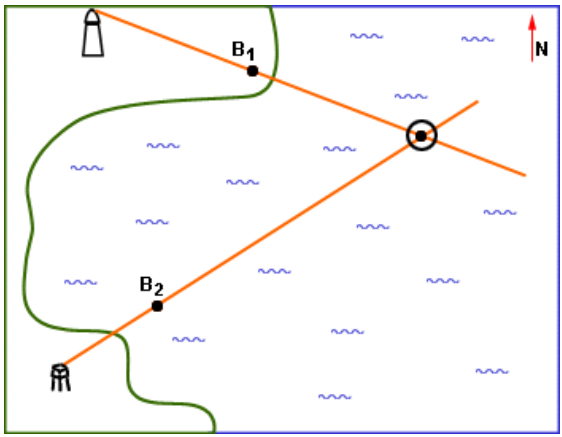
Transit fix

This method of fixing position relies on the fact that if a vessel observes two features directly in line then the vessel must also lie on that same line, called a transit line. It is possible to have a two-transit fix when the vessel is able to observe yet another two features on a direct line with itself. The two-transit fix will fix the position of the vessel at that time.

Example:

A yacht observes a beacon (B^1) and the lighthouse in line at 12.30p.m. At this time a second beacon (B^2) and a lookout tower on the coast are also observed to be in line. Use this information to fix the position of the yacht on the chart at 12.30p.m.

The following diagram demonstrates **transit fix** using this example.



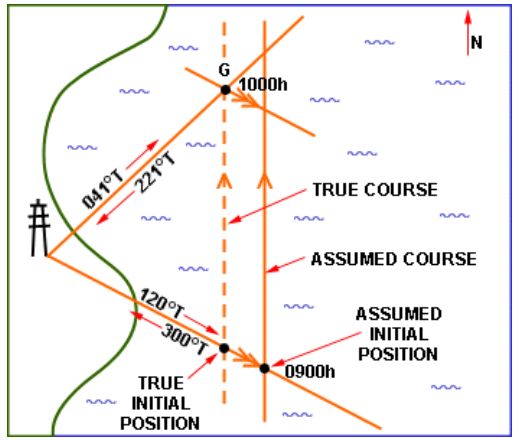
Running fix

This method of fixing position is used when there is only *one* visible feature to be observed. Bearings are taken to the feature at two separate times (perhaps an hour apart). These bearings and an *assumed* course are plotted on the chart. The distance travelled in the hour between readings is marked on this assumed course line. By transferring the original bearing line to this marked point, a true position (point G on the diagram) is determined.

Example:

C. Saylor notes that the bearing of his cabin cruiser to the base of a radio tower is 289°M at 0900h. He is traveling due north at 12 knots. At 1000h the bearing to the radio tower is 210°M. Use the given information to fix the position of the boat at 10:00 a.m. What was the true position of the boat at 9:00 a.m.?

The following diagram demonstrates **running fix** using this example.



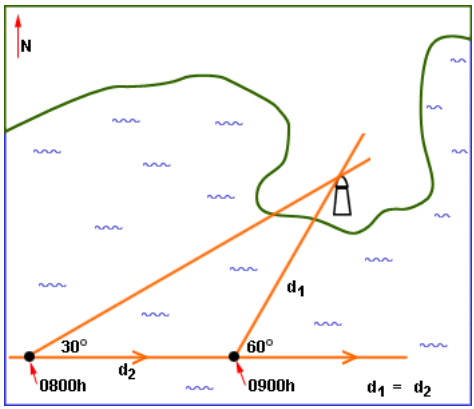
Doubling the angle on the bow

This is a form of running fix that takes advantage of the properties of an isosceles triangle.

Example:

A vessel is following a course of 090°T at a speed of 10 knots. The log was read when a lighthouse was bearing 030°T on the bow, and again when it was 060°T on the bow (double the first angle). What was the distance of the vessel from the lighthouse when the second bearing was taken?

The following demonstrates **doubling the angle on the bow** using this example.



d_2 = speed × time

= 10 × 1

= 10 n.miles

distance from the lighthouse is 10 n.miles

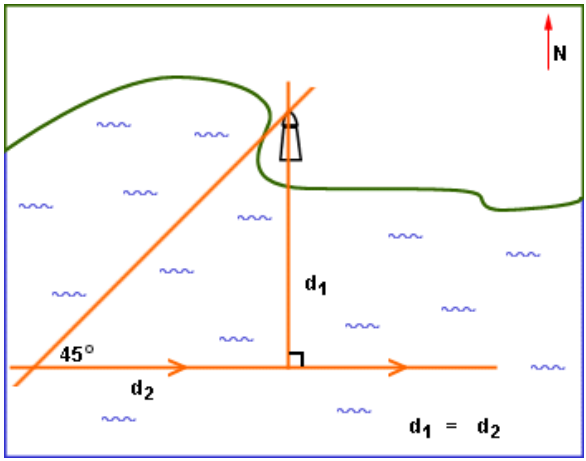
= d_1

Note: This fix requires the initial bearing to be less than 45°.

The four point fix

This type of fix uses the same principle as 'doubling the angle on the bow' but the angles used are specifically 45° and 90°. It is called a 'four point' fix because 45° is four points on the bow (a circle of 360° is divided into 32 points of 11.25° each.

The following diagram demonstrates **the four point fix**.



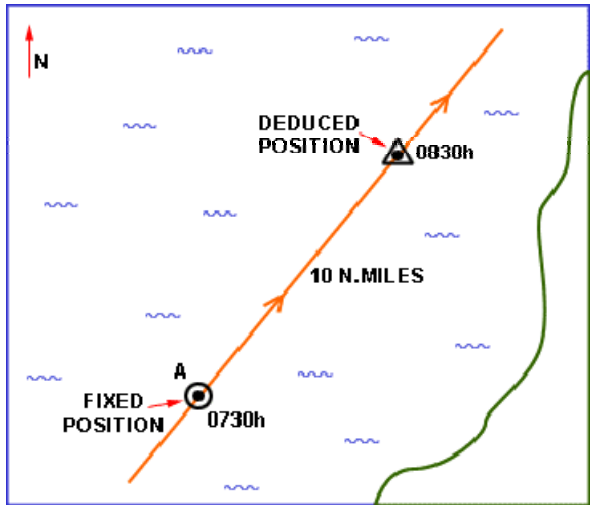
Dead reckoning

This is a method of fixing position which is, at best, an estimate of the vessel's position based on information gathered earlier. It is a deduced position used when navigators are unable to sight visible features due to distance from the coastline. A known fixed position (a circle with a dot in it) at a recorded time, the intended course and distance traveled in a given time period are used to determine the deduced position (a triangle with a dot in it).

Example:

A vessel traveling at 10 knots on a course of 035°T is at point A at 0730h. Estimate its position at 0830h.

The following diagram demonstrates **dead reckoning** using this example.

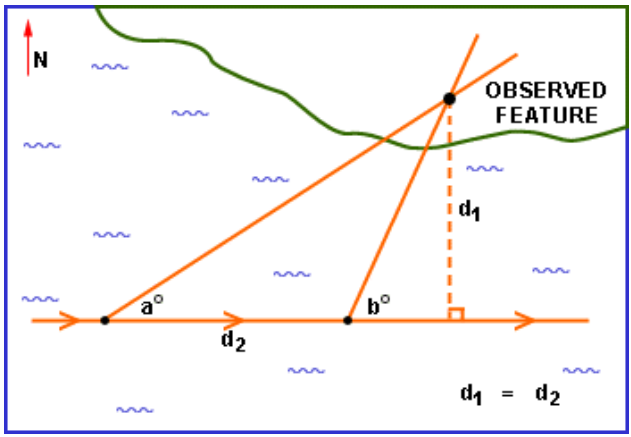


Did you know? 'Dead reckoning' is derived from 'ded. reckoning' which is 'deduced reckoning' abbreviated.

Fix by 'special angles'

This fix requires mariners to know some special pairs of angles (a° : b°) that give the distance run between bearings as equal to the distance abeam (abeam = when the feature is at 90° to the intended course) as shown in the diagram below.

These pairs of angles are:



16° : 22°

21° : 32°

25° : 41°

32° : 59°

37° : 72°

40° : 79°

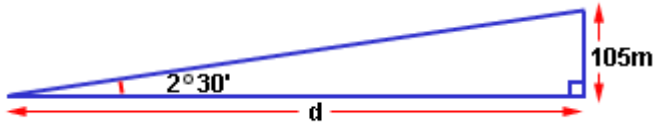
Fix by elevation (or vertical sextant angles)

This fix relies on the principle of the sextant, by its ingenious arrangements of mirrors, allowing the images of two objects to be brought together so as to appear in the same plane. Thus the lantern of a lighthouse can be made to appear to float on the surface of the sea resulting in a vertical sextant angle. Solution of the triangle by trigonometry in which the length of one side (the height of the lighthouse), and the angle at the observer's eye are known, allows the length of the base (distance off) to be calculated and plotted as a position fix.

Example:

From Bobby-Jay, a yacht, the angle of elevation to the top of a lighthouse of 105 metres in height is measured as 2°30'. How far is Bobby-Jay from the lighthouse?

The following diagram demonstrates **fix by elevation** using this example (this diagram is *not* to scale).



$$\tan 2°30' = \frac{105}{d}$$

$$d = \frac{105}{\tan 2°30'}$$

$$= 2404.9\text{m}$$

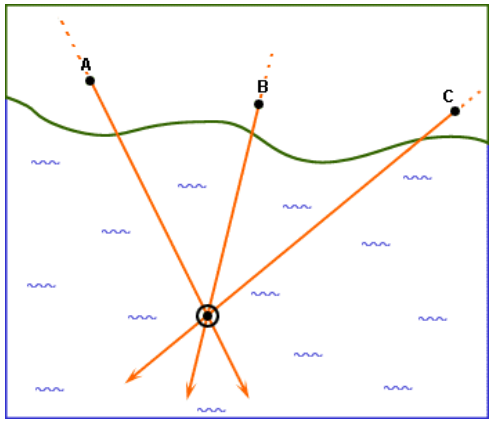
$$= 2.4\text{km (1.3 n.miles)}$$

Fix by horizontal sextant angles

This fix is in essence the same as a fix by cross-bearings. Instead of using a compass to take the bearings of the features a sextant is used in a horizontal position to find the angle between the objects. It is more accurate than a compass fix.

The method involves drawing the angles on tracing paper which is placed over the chart so that the arms of the angles pass through the features. The fix position is at the intersection of the three position lines and is pricked through onto the chart.

The following diagram demonstrates **fix by horizontal sextant angles**.



Fix by horizon lines

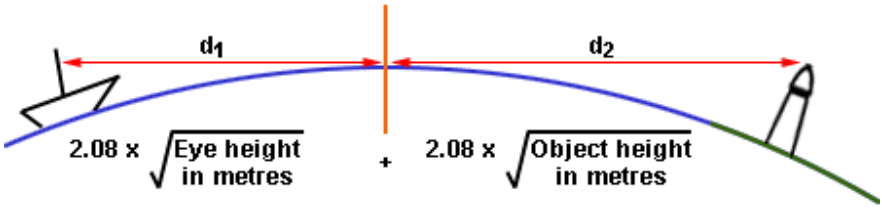
If an object of known height is observed to be just rising above or just dipping below the horizon, its distance can be readily found using the Nautical Almanac which includes an *Extreme Range Table*, or by calculation using the formula

Distance (in n.miles) = 2.08 × {√(elevation of feature in metres) + √(observer's height of eye in metres)}

Example:

The charted elevation of a lighthouse is 105 metres and the observer's height of eye is 2.74 metres. The light is sighted just rising above the horizon. How far is the lighthouse from the vessel?

The following diagram demonstrates **fix by horizon lines** using this example.



Distance of the vessel from the light = $d_1 + d_2$
By calculation: distance = 2.08 × 11.9
= 24.75 n.miles

Reading from the *Extreme Range Table* of *Norie's Nautical Tables* the distance is approximately 24.5 n.miles. The distance is an approximation as the tables (all in feet) give eye height in steps of 5 feet and object height in varying steps from every five feet through to each 100 feet when the height is over 700 feet.

The following diagram is an extract from a Norie's Table.

EXTREME RANGE TABLE

Height in feet Range in miles

Height of Object	Height of the Eye in Feet						Height of Object
	0	5	10	15	20	. . . . .	
5	2.56	5.13	6.19	7.01	7.69	.....	5
10	3.63	6.19	7.26	8.07	8.76	.....	10
15	4.44	7.01	8.07	8.89	9.57	.....	15
20	5.13	7.69	8.76	9.57	10.26	.....	20
25	5.74	8.30	9.36	10.81	10.87	.....	25
30 35	A small extract from the Extreme Range Table sufficient for the example given in the text.						
300	19.87	22.43	23.50	24.31	25.00	.....	5
325	20.66	23.22	24.29	25.10	25.79	.....	10
350	21.46	24.02	25.09	25.90	26.59	.....	15
375	22.20	24.76	25.83	26.64	27.33	.....	20
400	22.94	25.50	26.57	27.38	28.07	.....	25
...	...	...	...	...	...	...	
...	...						
...							
...							

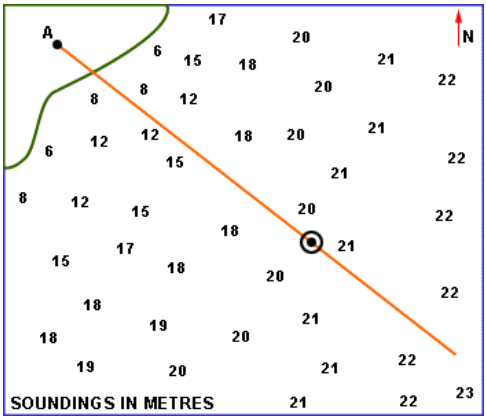
Fix by a bearing and soundings

This method of fixing position requires one bearing to be taken and a position line plotted on the chart at that bearing. Assuming the ocean floor is not too rugged or too uniform, a sounding can be taken and compared to those shown on the chart. The vessel will lie on the position line at the recorded sounding.

Example:

Fix the position of a vessel in 20.5 metres of water that has taken a bearing of 318°M to feature A on the coast.

The following diagram demonstrates **fix by bearings and soundings** using this example.



Fix by GPS

A fix by GPS (Global Positioning System) requires little effort from the navigator. The GPS equipment when turned on, returns information of position on the earth's surface, altitude, speed and direction of travel, and time. This information is transmitted from a number of the 24 satellites orbiting the earth.

Speed is often very important in calculations for navigation. Speed is measured in **knots**.

1 knot = 1 nautical mile per hour

Speed = distance ÷ time

Did you know?

Knots were originally measured by a line on a reel with knots tied at intervals. The line had a gadget on the end that doesn't let water through. It was let out over the stern of the ship. When the first knot passed over the stern a 14-second hourglass timer was started. At the end of the 14 seconds the number of knots having passed over the stern was the speed of the ship in knots

CYCT Calendar

Wed 26th September

Mid-week cruise – Kettering 10.00am

Tue 2nd October

General Meeting – DSS 8.00pm Pat Price will talk about his voyages in *Pendulum* in the Pacific

Sat 6th October

Combined clubs opening day of the new sailing season,

Sun 7th October

Picnic for those boats returning to the Channel from the season opening day sail past

Wed 10th October

Mid-week cruise – Kettering 10.00am

Wed 10th October

Committee Meeting – 7.30pm

Wed 24th October

Mid-week cruise – Kettering 10.00am

Thu-Sun 25th-28th October

Hobart Show Long Weekend cruise – Norfolk Bay

Tue 6th November

General Meeting – DSS 8.00pm

Wed 7th November

Mid-week cruise – Kettering 10.00am

Sun 11th November

Day sail – Killora Bay

Wed 14th November

Committee Meeting – 7.30pm

Note – up to date details of all planned cruises and events can be found on the club website. ***www.cyct.org.au***

Minutes of 2007 Annual General Meeting

Minutes of the 31st Annual General Meeting of the Cruising Yacht Club of Tasmania held at the Derwent Sailing Squadron, Sandy Bay at 2000 hours on Tuesday 4th September 2007.

WELCOME:

Commodore David Bryan opened the meeting and welcomed 27 members.

APOLOGIES:

Patricia & Roger Locke, Dennis & Wendy Lees, John & Julia Greenhill, Chris Palmer, Dave Davey, Annicke Ansselin, Annie Curtiss & Simon Aiken, Brendan & Catrina Boon, Mike & Ruth Temple-Smith.

MINUTES OF THE PREVIOUS MEETING

Minutes of the 31st Annual Meeting of 5 September 2006 were published in the September 2007 edition of the Albatross and ratified at the General Meeting in October 2006.

Moved Leo Foley seconded Andrew Boon that the minutes of the 31st Annual Meeting be recognised. **CARRIED**

CRUISE OF THE YEAR AND CRUISING PLAQUE OF THE YEAR

Andrew Boon announced that *Pendulum* skippered by Pat Price fulfilled the criteria for both awards. As Penny Lade and Pat Price were absent the presentation of the awards will be made at a later date.

TREASURER'S ANNUAL REPORT

The unaudited Treasurer's Report was tabled and circulated to members.

Moved Andrew Boon seconded Leo Foley that the meeting accept the report subject to a satisfactory audit. **CARRIED**

COMMODORE'S ANNUAL REPORT

David Bryan presented the Commodore's Annual Report**.**

Commodore David noted the death of members in the last year: Peter Cerutty, Derek Farrar, Annie Pope and Zen Houdek.

Moved David Bryan, seconded Hans van Tuil that the Commodore's Annual Report be accepted. **CARRIED**

VICE COMMODORE'S ANNUAL REPORT

Andrew Boon presented the Vice Commodore's Annual Report.

Moved Andrew Boon seconded John Skromanis that the Vice Commodore's Report be accepted. **CARRIED.**

REAR COMMODORE'S ANNUAL REPORT

Milton Cunningham presented the Rear Commodore's Annual Report.

Moved Milton Cunningham, seconded Leo Foley that the Rear Commodore's Report be accepted. **CARRIED**

ELECTION OF OFFICE BEARERS

Commodore David Bryan declared the committee positions vacant and conducted the election of the Commodore. Leo Foley completed the election of officers.

Commodore:

Leo Foley – nominated Barry Jones, seconded Kevin Hussey and elected.

Vice Commodore:

Andrew Boon - nominated Margaret Jones, seconded Chris Creese and elected.

Rear Commodore:

Milton Cunningham – nominated Leo Foley, seconded David Bryan and elected.

Treasurer:

Caroline Dutton – nominated David Bryan, seconded Margaret Jones and elected.

Secretary:

No nomination received. Margaret Jones will continue until a secretary is appointed.

Editor:

Chris Palmer – nominated Dave Davey, seconded Margaret Jones and elected.

Committee Members:

1. John Skromanis – nominated Margaret Jones, seconded Leo Foley and elected.
2. Mike Temple-Smith – nominated Andrew Boon, seconded Milton Cunningham.

Membership Officer:

Annicke Ansselin- nominated Dave Davey, seconded Margaret Jones and elected.

The positions of Warden and Quartermaster are committee nominations and will be filled later.

Auditor

Moved David Bryan, seconded Leo Foley that Peter Dawson continues as Honorary Auditor subject to his acceptance. **CARRIED**

CONSTITIONAL CHANGE

Moved Leo Foley, seconded David Bryan that the motion to change the times of General Meetings be put.

Milton Cunningham explained that on several occasions during the year it had been necessary to have meetings at earlier times and at venues away from the Derwent Sailing Squadron.

The new motion reads:

> *A General Meeting will be held on the first Tuesday of each month (excepting January) at a time and place to be advertised in the "Albatross".'*

CARRIED

Commodore Leo Foley closed the AGM at 2050.

Margaret Jones – Acting Secretary

Commodore's Annual Report - 2007

It is with pleasure that I present this Annual Report of the Cruising Yacht Club of Tasmania. The year has flown past and whether this is a sign of being busy or a sign that we are getting a little older and want to take things easier rather than continually rushing around, I am unsure. I know various club members are recovering from illness and I wish them well. Once again this seems to be related to increasing years, and to quote Barry Jones he said he was "bullet proof until age 50 and then things started to go downhill." I can personally relate to this. However we must remain positive and always look forward to getting away on the boat for some great company, some relaxation and some great cruising.

Club functions have been well attended, i.e. the annual dinner, Christmas function, Navigation Cruise and dinner, New Year and Easter cruises, long weekends etc. Whilst we cannot order the weather, contingency plans are always in hand and the Channel is a wonderful cruising area. My thanks go to both Andrew Boon and Milton Cunningham for all their effort in providing us with a variety of functions and cruising opportunities.

The recent publication of *Cruising Southern Water Ways* is largely due to the input of a dedicated group of our club members. This has given the boating public a first class and up to date cruising guide. Well done to all those who were involved in this project.

Our guest speakers have come from all walks of life and have given the club important and valued information. Whilst not wanting to list all speakers, my thanks go out to all. Thank you for your passion and willingness to share. Well done.

I would like to thank all those businesses who sponsor the CYCT through advertising in the Albatross and through providing prizes for the Donald Southerland Memorial Navigation Cruise. Your support is really appreciated by our members.

Thank you to Colin Finch and Peter Hopkins and their staff at MAST for their willingness to keep the CYCT informed on their operations and where boating funds are spent.

The CYCT has also noted the passing away of some members and whilst this is sad, we do not live in this life forever. We look to the positive side and welcome all the new members to the Club and I hope your association with the Club will be long and beneficial. The new member's nights have been a great success and for me the highlight this year was meeting the Willsons from Melaleuca. Thank you for sharing your experiences with us.

The Club would not function as it does without the dedication and hard work of the Committee members. Your Committee members have made a remarkable contribution to the life of the CYCT. A huge thanks to all concerned and I must add that it has been a pleasure working with you over the past two years. I fully believe it is time for new faces to fill the ranks of Committee members and commend the Club to you.

I am sure the reports from the other officer bearers will give a good overview of how the CYCT is going. My thanks again to you all - even those of you who are brave enough to attend an AGM!

David Bryan AFSM

Minutes of General Meeting – 06-09-07

Minutes of the General Meeting of the Cruising Yacht Club of Tasmania held at Derwent Sailing Squadron, 6th September 2007 at 8.00pm

WELCOME:

Commodore Leo Foley opened the meeting.

APOLOGIES:

Dennis & Wendy Lees, Chris Palmer, Dave Davey & Annicke Ansselin, Patricia Roger Locke, Julia & John Greenhill, Annie Curtiss & Simon Aiken, Brendan & Catrina Boon, Mike & Ruth Temple-Smith.

MEMBERS PRESENT:

27

MINUTES OF THE PREVIOUS MEETING 7 August, 2007.

Moved Andrew Boon, seconded Pam Skromanis that the minutes of the General Meeting held on 7 August as published in the September Albatross are a true and correct record. **Carried.**

BUSINESS ARISING:

Nil

COMMODORE'S REPORT:

Commodore Leo Foley welcomed new members Phil and Jane Mason, Quentin and Fiona Tuxen presenting them with club burgees.

VICE COMMODORE'S REPORT:

9 September day trip to Duck Pond

Midweek sailing will be Wednesday 12 September meet at the Oyster Bay chandlery at 10 am

Forthcoming cruises will be in the Albatross.

Suggestions for other venues are welcome. One suggestion was for a trip to Bridgewater probably over night either side of Cadburys Point.

The CYCT emblem is now available for clothing at "Totally Workwear". Contact Andrew Boon who can arrange the embroidery for a reasonable cost.

New burgees have been ordered through "Pumpkin Prints". Swallow tails are also on order.

REAR COMMODORE'S REPORT:

2 October Guest Speaker will be Pat Price and Penny Lade.

6 November Leo Foley Vanuatu

December all 2007 guest speakers will be invited to attend to answer questions, update any short issues and personally contact members.

Thank you to members for supplying supper.

GENERAL BUSINESS:

Commodore Leo Foley congratulated David Bryan on a job very well done during his term as Commodore.

He also thanked Andrew Boon and Milton Cunningham for their contribution to the efficient running of the Club.

Leo commended members for their camaraderie, helping others with their boats and urged everyone to continue to have fun during their cruising on the water.

The meeting closed at 9.05 pm. Supper followed.

Margaret Jones – Acting Secretary

Electric Drives - Propulsion of the Future?

Electric powered boats have definite advantages. They are environmentally friendly, and very quiet; they run with only a whisper of sound. They are reef friendly, quiet in harbours, are cheaper to run and emit no pollutants. So why are we still using fossil fuels and marine diesel engines to provide propulsion for ocean going vessels? Consider the typical internal-combustion engine. From the time a charge of fuel ignites in a cylinder, it has to push pistons, turn a crankshaft, turn a camshaft, open valves, pump water, pump oil, turn an alternator, and submit to reduction from a transmission to step the engine's thousands of revolutions down to something a propeller can use. By the time that's done, the engine's efficiency is somewhere below 25 percent. Also, diesel engines are rated at their maximum rpm--and on sailboats are rarely operated at that speed.

By contrast the efficiency of Solomon Technologies' electric motor is a percentage in the low 90s. Here's how it works: When the system is switched on, DC current from the batteries enters an electronic controller, which produces expanding and contracting magnetic fields in the motor's stator windings. These magnetic fields attract and repel the fields from three permanent magnets, made from neo-dymium iron boron, that are attached to the rotor. The controller electronically modulates the pulse width to increase or decrease speed. At 13 inches wide, the motor provides ample contact with the shaft to produce high torque at low rpm, enough for the motor to turn particularly large propellers. Fixed three-bladed 18/18 (diameter/pitch, in inches) propellers are typical in many of STI's installations. From the flowing electrons to the turning prop, the shaft passes through only two bearings and a stern gland--and no transmission, all of which accounts for its high efficiency. Furthermore, with the electric motor, the relationship between rpm and torque is linear: You can use it to turn the boat's prop at 1 rpm or 10 rpm or 50 rpm or 100 rpm. An internal-combustion engine needs to cross an rpm threshold before its propeller is put in gear; otherwise, it would stall.

Probably the most amazing aspect of the STI's electric drive is its ability to produce electricity with a low-speed, high-output alternator driven by the prop shaft when a boat is under sails. In other words, the device is converting the prop's rotation into stored energy.

Another company doing very interesting work in the field of electric drives for yachts is Fischer-Panda in Germany. Well known European yacht builders, Bavaria have chosen to use the revolutionary Whisperprop series from Panda -Fischer in a new line called the Bavaria 49 DE (Diesel Electric). It's the world’s first diesel electric propelled production yacht series. They also offer an more drive options (including a pod drive) which is extremely interesting - as STI does not.

New developments in this area are being addressed with companies such as Solomon Technologies, ASMO Marine and Fischer-Panda for utilising electric propulsion in production craft as well as Fast Electric Systems and MW Line in Switzerland for using straight electric drives in larger vessels.

For those that prefer a little more muscle in terms of power - and would prefer to have a dual propulsion system - the hybrid diesel-electric is the answer. Whilst it's more environmentally friendly - straight electric is not practical for some commercial operators, power-cats and motor-sailors for a variety of reasons including availability of shore power, horsepower issues, or lack of a backup system.

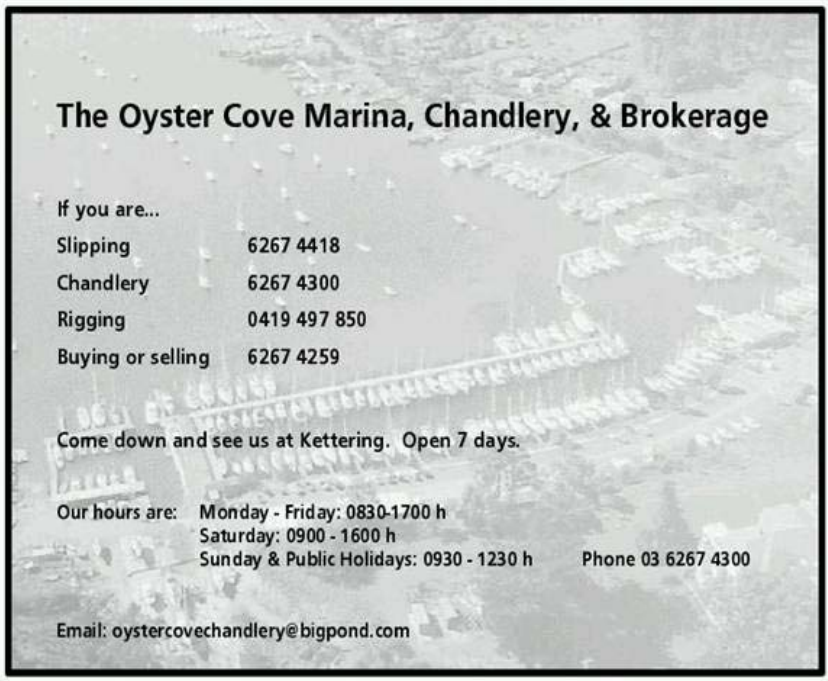
For those who prefer a dual system there are a couple of options. One is using DC generator input into electric drives. What's the difference in fueling up a DC generator with diesel to top up batteries in order to directly drive a propulsion system ... and just *using a normal diesel engine?* Lots. There is a huge amount of savings in terms of fuel consumption as well as a much quieter generator as opposed to a chugging diesel. The emission differences are also significant. The downside is the size and weight of the battery banks needed and more money initially invested (which is eventually recouped through fuel savings). The DC Whispergen is powered by a Stirling engine that needs no oil, is almost completely silent. it operates unobtrusively with a noise level similar to a domestic air-conditioner. Lightweight, compact and efficient, the WhisperGen converts over 90% of the fuel supplied into heat and electricity.

Then there's the Vetus option - where electric propulsion is integrated into the diesel engine much like the hybrid cars one sees on the road today. The general idea is to use the diesel engine when you want the power and switch to electric propulsion when you want some peace and quiet. When motoring under diesel power, the electric motor, driven by the diesel engine, functions as a dynamo, charging the batteries for the next round of electric propulsion. It's a nifty system.

This technology is more than viable - the US military is planning to shift over a significant proportion of their vehicles to hybrid technology in the future. The Humvee will be replaced by the more efficient Shadow RST-V - which is the US Marine Corps' first 4x4 hybrid-electric tactical vehicle

From www.boatbuilding.com

Photo – Steve Darden



Members' Advertisements

FOR SALE
VENTO - 30 FT DOVEN

20 hp Bukh diesel, furler, electric sink, wash basin and head.

Equipment includes sails, anchor, metho stove, ice box, lazy jacks, sail cover, auto pilot, radios, CD player

Very roomy main cabin & forward berth. Sleeps 5 plus I child.

Long history of successful racing.

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