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Offshore
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Editorial:
Sydney: Peter Campbell, 31 Albany St, Crows Nest, 2065.
Phone: (02) 439 4514 **Fax:** (02) 439 8517
Telex: AA 74612 BOATCO
Melbourne: Rob Williams, (03) 646 5877
Hobart: Peter Read, (002) 278 155, Bob Gear, (002) 67 2327
Adelaide: Geoff Kingston, (08) 218 9218
Perth: Hugh Schmitt, (09) 321 0161
Brisbane: Ian Grant, (07) 349 9147
New Zealand: Robert Love, 864 831
England: Bob Fisher, 590 68 2267.

Advertising:
Sydney: Offshore magazine — National Publications, Max Press, (02) 764 1111. Tony Hutton, Carrington Media Services Pty Ltd, Unit 8, 98 Alfred St., Milsons Point, 2061 Phone: (02) 959 3122, Fax: (02) 922 7523.
Melbourne & Hobart: Rob Williams, 36 Nelson St, Port Melbourne, 3207 Phone: (03) 646 5877
Brisbane: Don Douglas, Yachting Media Pty Ltd, 47 Sexton Street, Brisbane 4000 Phone (07) 368 2669, Fax: (07) 369 9677.
Adelaide: Gill Sinkinson, The Admedia Group of SA, 24 Kensington Rd, Rose Park, 5067 Phone: (08) 332 8144, Fax: (08) 31-0185
Perth: Frank Hall Media, 4th Floor, 102 James St, Perth, 6000 Phone: (09) 328 2539, Fax: (09) 328 2911
New Zealand: Anthony Reeves, Pacific Building, 127-129 Hobson St, Auckland, NZ Phone: 77 5120, Fax 34740.
USA West Coast: Lane E. Weiss & Assoc. 582 Market Street, San Francisco Cal. 94104 USA. Phone: (415) 986 6341
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Swan Premium 1 Photo Bob Fisher

Precision plotter drawing

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HOOD

"The best thing about the Birdsville races was inspecting the track."

The Birdsville Track.

The track begins at Marree, the last resting place of the Ghan, some 700 kilometres north of Adelaide.

Rain two weeks earlier had carved half-metre drops into the banks of the normally dry creeks, which criss-cross the road.

Fortunately, the Range Rover's high seating has more than scenic value, enabling us to spot these washouts and negotiate a way around them.

We made camp for the night 30 kilometres past Kopperamanna Bore.

We'd folded down one-third of the Range Rover's asymetrically split rear seat to extend the already cavernous load space. This provided the extra room to carry our camping gear without cramping the comfort of the two rear passengers.

Next day both the track and the Range Rover showed their true colours.

At Coopers Creek, we encountered an unstable pile of rubble which had been deposited to replace the washed-out road.

Others in a less capable 4WD had declined the challenge. We selected low ratio and engaged diff-lock.

With power now distributed equally to each axle, we gained the traction we needed to claw our way over.

Once across, we faced 100 kilometres or so of gibber rock, which was like driving on cobblestones scattered with marbles.

It was a question of sticking doggedly to the wheel ruts, while the Range Rover's rubber body mounts and long travel suspension worked overtime to dampen the constant jolting.

Approaching Goyders Lagoon the rock gave way to sand. Now the ruts had set concrete hard.

The fact that we had a 4-speed auto was a godsend, as we could keep both hands on the wheel as we weaved our way around the deeper drifts and sun-hardened ruts.

Then it was across the Diamantina River and into Birdsville for the races. (Population 100. Raceday 3000.)

That's when our navigator made a curious discovery.

The sign at Marree said Birdsville was 520km north. The sign at Birdsville said Marree was 553km south.

"We'd better go back," he said, "and see what we missed."

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WITH only six months to go before the start of the fifth Whitbread Round the World Race, from The Solent on the south coast of England on September 2, 39 syndicates are shaping up to tackle the 32,932 nautical mile classic, an event that has become one of the last great challenges of yachting.

Although Fremantle has been chosen as the second stopover, the end of the longest leg of the course, efforts to organise an Australian syndicate have failed. At the best, Australasia will be represented by two New Zealand yachts, sailed by yachtsmen well-known to Australians, and both with outstanding prospects of line honours victory. And their sponsors also have significant commercial links with Australia.

Of the 39 entrants, 10 are new boats, three of them ketch-rigged maxis designed by New Zealander Bruce Farr — the two NZ entrants *Fisher & Paykel New Zealand* and *Steinlager II* and the Swiss challenger, *The Card*. There are another five Farr designed yachts competing.

The fleet includes entries from Britain, the United States, Finland, Italy, Holland, West Germany, Switzerland, Poland and, for the first time, the USSR.

The two New Zealand entrants have been in the water since early in the year, with *Fisher & Paykel New Zealand* sailing across the Tasman on a training voyage, visiting Sydney and Brisbane. *Fisher & Paykel New Zealand,* skippered by round-the-world veteran Grant Dalton, and *Steinlager II,* skippered by Peter Blake, also have been training and racing together in New Zealand waters before heading off to Europe.

On early indications there is nothing between the two ketches in boatspeed, and the Down Under entrants have been installed in the top group of favourites for the Whitbread. Certainly, they have the most experienced long ocean racing skippers, navigators and crews and the two boats represent the most advanced computer technology applied to yacht design and the latest in big-boat hull construction, rigging and sails.

Steinlager 2, *Peter Blake's fractional-rigged maxi ketch sailing off New Zealand. Blake says that it will be the biggest maxi in the Whitbread Race.*

Significant in the design concept of *Fisher & Paykel New Zealand* was that the ketch be optimised to take full advantage of the new course for the race, which gives a greater degree of off-the-wind racing. The first step in the design programme was to generate an accurate global weather picture drawing on historical and current weather information. This was the vehicle for an exhaustive computer analysis by the Farr office of potential designs and types of maxi yachts.

The resulting hull shape models were tested in tanks at Southampton University and the Royal Navy submarine base tanks in England. When the potential of a maxi ketch on the new Whitbread course became apparent, *Fisher & Paykel New Zealand* skipper Grant Dal-

Kiwi Ketches for Whitbread

By Peter Campbell

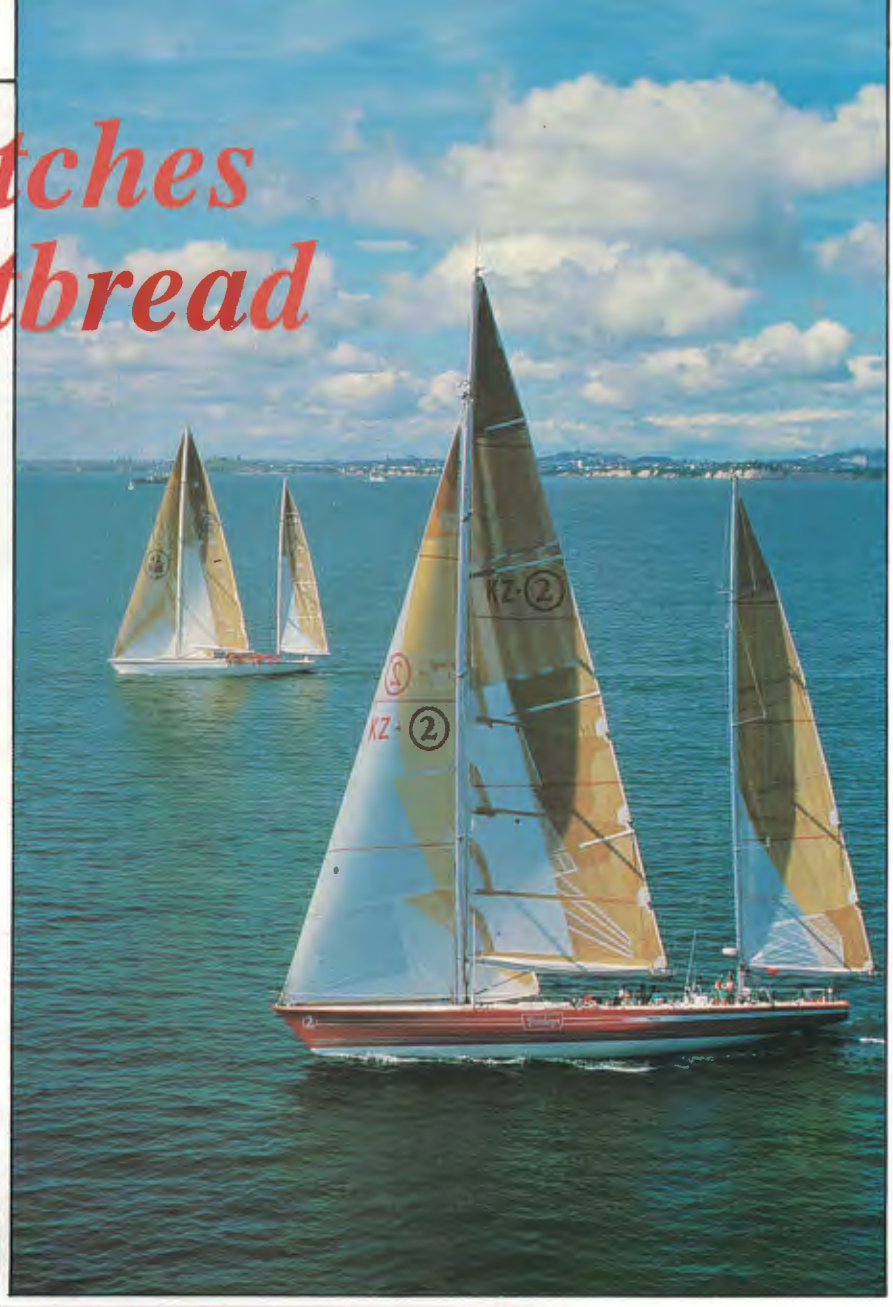
ton authorised the development of two designs — one a state-of-the-art fractional sloop and the other a super-sophisticated ketch.

"We still had checks to run and we didn't want to end up at a design deadline time without our thinking having been fully developed both ways," Dalton explained during his visit to Sydney.

The end decision to go with the ketch was taken only after elaborate flow programming analysis by sail designer Tom Schnackenberg. The result was a masthead rig ketch, the likes of which the world had not seen.

Built by the Marten Marine yard in Auckland, the yacht was constructed using the latest exotic fibreglass technology with minute attention to weight optimisation while retaining complete constructional integrity.

Since its return from the trip across the Tasman, *Fisher & Paykel New Zealand* has been involved in further sail testing and sponsor sailing before being



The two maxis built for the Whitbread Race sailing together off New Zealand.

By contrast, Fisher & Paykel New Zealand *is a masthead Ketch. The 80-footer will be skippered by Grant Dalton. Both Maxis are Farr designs.*

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The list of results this year is staggering, it shows when sailors demand raw power and reliability in their winches, they demand Barient.

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Kenwood Cup	Great News/Sagacious V*/Esanda Way*	1st Australia
Americas Cup 1988	Stars & Stripes	Winner
One Ton Cup 1988	Propaganda	1st
San Francisco Big Boat Series	Il Moro De Venezia II (Maxi Class)	1st
	Great News (50′ Class)	1st
World Maxi Championship	Il Moro De Venezia II	World Champion
Round Australia Bicentennial Race	Steinlager I	1st

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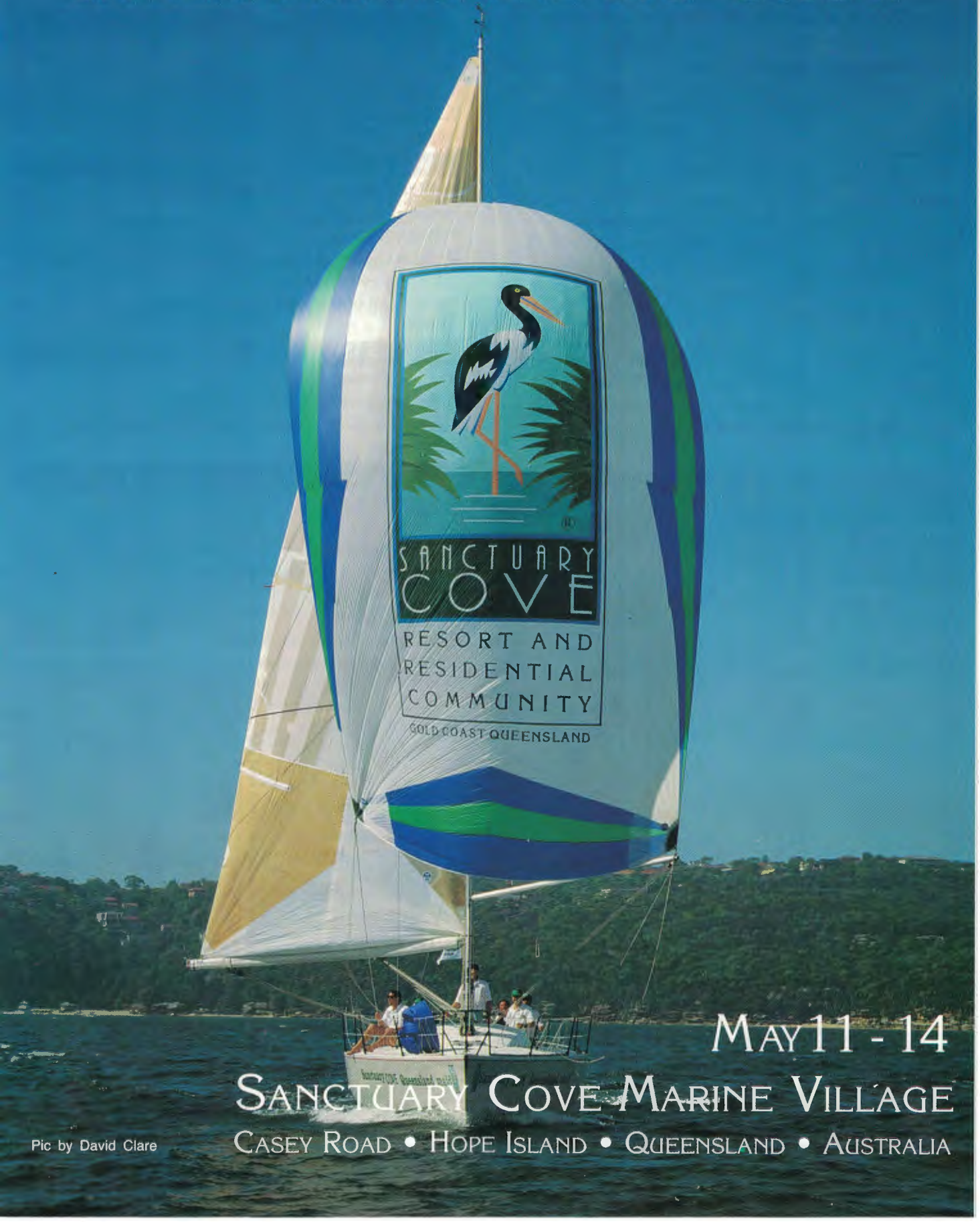
Underline Design Group

1989 Queensland International Boat Show



Pic by David Clare

May 11 - 14

Sanctuary Cove Marine Village

Casey Road • Hope Island • Queensland • Australia

BOAT SHOW PROGRAMME

EVERY DAY

- **On-water marina display**

Floating timber marina ensures the best possible close-up water level viewing of boats afloat.

- **Hard stand boat displays**

Additional craft on hard stands show their underwater lines. Run your hand over the superb timber hull of Ben Lexcen's last hull design — state of the art in timber hull construction.

- **New designs**

Watch for the exotic and the unusual — several craft will be on display in Australia for the first time.

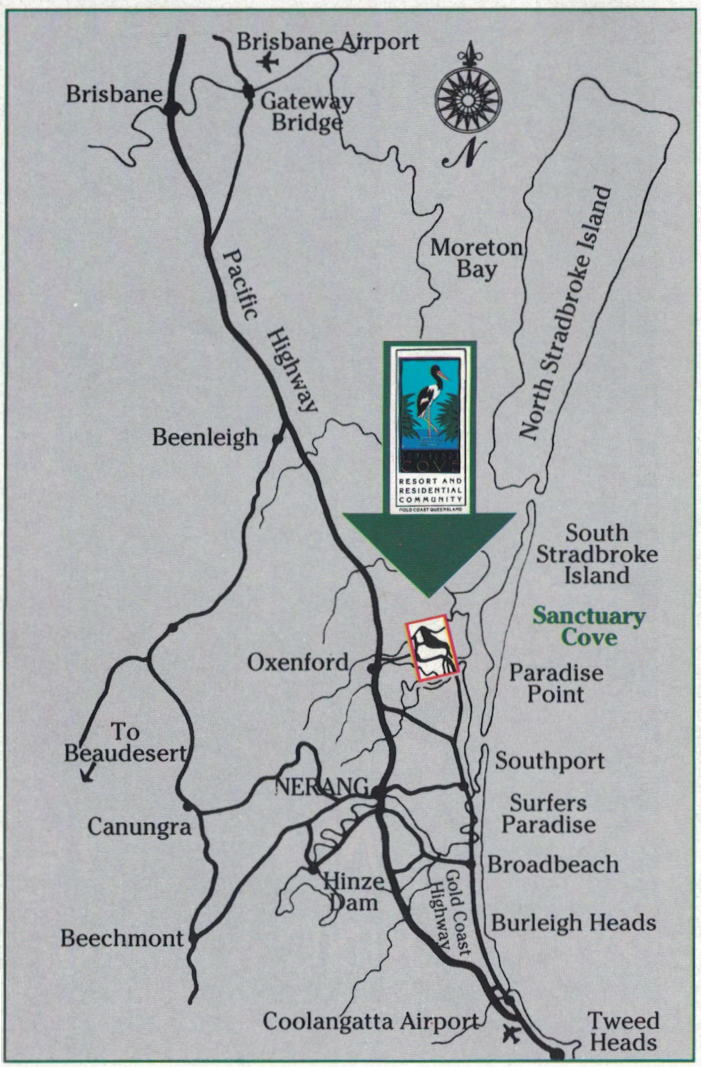
- **Extensive marine product displays**

From anti-fouling to radars, anchors to trim tabs — the newest and best in marine accessories.

- **Free entertainment**

Street entertainers set their imaginary stage on the colourful Marine Village streets. Listen for seafaring shanties from across the seven seas, fashion parades, and surprising roving talent of all kinds.

- **Daily draws of big prizes**



THURSDAY MAY 11

- **Official opening 11am**

FRIDAY MAY 12

- **National Boating Industry Seminar**

The first seminar for businessmen in the boating industry — sharing views in a positive environment: 9:30am - 5pm Hyatt Regency Sanctuary Cove (phone (075) 57 6868 for registration details).

SATURDAY MAY 13

- **Free Fishing Workshop 1-4 in 'The Pitchers'**

Hands-on training and advice by fishing professionals from angling to big game fishing.

- **Gala Celebrity Dinner at Hyatt Regency 7:30pm**

Glittering event hosted by 1988 Australian Yachtsman of the Year Peter Gilmore (phone (075) 57 6868 for information and reservations).

SUNDAY MAY 14

- **Free Fishing Workshop 1-4 in 'The Pitchers'**
- **Major draw 5pm**

Random draw of on-water display entry ticket numbers for big prizes

ADMISSION

- **Free parking**
- **Free entry (open 10am to 6pm May 11-14)**

Entry is free as always to Sanctuary Cove, the Marine Village, on-land display areas and entertainment. A $5 single and $10 family entry ticket to on-water marina display qualifies holder for major prize draw).

- **Special travel packages**

Discount accommodation and travel packages for interstate visitors (phone (075) 57 8200 for details).

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GOLD COAST QUEENSLAND

MARINE VILLAGE

THE MARINA

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Boating enthusiasts find Sanctuary Cove a destination that has everything to make the most of life on the water.

Everything has been considered. Complete service facilities include travel lift, hardstand and washdown, engineering and electrical workshops, refuelling dock, marine trimming and much more.

The resort harbour and the Coomera river leading from the Pacific Ocean and the Southport Broadwater have been deepened to a minimum of more than three metres at low water and craft up to 50 metres can be accommodated.

With some 300 berths, the single-loaded floating timber marina offers berth holders immediate access to electricity, water and telephone connections.

Sanctuary Cove Marine Operations are open seven days a week along with base radio VJ4 SCR.

Pilotage, crew and provisioning services are all readily available.

The Marine Village, with its fascinating range of shops, is a convenient source of provisions and services with its Marketplace, general store, liquor store, pharmacy, newsagent, tobacconist, bakery, medical and dental suites, dry cleaners, bank, hairdresser and post box. Access to modern laundry and shower facilities is free.

Coffee shops, food outlets, waterfront bars, a brewery, Yacht Club, restaurants and a night club are all just a short stroll up the piers.

The resort's 24-hour security service ensures complete safety.

Visitors may moor for the day free or stay over night for as little as $20.00.

For a few hours, days or permanently, it's little wonder Sanctuary Cove Marina is a favourite.





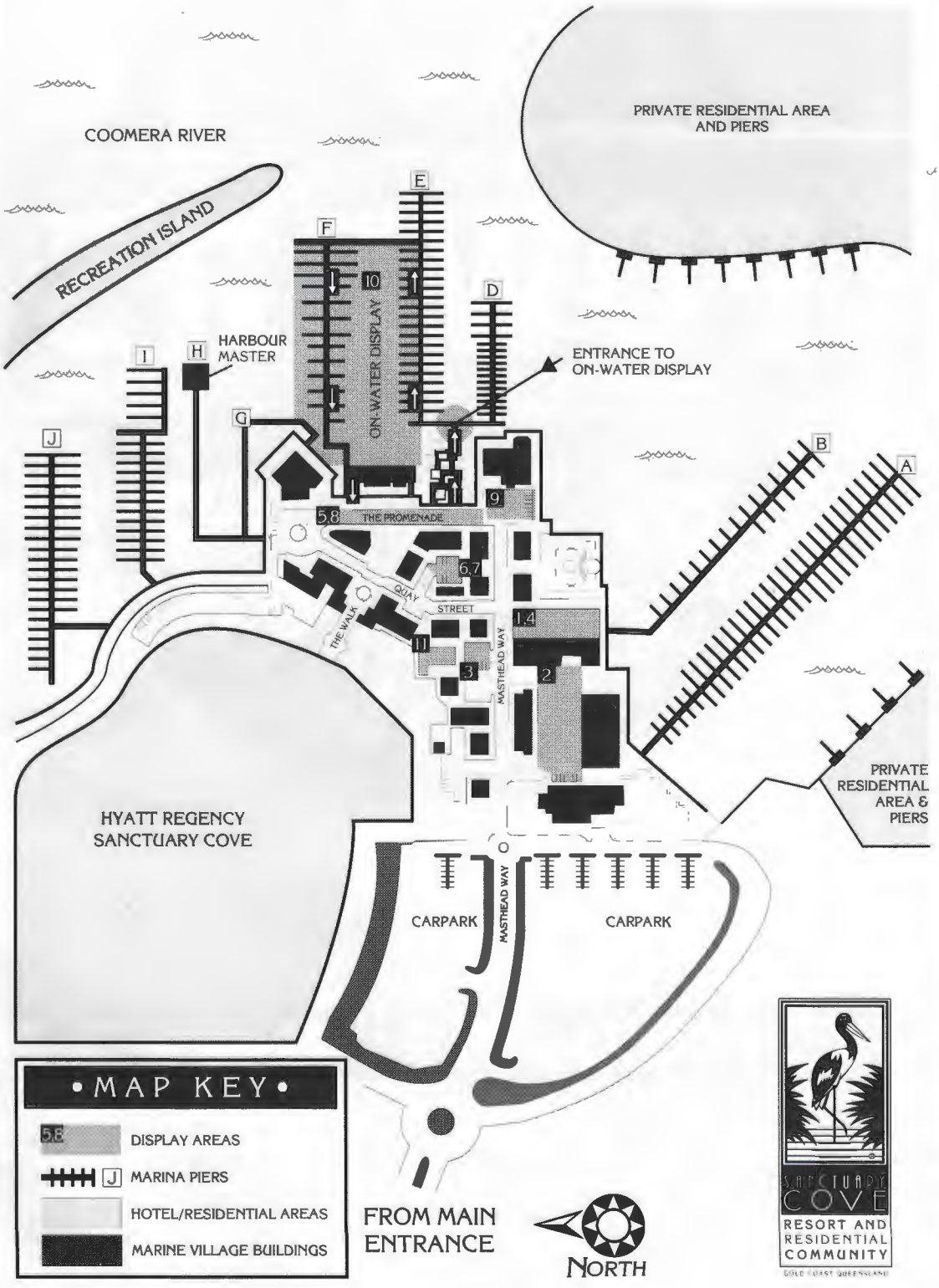





Sanctuary Cove Marina and Marine Village — style, service, convenience and colour. Why would you berth anywhere else?

1989 Queensland International Boat Show

Site Plan



LIFESTYLE

SANCTUARY COVE

Sanctuary Cove is a resort and residential community with no equal. Whether you enjoy it for a day, a week, or life-time, it offers a lifestyle with no comparison.

Set on 470 hectares at Hope Island, between Brisbane and the Gold Coast, it combines shopping, recreation, a superb international hotel and a marina, and carefully planned private residential areas.

For its many visitors it is a resort paradise with a myriad of leisure and entertainment choices.

There are two international standard golf courses, The Palms, a challenging resort course, and the Pines, designed by Arnold Palmer to be a world class course for serious golfers.

The focal point for recreation and relaxation is The Rec Club, offering a tennis complex, squash courts, lawn bowls, swimming, running track, all-sports shop, extensive fitness facilities and dining.

Guests of Hyatt Regency Sanctuary Cove are pampered in luxurious yet intimate surroundings. Discreet personal service combines with gracious restaurants, a tropical beach lagoon and the finest facilities to make this a truely memorable holiday experience.

But it is the residents of Sanctuary Cove who fully understand this idyllic lifestyle. Only they, and selected corporate members, can join The Country Club, the elegant heart of the residential community.

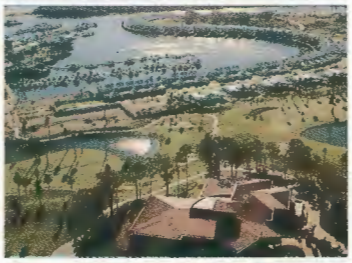
Residents choose from a superb range of housing styles, from luxury villas to grand individual homes, overlooking waterways and fairways.

And all this with the assurance of absolute privacy and safety provided by a 24 hour manned and electronic security network.

Sanctuary Cove — where life is as it should be.

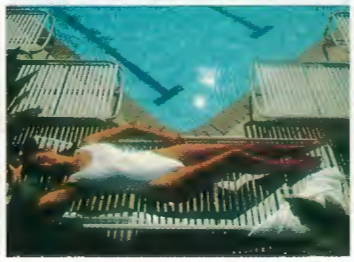
Sanctuary Cove — a resort community for those who value quality, security and the finest possible facilities for an active lifestyle.










THAT'S BETTER.

lifted from the water for a re-fit in mid-March.

In April, the yacht will be shipped to the USA to compete in the trans-Atlantic Race from Newport, Rhode Island to Cork in Ireland. At least six other Whitbread maxis are expected to compete in the 2,600 mile race which starts on June 6.

Once in the UK, campaign headquarters will be set up in either Portsmouth or Plymouth. During the two months leading up to the start of the Whitbread, the yacht will spend some time training out of Belgium, and will compete in the Fastnet Race along with a number of other Whitbread entrants.

Fisher & Paykel New Zealand will carry the ensign of the Royal New Zealand Yacht Squadron for the Whitbread, and the Squadron will host the fleet in Auckland.

Fisher & Paykel New Zealand specifications:

Boat length	80+ft
Boat width	19ft
Draft	14ft
Weight	30 tonnes
Main mast	95ft off deck
Mizzen mast	65ft off deck
Sail area	(all sails) 800 sq metres
Yacht construction:	
Hull	exotic materials — carbon fibre, kevlar and nomex core
Mast	aluminium
Boom	aluminium
Spinnaker poles	carbon fibre

Steinlager 2 Goes Fractional

WHILE Peter Blake's *Steinlager 2* is also ketch-rigged, it differs in that it is a fractional rigged two-master and, according to Blake, is the longest maxi yacht in the world.

The Bruce Farr-designed monohull is 25.6 metres (84ft) long, has a radically different and exceptionally large fractional rig that will ensure it is the biggest boat in the fleet.

"*Steinlager 2* is not only the longest IOR maxi yacht in the world but the large rig will enable her to carry more sail than any other yacht in the race," said Peter Blake. "It's bigger than any Whitbread yacht ever seen before and she's the first fractionally rigged ketch to be built for modern ocean racing," said Blake.

Pierre Fehlmann, who took line honours in the last Whitbread race, has again opted for a conventional Farr designed sloop and his single mast will be a similar height to the main mast on *Steinlager 2*. However, the New Zealand yacht additionally has the mizzen mast.

The main mast on *Steinlager 2* is 34.7 metres (114ft) high and the aft mizzen mast is 24.7 metres (81ft) high. For comparison, Blake's *Steinlager 1* trimaran, which won the Bicentennial Around Australia Race, has a 26.2 metre (86ft) wing mast.

Peter Blake's second of the three, multi-million dollar Steinlagers.

The sail area on *Steinlager 2* will be considerably greater than the sail area on the majority of the Round the World race yachts. *Steinlager 2* will have a beam of 5.85 metres (19.2ft) and a draft of 3.96 metres (13ft).

Peter Blake disclosed that the decision to build a fractional rig ketch was made well over a year ago following extensive computer analysis and tank testing in conjunction with Bruce Farr in America. "We considered all the options, including the more traditional sloop design and the more conventional mast head rig, but confirmed to Bruce Farr when we left Annapolis in July of 1987 that we wanted to go with the fractional rig ketch."

Blake has not wavered in his belief that this would be the best configuration for the predominantly 'downhill' course and development of the design continued right up until building began in January. "We chose the best combination of boat length and rig. *Steinlager 2* will have a lot of sail and will be easily driven in the weather conditions we are anticipating.

"I did a lot of my early long distance racing in ketch rigged yachts and my family has owned a ketch for twenty-seven years," said Blake who has competed in all four previous Round the World races.

European Entries in Ocean Training

FOR nine of the Whitbread boats the Race of Discovery in December provided the first opportunity for them to size up their competition and to test their own crews, sails and tactics.

Last year's winner on elapsed time, Pierre Fehlmann, is now at the helm of *Merit* and again showed winning success when he lead the maxis to the Race of Discovery's finish line.

For *Equity and Law II,* the race proved that most of their equipment was functioning well, with some important decisions made with regard to further improvements. The keel which was performing very well, will now be replaced by a similar but lighter and more aerodynamic one, saving 300kg. A new mast will be fitted shortly, which will be a lighter and stronger replica of the current one. Most sails were found to be performing well, especially the new spinnakers, however since the Race of Discovery provided little upwind sailing, some new headsails will still have to be tested in the coming season.

Despite the fact that *UBF* have experienced several problems, for example their mast breaking and the boat suffering some damage in a trans-Atlantic crossing last year, and a tactical decision which failed to benefit *UBF* in the Race of Discovery, skipper Ludde Ingval believes that *UBF* is a fast boat and that the crew works well.

Another Finnish entry, *Belmont Finland II,* ex-*UBS Switzerland,* was christened by Italian singer Loredana Berte, Bjorn Borg's girlfriend, on 1 December. Skipper Harry Harkimo and his crew trained intensively with *Merit* in the Mediterranean for two months before competing in the Race of Discovery and finishing third in the maxi class.

Britain Builds New Maxis

THERE have been a large number of developments with the British syndicates. The Combined Services maxi continues to be built at Green Marine in Lymington and is nearing completion.

Further afield in Totnes, *Rothmans* builders at Paragon Composites Ltd have bonded the deck to the hull of this all-British maxi. The next stage will be to turn the hull over for farring in preparation for the positioning of the keel and rudder. Final fitting out and installation of the systems will follow shortly afterwards. *Rothmans* is on schedule for her launch in the spring.

The Russian syndicate *Golden Fleece,* headed by Vladislav Murnikov, are combining science and space technology and engineering to produce a revolutionary yacht. The Soviets plan to take food specially developed for the cosmonauts in the Soviet space programme and they are believed to be developing very lightweight, warm clothing from spacesuits but modified for marine conditions.

In addition, the team has examined 25 years of weather data. Since 2 September 1988 the Russians have been running a simulated race on a computer using the actual weather conditions as they develop from day to day.

With a total budget for the Race of $US5-6 million the Russians hope to find half of that through overseas sponsors. Local company Fasiz is already backing the syndicate with $1 million. Dennis Conner who was present at the press conference in Moscow which announced the Russian challenge, plans to bring the project to the attention of Pepsi Cola — the company which backed him for his win against the New Zealand Challenge in the recent America's Cup challenge.

The French syndicate, *Operation Cargo* is on schedule to be in the water by May. The deck of this 22 metre ULDB fractional sloop maxi has been completed and the hull is well under construction. While the Italian biscuit company Bistesane has enabled the boat to be built, *Operation Cargo* are looking for further sponsorship.

An all girl crew was unheard of in the history of the Whitbread Round the World Race until this year. In addition to *Maiden Great Britain,* which achieved second place on corrected time in the Race of Discovery, American Nance Frank is ready to take up the Whitbread challenge with an all girl crew. Final negotiations for sponsorship are well under way, however she is yet to secure a boat.

The Whitbread Round the World Race is organised by the Royal Naval Sailing Association and is considered the ultimate challenge in ocean racing, attracting skippers and crews from all around the world. The Race starts on 2 September from The Solent and takes approximately nine months to complete.

Fisher & Peykel New Zealand *shows her massive sail area.*

Course is new, but the challenge remains the same

THE Whitbread round the world race is regarded as one of the last of the great challenges.

The event pits men in sail boats against the elements through the farthest reaches of the world's oceans.

Starting and finishing off the historic English port of Southampton, the race goes counter-clockwise around the world, plying the traditional trading routes which were once the domain of the proud clipper ships.

In the process, it takes in all of the famous and infamous maritime landmarks such as the legendary Cape of Good Hope and Cape Horn.

The "bottom" legs of the course take the race yachts deep into the most desolate and lonely stretches of water on the globe — the Southern Ocean.

This is the vast expanse of water that circles the earth between the southermost capes of Africa, Australia and South America and the northern shore of the Antartic continent.

It is the only area of ocean in the world where no land intervenes. The sea is free to circulate the globe without interference. The weather systems are similarly uninpeded and all-powerful.

The hazards in the high latitudes are many as the yachts skirt the Antarctic icepack.

Freezing temperatures, storms, huge waves and icebergs are all part of the package.

But there are major savings in distance to travel as the surface of the earth tucks in to its southern pole.

Also, the storms travel in the same direction as the yachts. They can be used to advantage by crews with the courage and the skill to "fly" in front of them.

The traditional course for the Whitbread covered 27,000 miles from Portsmouth to Cape Town, Cape Town to Auckland, Auckland to South America and South America to Portsmouth.

The inaugural race in 1973-74 and the second in 1977-78 used Rio de Janeiro as the Southern American port of call.

But the stopover coincided with the famous Rio carnival making it almost impossible to refurbish and resupply the fleet.

So the 1981-82 race went to Mar del Plata, in Argentina.

The move was a success but the Falklands War became a factor and a second switch was required for the 1985-86 race — this time to Punta del Este in Uruguay.

Since then, because of the political situation in South Africa, Cape Town, the first stop in all four Whitbreads to date, has been abandoned.

This destroyed the traditional route around the world so the race organisers, Britain's Royal Naval Sailing Association, took the opportunity to revamp the whole race format and introduce new countries.

This has meant an increase to 33,000 miles in the distance sailed, the course for 1989-90 race being Portsmouth to Punta del Este, Punta to Fremantle (Australia), Fremantle to Auckland (New Zealand), Auckland to Punta del Este, Punta to Fort Lauderdale (Florida), and Fort Lauderdale to Portsmouth.

The 1989-90 race will start from Southampton on September 2, 1989. The fleet is not expected back in Portsmouth until around May 21, 1990.

The course change has also meant an increase in the length of the longest leg which used to be 7100 miles from Cape Town to Auckland.

The lengthiest journey will be 7650 miles from Punta del Este to Fremantle.

The different route around the world has in turn imposed different performance emphasis in yachts built especially for the race.

The traditional Whitbread course demanded good all-rounders with a leaning toward downwind performance for the two Southern Ocean legs.

But windward ability was an important consideration because of the South Atlantic trek from the Doldrums to Cape Town into the south-easterly trades and for the final leg back through the Atlantic from South America to England, which could be predominantly upwind, depending on the position of the Azores High.

The new course significantly reduces the prospect of upwind sailing and puts a correpsondingly hefty premium on reaching and running ability.

From Southampton to Punta Del Este, the yachts will reach across the trades to the South American coast rather than punch straight into them on the way to the Cape of Good Hope.

Similarly, from Punta to Fort Lauderdale on the way home, there will be no requirement for easting once through the Doldrums headed north.

The fleet will ease away past the Caribbean and the West Indies to the coast of Florida.

Then the final leg across the Atlantic should be a fast downwind ride ahead of the weather systems which, like the yachts, will be travelling west to east.

These altered performance criteria have prompted a return to favouritism of the ketch rig with yachts such as Fisher & Paykel New Zealand.

60-Boat Fleet In Club Med Noumea

A FLEET of at least 60 yachts, from all Eastern Australian States and from Noumea, has entered for the 1989 Club Med Australia-New Caledonia race — Australia's longest and most exciting ocean race into the South-West Pacific.

Organised by Australia's most experienced offshore racing clubs, the Cruising Yacht Club of Australia and the Queensland Cruising Yacht Club, in conjunction with the most hospitable yacht club in the South Pacific, Cercle Nautique Caledonien, the race will see fleets start from Sydney on Saturday, June 3, and from Brisbane the following day.

The combined fleets will be the largest contingent of yachts to race from Australia to New Caledonia since 1983 when the Sydney fleet was boosted with the addition of the first fleet to race from Brisbane, giving a total fleet of 59 yachts representing Australia and New Caledonia.

CYCA race director Alan Brown says there are a number of reasons for the upsurge in interest in this classic race into the South-West Pacific. New Caledonia's political climate has settled down and skippers and crews who took part in the 1987 race returned to Australia bubbling with stories of a great race across the Pacific — of how the French Navy's escort vessel sent an inflatable across to yachts with chilled bottles of wine on quiet days at sea, of the generous hospitality of the French in Noumea, and of the opportunity to follow the race with some magnificent island cruising.

A further boost this year is the celebration of 200 years of the founding of the Republic of France — with a dozen or so French yachts entered in what they are calling their Bicentenary Race.

This year's event has some changes to recent races. Instead of the race finishing off Amadee Island, at the entrance to the reef, the yachts will now finish within Noumea Harbour. There will be three divisions again — IOR, Arbitrary and Cruising, with the latter being made more competitive.

The CYCA has given special dispensation for the relaxation of Rule 26 on advertising ahead of the July 1 changes to the rule. This will allow competitors to have limited advertising on the hulls and spinnakers as a recognition of individual sponsorship.

Host club for the 1989 Noumea Race will again be the Cercle Nautique Caledonien — always giving a warm welcome to visiting yachts.

Although the majority of entries are in the cruiser/racer category, the fleet includes many interesting yachts, among them the 1987 race winner, *Nadia IV,* a strong contingent of French yachts and, for the first time, two woman skippers — one Australian, one French.

Jan Partridge, the enthusiastic yachtswoman from Coffs Harbour on the NSW North Coast, has entered her 11.3 metre sloop *Outrageous,* in which she has contested the Jupiters Sydney-Gold Coast race and then the AWA Sydney-Hobart. While this will be her longest ocean race, Jan is a most experienced sailor and has put together a good crew for the Pacific crossing.

The French woman skipper is Anic Da Ros, a well known Noumea businesswoman and a veteran of several voyages between Australia and New Caledonia. With her sights set on a line honours victory, Anic has bought the New Zealand-built, fast 55-footer, *Night Flyer.* Anic previously raced in the Sydney-Noumea race with her Farr 1104, *Dianick II,* which she has sold to another Noumea yachtsman, M. Chichemanian, who has again entered it in this year's race.

The French Navy is again providing an escort vessel for the fleet as they sail from Sydney, the partolleur *La Moquese,* captained by Lt. de Vaisseau E. Bossaid. *La Moquese* is fully equipped for search and rescue work, and long-range radio communications. However, in addition, Jack Joel, of JMJ Fleet Management in Brisbane, has made available his Hatteras motor cruiser *Bahama* as a support radio relay vessel. *Bahama* will be skippered by well known yachting identity Bruce Ramsden, with long-time CYCA member Don Mickleborough as his first mate.

Last year's race winner, *Nadia IV,* will be skippered this year by owner Teki Dalton. Since the 1987 race, when another Canberra yachtsman, George Snow, skippered her to victory, the Farr 40 has won two successive CYCA Blue Water Championships.

Former Admiral's Cup yachtsman and designer Ted Kaufman is making a comeback to long ocean racing with *Mercedes VI,* which he recently reacquired, while among the strong contenders for line honours will be Mike Clements 17-metre sloop, *Rager.*

Veteran Geelong yachtsman Geoff Wood has again entered his famous three-masted schooner *Ile Ola* for what Geoff says will be his last voyage into the Pacific.

Other entries include *Balia* and *Solemer* from Tasmania, Josko Grubic's maxi ketch *Anaconda II* from Adelaide, the Around Australian Race competitor *Goodman Zulu Chief,* Joe Goddard's *Inch by Winch,* John D. Pforr's 13.8-metre ketch *Fortress* from Brisbane, Peter Rysdyk's *Onya of Gosford, Windsong IV* from Melbourne, Maurie Cameron's much-sailed *Witchdoctor* and television personality John Barton's *Aotea Rushcutter.*

Club Mediterranee, once again the major sponsors for the Australia-New Caledonia Race, are planning a spectacular farewell for the fleets from Sydney and Brisbane and will again welcome skippers at Noumea with their traditional cocktail party at Chateau Royale, the Club's resort in Noumea. Many of the friends and families of competing yachtsmen and women will be staying at the Club Med during the post-race festivities which are always part of the tradition and fun of this great race.

— Peter Campbell

Sanctuary Cove to host International Boat Show

SANCTUARY Cove will be the venue for the 1989 Queensland International Boat Show from May 11 to 14.

Sanctuary Cove managing director, Mr David Huffer says the decision to host the four-day marine spectacular followed the success of two major boat shows held at the resort during 1988.

"We will now expand the event into an international market-place and develop it as the premier boat show in Australia," Mr Huffer said.

"Feedback from the marine industry confirmed Sanctuary Cove is an ideal location for such an event, combining the perfect marina setting for on-water displays and the full range of resort, sport and leisure facilities."

Organisers expect more than 100 exhibitors will participate in the show which will feature both on and off-water displays.

Last year's Sanctuary Cove Marine Village boat show featured craft and equipment valued at more than $8 million and attracted some 90,000 spectators over the four days.

TBT Anti-fouling now banned in NSW

THE NSW Government has banned, from March 1, the use of any anti-fouling paint containing TBT (tri-butyl-tin) because of its poisonous effect on the oyster and fisheries industries in this State.

Until now most producers of anti-foul paint have relied heavily on this product as an additive to the paint to provide an effective coating against marine growth.

Because of the speed with which the Government proposed to implement legislation outlawing the use of TBT, the Cruising Yacht Club of Australia has announced that its slipway staff can be done under the following conditions:

1. The Club cannot be responsible for new products of anti-fouling as they are new on the market and it has no knowledge of their suitability and as such the club cannot advise members about compatability or the long term performance of the paint.
2. The Club cannot apply materials that do not comply with the new legislation (eg. owner's previous stock).
3. Any complaints regarding performance of the paint must be referred back to the manufacturers of the product.

The new law applies:

- A total ban on the use of TBT and other organotin based anti-fouling paints on boats under 25 metres.
- A ban on the retail sail of any paint containing TBT, or other organotin compounds. Penalties ranging from $20,000 to $40,000 can be incurred by individuals and corporations for illegal sale of TBT based paints.

Boats over 25 metres may be treated but special permits and licenses are required from the State Pollution Control Commission or the NSW Agriculture and Fisheries before commencing work.

Safer boating from $4.8 million National Auto-Seaphone expansion

MARITIME safety in Australia will be improved by the extension to all major commercial and pleasure boating areas of the Australian coastline of the OTC Auto-Seaphone direct dial radio telephone network.

By the end of 1989, an additional 18 Auto-Seaphone stations will be operational, providing almost blanket coverage of the eastern coastline and services to other heavily trafficked parts of the Australian coast.

The Auto-Seaphone service allows users to direct dial into both national and international telephone networks from distances up to 80km out to sea. Calls to vessels equipped with the system can be made from any shore telephone.

Auto-Seaphone also offers a "Dial 999" emergency service function which is monitored 24 hours a day.

The new Auto-Seaphone centres for the various States and Territories, in probable order of installation, are:

Northern Territory: OTC Darwin, operating by June.

Western Australia: OTC Broome and OTC Carnarvon (June), followed by Port Hedland and Dampier late in the year. In addition, a separately funded project to install Auto-Seaphone services for use by fishermen working the Abrolhos Islands is expected to be operating at Geraldton by mid-1989.

Queensland: Cairns, Whitsunday Island (serving the coastline between Bowen and Mackay) and Yeppoon (July); Gladstone and Fraser Island (scheduled to be operational in August). These will complement the Mt Springbrook installation which already covers an area from north of Brisbane to the north coast of NSW. Thursday Island should have Auto-Seaphone in October.

New South Wales: Kempsey and the north coast and Eden on the south coast to complement existing Auto-Seaphone facilities in Sydney, Newcastle, the Hawkesbury River region and Nowra. Expected to be operating by September.

Victoria: Lakes Entrance (September).

Tasmania: Burnie/Devonport and OTC Hobart (October).

South Australia: Port Lincoln (October).

The Very High Frequency (VHF) radio Auto-Seaphone system can also accept calls from private or business telephones anywhere in Australia to boats or ships at sea. Callers dial 0108, give the vessel's name, its Auto-Seaphone number, radio call sign and probable whereabouts.

Auto-Seaphone can cost as little as $249 to install if it is connected to a vessel's existing VHF radio equipment. An annual administrative charge of $25 is levied, while calls cost $1.30 per minute anywhere in Australia, or an off-peak rate of $1 per minute between 11pm and 7am.

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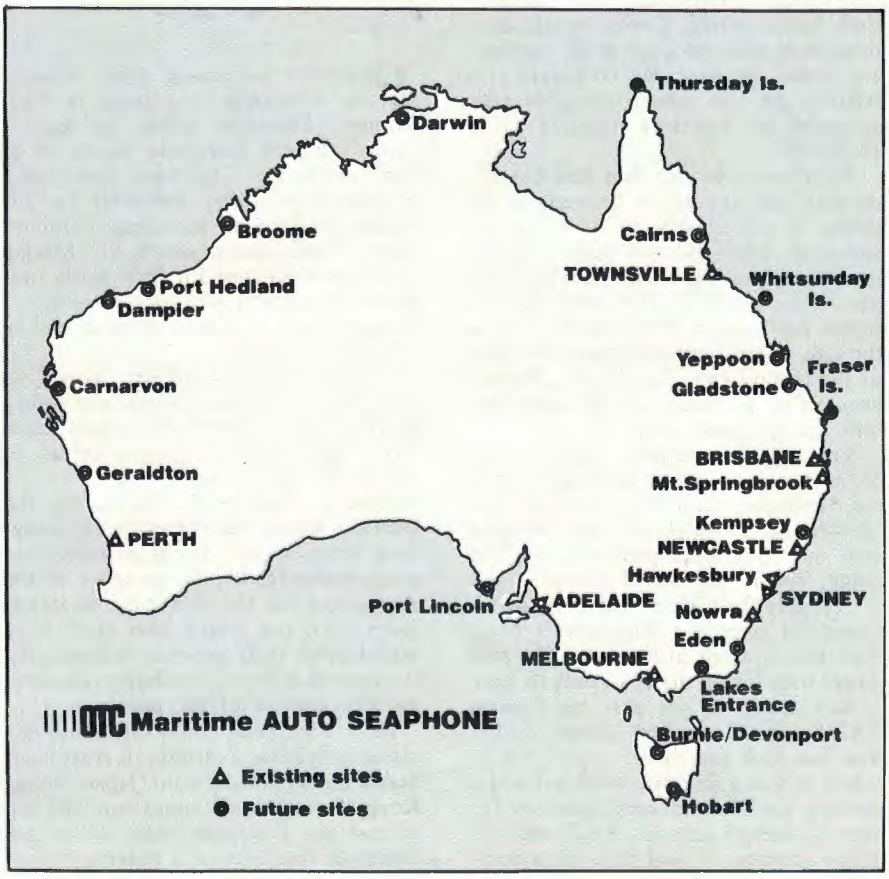
OTC's new Australia-wide Seaphone link.



Not the Customs House Again!

By Rik Dovey

BOUQUETS to everyone involved in the ANZ 12-Metre shoot-out on Sydney Harbour, it was a sailing spectacle that had to be seen to be believed, in more ways than one.

I'm sure on Australia Day the crew on the blue boat could not believe their eyes. I was stuck in a van producing the television coverage so I was spared the crush on the water, but there were some desperate looks in Conner's crew as they tried to tack, only to be faced by a wall of boats. Praise be it wasn't blowing 25 knots — there could have been a disaster.

At least on the subsequent days the Harbour officials got it right and were able to give the yachtsmen clear courses.

Congratulations to Iain and Peter and the crew — they would have been a bit nervous going into that series in front of their home crowd. Defeat would have done their cause no good at all, particulary come the time the corporate arm twisters go into action trying to raise sponsors for the next America's Cup challenge.

But it was obvious they had Conner on toast and just before he went on the bricks it was clearly all over bar the shouting. That did not stop Conner's merry men having a whinge when they got home. Bill Trenkle told the LA Times he thought they were dudded in the sails department and that at the start of the second race they let the Australians off the hook by not running them into the spectator fleet.

Sour grapes, says Iain Murray. Sails, old and new, were equally shared and the Americans made no complaint until afterwards. As for the disputed start he says the Americans protested but the judges ruled "sail on".

Certainly the visitors had grounds for complaint over the Australian's boss, Alan Bond, albeit in absentia. The race where they led up the beat, only to have to tack away to get past his *Captain XXXX*, the disfigured classic *Jessica*, was bad luck for them.

Still it was a fantastic weekend and a blessing for all who seek sponsors for their yachting exploits. ANZ and the minor sponsors would have been thrilled at the coverage and exposure they received. Hopefully it will be the start of an annual event, maybe we will have an Australia Cup in Sydney after all.

According to Iain Murray they are now considering a sail-off between foreign crews to decide who will challenge the Australians for the next ANZ Australia Day Cup.

Top idea that. Get Dennis back, Buddy Melges, Rod Davis, Chris Dickson, Tom Blackaller and Eddie Warden-Owen on the two *Kookaburras* and it would be a yachting feast racing around the shorter courses on the Harbour.

Then, after 1991 or 1992, depending on the judge's decision if she ever makes one, get two of the new America's Cup class yachts because they are going to be sensational to watch.

★ ★ ★

PLENTY happening at the moment — Admiral's Cup trials in Melbourne, *Sovereign* going up against American and European maxis at St Thomas in the Caribbean, the Caltex Sydney-Mooloolaba followed by the Queensland circuit including Hamilton Race Week, down south the Marlay Point extravaganza for little boats (not to be missed if at all possible) — then a breather until next season which will be a beauty.

Yes, it's AWA Southern Cross Cup time again and this series just keeps getting better as the CYCA puts more effort into promoting it overseas to attract foreign entries.

This regatta lives or dies by the overseas teams that come for the party. Last time it was boosted somewhat controversially, by the presence of the Americans for the first time in years. Even with the drama over their brief withdrawal, their presence at least gave the regatta of lot of credibility considering the absence of the poms.

Let's hope both come this time, because with New Zealand, all Australian States and a national team, Japan, Hong Kong, Papua New Guinea and let's say at least one European team, we've got ourselves one hell of a regatta.

One suggestion — to get public interest up and add to the return to sponsors, put on an invitation race on the Harbour. Highlight of the now defunct Burns Philp Maxi series was the Harbour race, a similar Southern Cross Cup race which is accessible to the public would be a great hit.

We also look like having a great Hobart race if the three Australian maxis are here to play. They of course are *Windward Passage II, Sovereign* and Bond's new *Drumbeat*. If all three make it, it will be the first time since the early 80s when *Condor* and *Nirvana* match-raced south that we've had a strong maxi race at the top of the fleet.

Such a clash may even be enough to tempt one of the American or British maxi owners to lash out and make the trip south to play.

Herculean efforts have been made in recent years to get the maxi owners to come Downunder, but it seems it's just too expensive. So it's back to the local owners but it's been a long time between drinks. Let's hope that this year Rod Muir, Alan Bond and Bernard Lewis can be persuaded to take each other on in one of the world's greatest (if not THE greatest) yacht races, in front of a home crowd. It would be a fantastic plus for the sport which, with the strong international Southern Cross fleet, would make it a year to remember.

★ ★ ★

Admiral's Cup Team

CONGRATULATIONS to the owners and crews of *Joint Venture, True Blue* and *Madeline's Daughter* for winning their way into the Australian Champagne Mumm Admiral's Cup team. Commiserations to those aboard *Hitchhiker, Great News* and *Sagacious* who went so close.

Admiral's Cup selection trials are fantastic regattas to watch with great racing, this year's possibly the best, except for the light weather. Several highlights stand out.

- The light weather certainly made the trials inconclusive — with only three races having winds around 20 knots and the rest below 10, it left a question mark over the performances of all yachts and, for that matter, crews. Undoubtedly the call will be renewed to move the Trials from Melbourne but it must be remembered that such a light patch can occur anywhere. Still, Melbourne in 1989 was the year of the tactician — the man who called most of the shifts right each day came out on top. Just look at the number of individual race winners there were.
- Best tactician in the regatta was Chris Dickson, he of the New Ziland accent. Dickson gave everyone a sailing lesson, hitting most of the shifts just right and

being able to get out of trouble on the rare occasion when he did get them wrong. It was nice to watch and at the end when he got into some match racing with *Joint Venture* and *Sagacious* the action was fantastic. His reputation as a superbrat took quite a denting as well, as he was a lot more relaxed than the Fremantle days.

• The rumpus over crews, with suggestions that *Madeline's Daughter* and *True Blue* did the wrong thing by sailing with experts highly unlikely to be able to sell in England, did threaten to overshadow the racing itself. Certainly there are some whose opinions must be considered who claim that the yachts should not have been picked. At least the controversy never got as bad as a few years ago when the selectors went out on a limb and picked Syd Fischer's *Ragamuffin* ahead of Peter Kurts' *Once More Dear Friends* and Lou Abraham's *Challenge* which had finished ahead on points. But it was bad enough this year and ORCA will have to look very closely at this before setting the rules for the next game in 1991.

• *Great News* looked set to go to England after a string of firsts at the start of the regatta which most thought would have been a good thing considering the new handicap bias towards the big boats. But then the wind died and so did *News*.

She very nearly scraped in thanks to a lucky shift in race seven, an extraordinary race

News got off to a bad start in the 6 knot wind by being recalled, but managed to sail back into the lead by the 1st mark, about two minutes ahead of *Madeline's Daughter* with the rest in hot pursuit. Halfway along the reach the wind died and went around 180 degrees, turning it into a beat. *Great News* got the new wind first and rounded the second mark eight minutes ahead. While she sailed away on a close reach the rest floundered, waiting for the wind to fill.

Great News went into a corrected time lead which she held until rounding the last mark of a shortened course. Then disaster struck. As the breeze freshened it swung, turning the beat into a fetch and that was it for *News* as her lead almost halved and she dropped out to stone motherless last.

In a way it was justice — what the shift on the second leg had given her was taken away by another shift on the last. Many felt it would be too great a gamble to take the big boat which was hopeless in light air. That may be so but it's a pity we don't have a 50-footer which goes in all winds.

• In any regatta the banter is pretty full on, in Melbourne at times it was stronger than the winds. Tall poppies always get it in Australia and this was no exception. So there were the "Clankers"

"Where did that wind go?" ...A gloomy afterguard aboard Great News. *(Pic — David Clare).*

— the noise made by all the olympic medals hanging around the necks of the afterguard on *Great News;* the "Darlings" of the media, Messrs Dickson, Dodson, Haines and Gilmour; and the "B" Division — the battlers not in the running for a berth in the team. Mind you, after jumping aboard one of the "B" boats for a couple of races at the end I can assure you the competition to win that division was pretty fierce.

• Best line of the regatta came before the final race, when *Great News* still had a slight chance of pipping *Madeline's Daughter* for the big boat berth. It was a bad morning, Melbourne at its worst — pouring rain and the wind sucking, not blowing. During a two hour postponement while everyone sheltered ashore, one suggestion was that they should work out the time *Great News* had to be beat *Daughter* by and send the two out to race it off while everyone else stayed ashore in the dry bar and watched.

The best line, (I think by Frizzle, the master of one-liners) was that they should give the owners of the two yachts $250,000 each and whoever converted that to $1m first should go to England.

Finally, good sailing and good luck in England to everyone in the team.

★ ★ ★

LET'S hear it for the IMS. The CYCA has gripped the machine measurement handicapping system by the horns and nominated it for the Hobart this year.

Like all handicapping systems it has its backers and knockers, in this case backers in the USA and knockers in Europe. But let's face it, we need IMS to work.

Only three IOR yachts were built for this year's Admiral's Cup trials etc. And IOR is becoming more and more the grand prix class. Left out in the cold are the older IOR boats and the faster production boats like the Farr 37.

One walk along the marina will convince anyone of the need to develop a handicapping system that will handle all types, from Adams to Joubert and the old Farr, Davidson, S and S, Frers, Lexcen and Dubois designs. There are also plenty of very good production boats around.

IMS has plenty going for it, including the VPP it produces. Let's hope it does the job or offshore racing is in trouble.

To some it appears the simple solution is to have size division, say 30ft, 40ft, 50ft and so on. But then how do you divide it up, lightweight, production (medium displacement usually) and heavyweight as happens in JOG?

Again it starts getting pretty complicated.

Some of the sport's best brains, here and OS, have tried to come up with the answer to the handicapping dilemma. No-one has quite succeeded. Let's hope IMS does.

San Diego Scuttled
- but it's back to court

WHAT does a skipper need to win the America's Cup? A good judgement! Hopefully, never again will the outcome of one of the world's greatest sporting events become the subject of ongoing litigation and castigation.

In her judgement disqualifying the US catamaran *Stars & Stripes* from the mis-match America's Cup contest of September, 1988, Judge C. Beauchamp Ciparick re-stated the basic rules of sportsmanship and fair competition on the water which, for the past 137 years have been the very essence of the Cup.

By her judgement, San Diego Yacht Club forfeits the Cup won firstly by Dennis Conner and the 12-metre class yacht, *Stars & Stripes,* from Royal Perth Yacht Club's representative, *Kookaburra III,* skippered by Iain Murray, off Fremantle in February, 1987, and then successfully defended by Conner in the catamaran, *Stars & Stripes,* against Mercury Bay Boating Club's "K-class" maxi yacht, *New Zealand,* off San Diego last September.

However, San Diego Yacht Club has indicated an appeal to a higher US court, despite strong requests from potential challengers, including Australia's Alan Bond, to accept Judge Ciparick's decision. The next America's Cup defence would have been a minimum of two years from the handing down of Judge Ciparick's decision. If an appeal is lodged, it will be two years from that decision.

By Peter Campbell

Nevertheless, such an appeal, to the Supreme Court of the United States, is not automatically heard. In fact, that court generally hears only 3-4 per cent of the cases put to it. Some US lawyers say the New York Supreme Court is the final arbiter because the original Deed of Gift was lodged there 101 years ago when the trophy was presented to the New York Yacht Club "for friendly competition" between nations.

This third court decision by Judge Ciparick followed her two previous findings that:

- New Zealand's Mercury Bay Boating Club's challenge with a yacht measuring 90-feet on the load waterline was a valid challenge.
- San Diego Yacht Club was not in civil contempt for threatening to defend the America's Cup in a catamaran.

The America's Cup Match then went ahead, despite worldwide claims that it was a mis-match, with the catamaran totally outsailing the monohull in the two-out-of-three race series. In the wake of this match Mercury Bay and San Diego both called on the New York Supreme Court to determine the lawful holder of the Cup — the first time in its history that the outcome of a Cup Match has been decided by lawsuit.

In her 14-page ruling, Judge Ciparick said forfeiture of the Cup was a "drastic remedy" but there was no alternative. Dealing with the eligibility of a multihull vessel to contest the Cup, she pointed out that the nature of the basic specifications of the vessels set out in the Deed of Gift supported the conclusion that a race limited to monohulled vessels was contemplated by the donor of the Cup, George Schuyler.

In her finding, the Judge Ciparick said: "The emphasis of the America's Cup is on competition and sportsmanship. The intention of the donor was to foster racing between yachts or vessels on somewhat competitive terms. The Deed of Gift, when read as a whole, expresses the intent of the donor that the defender of the America's Cup operating within the limitations of the chal-

Steve Kelley in the San Diego Union, Sept. 9, 1988.

How they reacted...

Michael Fay, chairman New Zealand syndicate . . . "The America's Cup is the winner. The Deed of Gift works."

Pat Goddard, Commodore, San Diego Yacht Club . . . "The issue facing us now is to do what is best for the America's Cup."

Iain Murray, designer for Alan Bond's 1991 America's Cup Challenge syndicate and 1987 skipper of *Kookaburra III* . . . "Australia's chances of winning back the America's Cup have been strengthened logistically by staging the next Cup in Auckland."

John Bertrand, skipper of *Australia II* . . . "What they (San Diego) did cheapened what we did and the America's Cup in general . . . the judgement will put the America's Cup back on an even keel."

Toby Morcom, Commodore, Mercury Bay Boating Club . . . "The world at large, including the great majority of America, agrees with the court's decision. . . San Diego Yacht Club should now abide by the ruling of the referee and, in doing so, earn the respect of everyone."

Alan Bond, America's Cup Challenge 1991 syndicate chairman . . . "San Diego should close the book on 1988 and start preparing to challenge in 1991."

Malin Burnham, president of San Diego's America's Cup Organising Committee . . . "We solidly, wholeheartedly, believe an appeal is in the best interest of the America's Cup."

Dennis Conner, the first man to lose the America's Cup twice ... "I am not blameless, but it certainly wasn't Dennis Conner's sole decision to race a catamaran."

lenge provisions select a vessel that is competitive with that of the challenger ... that although design variations are permitted, the vessels should be somewhat evenly matched.

"The Court finds that the intent of the donor, as expressed in the Deed of Gift, was to exclude a defence of the America's Cup in a multihulled vessel by a defender faced with a monohull challenge.

"While the history of the America's Cup indicated that variations of design were not precluded, there appears to be virtually no instance where the challenger was not met with a comparable or smaller vessel in terms of load waterline length. To permit a race between a monohull and a multihull would be to countenance a mismatch comparable to a race between monohulls with one having a substantial advantage in load waterline."

In her finding, Judge Ciparick ruled: " ... it is clear that catamarans may not defend in America's Cup competition against a monohull. Accordingly, San Diego shall be disqualified in the September, 1988 competition.

"The court is mindful that forfeiture is a drastic remedy in the instance of a competition such as the America's Cup, with its large economic significance and prestige.

"San Diego was well aware of the risk it ran when it chose to follow the unprecedented course of defending in a catamaran. Barely paying lip service to the signfiicance of the competition, its clear goal was to retain the Cup at all costs so that it could host a competition on its own terms. San Diego thus violated the spirit of the Deed."

Judge Ciparick added that it was in the best interest of the America's Cup competition that "this episode be overcome and that the global yachting community be afforded a fair opportunity to participate in this prestigious competition.

"It is hoped that further defender-trustees will place the interests of the Cup and its spirit in a paramount position," the judge added, urging Mercury Bay to fulfil its obligations as the new trustee in the spirit of friendly competition that the donor of the Cup intended more than 100 years ago.

Apart from the reaction of San Diego Yacht Club, there has been a worldwide acceptance of Judge Ciparick's courageous finding, with the challengers urging San Diego to accept the judgement and make a challenge for the Cup on the water in New Zealand in 1991. As has already been agreed by the 25 challengers from 10 nations, and from other potential challengers within the United States, the next Cup Match will be sailed in the new America's Cup Class yachts.

Iain Murray Analyses...

The New

THE general philosophy behind the new America's Cup Class is that the Cup should be raced for in the fastest monohull yachts in the world and the new design will see to that.

But it also goes much further than just speed. The basis of the rule is to create a match racing boat that will be hard to sail, have design parameters that make all yachts competitive, keep the costs reasonable, incorporate the best technology — possibly which will also go onto benefit other sailing classes, and finally have uses after the Cup.

The yachts will certainly be exciting, not just to sail, but also to watch, particularly on the new Cup course.

In all wind strengths the boats will be faster than the best maxis downwind. Upwind in light airs they will be a little faster, in heavy airs they may be a little slower.

In 15 knots of wind they will be doing 7.2-7.4 VMG upwind, downwind about 12 VMG and on a reach 15-16 knots. They will never sail dead downwind but there will be some very hairy moments with the spinnaker pole squared back at the bottom mark.

They will be very difficult to sail, with just 16 crew handling a big rigger than a masthead maxi. Everyone will be important, not just helmsmen and tacticians. With the new course the crews will have a really tough job — after setting a spinnaker they will have to change kites twice down the reaching legs. And those kites will be 4,500 square feet, bigger than those flown on the masthead maxi.

Keeping the crew numbers down not only makes their work more important, it also increases the importance of stability in the design because the small number do not make up such a vast proportion of the righting moment of the yacht, such as in IOR.

In general, the rule pushes the designers to create yachts that are very similar to each other, in fact you would have to work very hard at producing a Cup classer that is NOT competitive.

The formula is a trade off between length versus sail area versus displacement. Displacement has a maximum and minimum (16,000 kg — 25,000 kg). Length and sail area have their own sets of parameters that have "bucket" ends which you cannot go outside.

The rule pushes designers towards a mean length that gives more sail area and better displacement. There is a clear optimum point for length, sail area and displacement. Designers can move away from that point, but they will not get as much sail area or the weight they want for a given length.

In theory, up to a metre and a half of waterline length either way, the penalties in sail area and displacement are not great, but go beyond those limits and they're tough — like cutting your legs or arms off.

So designers will be playing around within those parameters to try and get the best formula for certain sailing conditions.

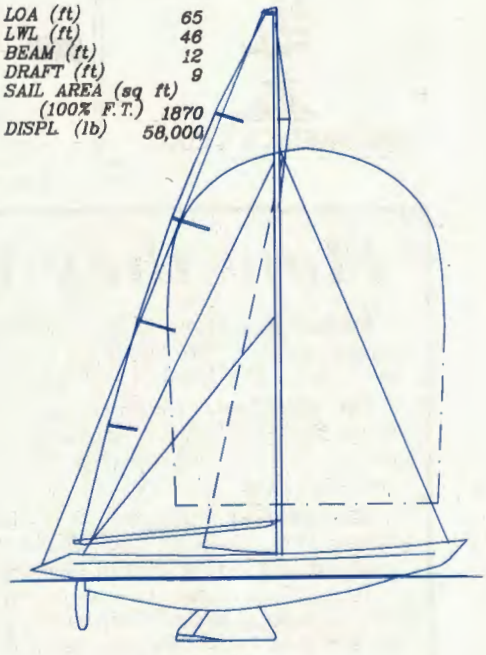
Still they will be very close. There will not be boats in the new class that are as different as *Azzurra* and *Stars and Stripes* were in Fremantle and because they are sailing faster, a minute in San Diego or Auckland will be a big margin.

Similarly with construction the rule will produce yachts that are very similar.

The restrictions ensure a strong monocoque structure which, like *Windward Passage II*, does not need a lot of internal frames. The internal structure will only be necessary to take the keel and chainplates and support the mast and essentially the people who master that best will make a weight saving in that area. But it will not be possible in the skin because there are skin and core limitations.

CHARACTERISTICS

LOA (ft)	*65*
LWL (ft)	*46*
BEAM (ft)	*12*
DRAFT (ft)	*9*
SAIL AREA (sq ft) (100% F.T.)	*1870*
DISPL. (lb)	*58,000*



*STARS & STRIPES 87 **

Carbon fibre will be used everywhere, but Kevlar will be used too, not only to add structural strength but because carbon on its own would come in under the minimum restrictions on skin thickness and weight.

Under the rule you can have two movable appendages and undoubtedly people will play around with this. The options are two rudders and fixed keel, rudder and trim tab on the back of the keel or maybe even a rudder with a fixed keel and flapping wing. The general feeling is that with the draft allowed the winged keel is not necessary.

That will help achieve the aim of a reasonably priced boat too, doing away with the winged keel and its expensive castings. Cost is important and the Cup yachts should cost a little less than a fullblown maxi, in the water.

I'd expect each to cost a little less than $3m to launch. In the first place they are smaller, the principle was to go as small as possible yet still being faster. So the hull is not as big, nor does it have the contortions of IOR boats, an interior fitout or engine to be installed, so it is also easier to build.

The sails will probably be a little less because there are not as many of them and the mainsails and headsails do have full length battens which will make them last longer.

The only extra cost is the rig which will cost about $100,000 thanks to being able to use carbon fibre. This will be one of the big technology breakthroughs in the yachts which will make a very big difference in performance. The Cup rig will weigh in at close to half that of a maxi — 840 kg against 1,500 or thereabouts which will make an incredible difference on the water.

It is important to develop the technology in these boats, so that it can flow onto other classes and the use of carbon fibre will be one of several areas in the new class which should force new technological boundaries.

The other major costs then are research and development and campaigning. I guess the sky's the limit, certainly with the former. How high do you want to go?

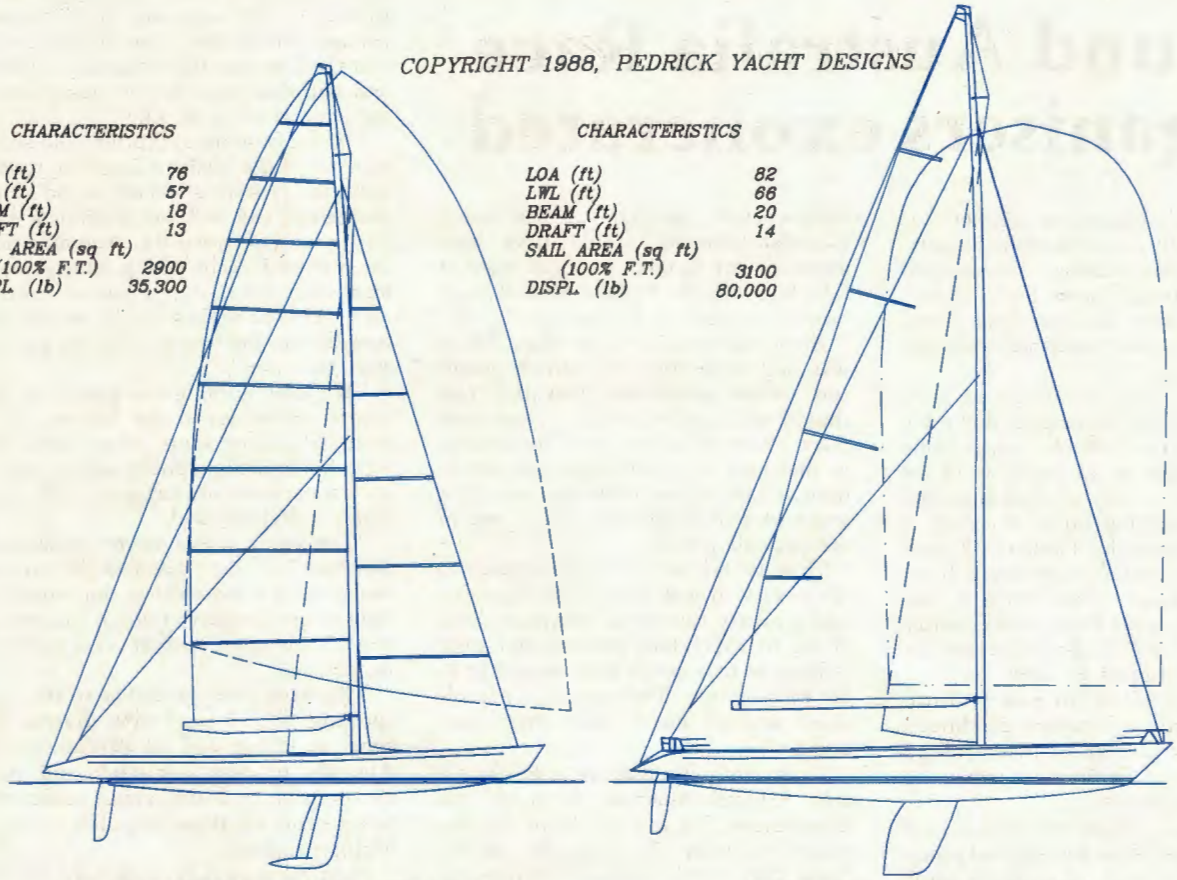
At least the guy paying most of the bills is looked after. The rule allows the owner to race aboard and why not — he should be allowed to enjoy what he has paid others to create.

Finally, it was important to produce a yacht which has life after the Cup and the new class provides the basis for that. They could be fitted with a motor, coachhouse and interior and converted to cruising or IMS racing and have a good class. Maybe they'll take over from the maxis, we'll have to wait and see. But they will be beautiful yachts and they will be able to go onto other things.

SPECIFICATIONS

LOA 73ft
LWL 59ft
Beam 18ft
Draft 13ft
Ballast 60% (approx)
Sail area 3,100 sq ft
Mast height (above water) 110ft

America's Cup Class



CHARACTERISTICS

LOA (ft)	76
LWL (ft)	57
BEAM (ft)	18
DRAFT (ft)	13
SAIL AREA (sq ft) (100% F.T.)	2900
DISPL. (lb)	35,300

AMERICA'S CUP CLASS

CHARACTERISTICS

LOA (ft)	82
LWL (ft)	66
BEAM (ft)	20
DRAFT (ft)	14
SAIL AREA (sq ft) (100% F.T.)	3100
DISPL. (lb)	80,000

1989 PEDRICK MAXI

Storm clouds ahead as NBL Technovator, *under reefef sail, heads out of Sydney Harbour on the fateful first night at sea of the Bicentennial Around Australia Race.*

Round Australia Race organisers exonerated

A Coronial Inquiry in Sydney has completely exonerated the organisers of the short-handed Bicentennial Around Australia Yacht Race of any fault arising from the death of Geoff Courtis, one of the yachtsmen competing in the race.

Mr Derek Hand, the Assistant State Coroner of NSW, in handing down his findings into the death of Courtis commented: "There is no justification for any criticism of the organisation and subsequent carrying on of the race".

Mr Hand found that Courtis, 39, died when he was washed overboard from the yacht *Boundary Rider* when it collided with Mermaid Reef (near Crowdy Head on the NSW mid-north coast) on the night of August 8, 1988.

The coroner had before him evidence on the prevailing weather conditions from both the Bureau of Meteorology and competitors in the race when he made his statements.

He also said: "Here we have a race which was properly organised and properly run and the decision of an adult person with 14 years active yachting experience to compete . . . He (Geoff Courtis) certainly would have been aware of any hazards . . . and went in fully knowing the Around Australia race would certainly have dangers.

Mr Hand went on to say that: "A lot was said at the time by certain people and certain authorities that this race should not have been run . . . but there were plenty of experienced yachtsmen in that race who calculated the conditions and risks from what they were told and took part in the race well aware of the prevailing risks.

"It is not fair to criticise the organisers of the race. It was a properly organised and properly run event. We then come down to individual persons and their estimation of whether they should be in the race or not. They were all experienced and all knew what they were doing.

"It certainly is a tragedy as this was a race Around Australia to mark the Bicentenary. To the family of the deceased we offer the sympathy of the court." Mr Hand concluded his remarks by saying: "There is no justification for any criticism of the organisation and subsequent carrying on of the race."

For the past six months the race organisers, the Short-handed Sailing Association of Australia, McIntyre Marine Services and Don McIntyre, who was then Chairman of the SSAA, have been attempting through legal channels to obtain a statement embodying some form of an apology from Mr Ross Nixon, the then Assistant Commissioner of Police.

On the night of August 8, 1988 the first day of the historic 7,500 nautical mile Around Australia Race a 50 knot+ gale swept through the fleet causing one yacht, *Escapade* to capsize and *Boundary Rider* to hit Mermaid Reef.

The weather forecast at the start of the race was an initial strong wind warning of W to SW winds of 25-35 knots at first easing to 20-30 knots with moderate to rough seas.

A Water Police launch, *Sea Eagle,* from Port Stephens, sank whilst going to the assistance of *Escapade* in huge seas. Mr Hand commended the Police and any other authorities taking part in the attempted rescue.

Don McIntyre, who attended the Coronial Enquiry, said he was pleased but not surprised with the outcome, adding: "We were unfairly criticised at the time by Mr Ross Nixon who said that I and the other organisers were foolhardy and suggested that criminal charges may be laid. I am pleased to say that the Coroner did not agree with him and said that there was no justification for any criticism at all.

"At the time the authorities and some sections of the media did not appreciate that this event involved the world's elite yachtsmen and women combined with five years of intensive planning and international yacht racing management experience. Our safety standards for this race were the highest in the world and August was the best time of the year to start the race.

"We have nothing but praise for the rescue authorities in the field but it is incredibly frustrating when someone who holds a high public office makes such statements and suggests a full scale enquiry will be held.

"The enquiry has never eventuated therefore, we have not had the opportunity until today to clear our name. In light of the Coroner's finding we are still considering some further legal action," he said.

"We have a responsibility to the race sponsors, Goodman Fielder Wattie, the sport of sailing and all adventurers in Australia to clear our name and stop irresponsible and unfounded statements being made by those in public office," McIntyre added.

Planning is already underway for the event to be held again in 1992.

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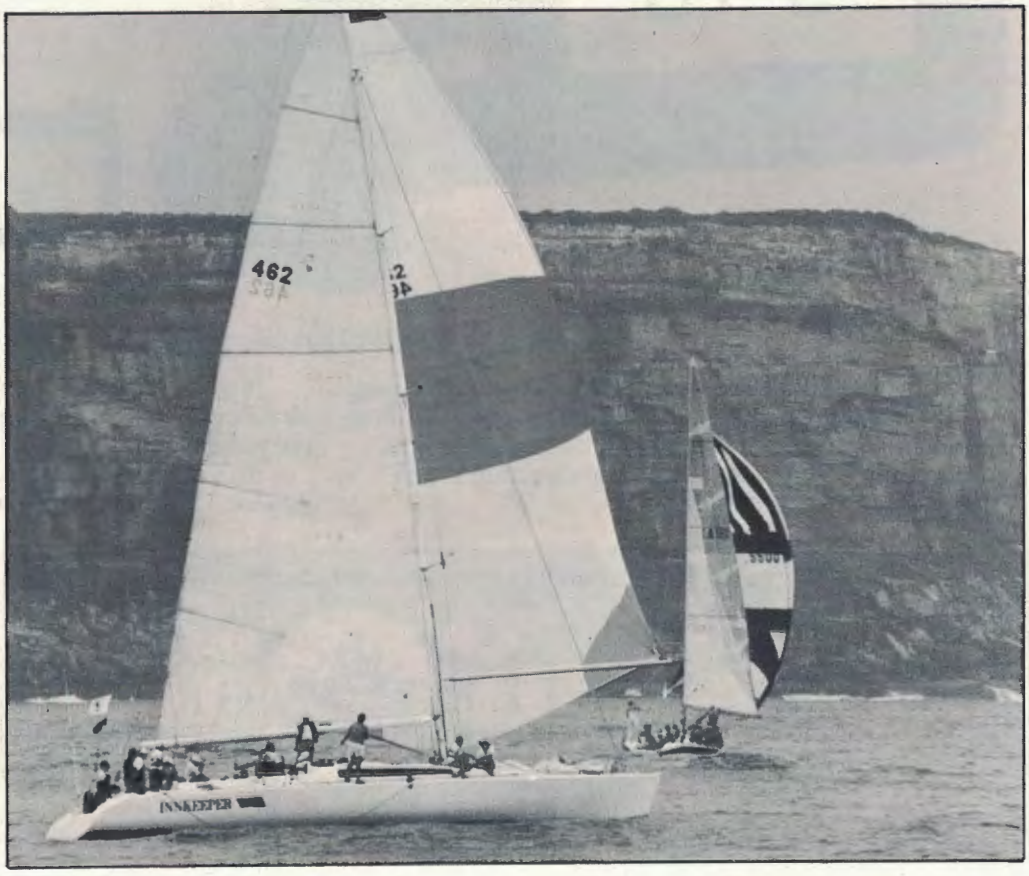
Pemberton III Wins Northern Treble

By Peter Campbell



Above right: Ben Lexcen designed 30-footer, The Pink Boat, *lost its mast on the first night at sea. (Pic — David Clare).*

Innkeeper, *the first 66--footer from Queensland, made a slow start but finally finished second across the finish line to* WindwardPassage II. *(Pic — David Clare)*

MAX Tunbridge, one of yachting's more colourful characters, had two massive black eyes, a broken nose, his head swathed in a blood-stained bandage — and a grin from ear to ear — as he leaned against the bar in the Mooloolaba Yacht Club with the traditional "bundy and coke" in his hand.

"I guess I'll have one helluva headache, but what a race, what a boat," the veteran sailor from Sydney's Royal Prince Alfred Yacht Club said, his voice croaking through a split lip. "I've sailed in more races to Mooloolaba than I care to remember, but this was a beauty. A terrible night at sea, but what a result!"

And what a result, it was for Tunbridge and race skipper Richard Hudson in their Half Tonner, *Pemberton III*. The Kell Steinman-designed lightweight sailed through a 50-knot southerly gale on the final night of the race to take overall victory from the 64-boat fleet, beating two other Half Tonners, *Beach Inspector*, sailed by Peter Nicholson and Lee Killingworth, and *Public Nuisance* (Richard Perini), both Dubois 30s.

It was the third successive major north-bound victory by *Pemberton III* since Hudson and Tunbridge bought the yacht a week before the 1988 Sydney-Gold Coast Race. They won that, then took out the Pittwater-Coffs Harbour Race at Christmas, and completed the hat-trick by winning the Mooloolaba race.

Pemberton III is the former *Ruzulu* which finished second to its sistership *Nuzulu* in the 1986 Mooloolaba race. *Beach Inspector* won the race in 1981 with both Hudson and Tunbridge aboard and in 1984 Hudson skippered *Public Nuisance* to victory, again with Tunbridge aboard. In fact, since 1981, Half Tonners have been the overall winners of the 480 nautical mile rock-hopping race north six times out of eight.

The Half Tonners were always well placed as the fleet sailed north from Sydney in light to moderate breezes which, apart from some overnight thunderstorm squalls, remained moderate until they reached the Queensland border. The race had started on the Tuesday (reverting to the original week-day start) and Rod Muir's maxi, *Windward Passage II*, got the gun just before dark on the Thursday evening, sailing the 480 nautical miles in 2 days 19 hours 16 minutes 30 seconds — about nine hours outside *Helsal's* long-standing race record.

The Queensland 66-footer, *Innkeeper*, crossed the line second, about an hour and a half astern of the *Passage*, but was subsequently disqualified following a protest. Third to finish was *Hammer of Queensland*.

During the night the fleet was hit by winds rising from 30-35 knots to wild gusts of 40-50 knots and pouring rain. Aboard *Pemberton III*, duelling almost boat-for-boat with *Beach Inspector*, the crew tried at first to carry a spinnaker, but after several wild broaches and chinese gybes, reduced sail to a main and poled-out headsail.

It was during one of these wild gybes that Max Tunbridge got flattened by the boom. Already one crew short, and with Tunbridge knocked out, the others

Another race casualty was Bob ("Sir Robbo") Robertson, pictured with League star Wally Lewis on Media Sailing Day. "Robbo" broke a shoulder and ribs when caught by a mainsheet in a wild gybe during the race to Mooloolaba. (Pic — David Clare)

Beach Inspector *reaches under spinnaker past North Head on the way north — the veteran Half-Tonner finished second to* Pemberton III. *(Pic — David Clare).*

kept the boat going under a double-reefed main and No. 2 headsail to cross the line at 6.30am on the Friday — only 12 hours behind the maxis — and beating *Beach Inspector* by seven minutes.

New South Wales won the inaugural Caltex State of Origin Yachting Shield, beating Queensland by 200 points to 161. The Queensland women had already put their State ahead in their match against the Sydney girls on the harbour, but on the ocean the NSW team proved superior. NSW's points came from 27 earned in the women's match and 173 at sea. Queensland gained 37 in the women's match, 124 at sea.

In the ocean race, each State had five teams of two yachts, one in the IOR division, one in the PHRS division. Topscoring team for NSW was *Pemberton III* from the Royal Prince Alfred Yacht Club and the Lexcen-designed 50-footer *Apocalypse*, skippered by Peter Wood and Barclay Wade from Middle Harbour Yacht Club.

Topscoring team for Queensland was *Witchcraft II* (Bruce Staples) and *Walk on the Wildside* (Ken Lipke).

Division results:

IOR OVERALL: 1, *Pemberton III* (Richard Hudson-Max Tunbridge, RPAYC) corrected time 1-22-04-32; 2, *Beach Inspector* (Peter Nicholson-Lee Killingworth, RPAYC) 1-22-55-02; 3, *Public Nuisance* (Richard Perini, MHYC) 1-23-52-17.

IOR DIVISION 1: 1, *Mercedes IV* (Peter Stronach); 2, *Continental* (Mike Champion); 3, *Computer Solutions* (Ewhen Hreszczuk).

IOR DIVISION 2: 1, *Beyond Thunderdome* (Warren Johns); 2, *Witchcraft II* (Bruce Staples); 3, *Venture One* (Max Ryan).

IOR DIVISION 3: 1, *Invader* (Eric John Stano Jr); 2, *Extension* (Tony Dunne); 3, *Impeccable* (John Walker).

IOR DIVISION 4: 1, *Pemberton II;* 2, *Beach Inspector;* 3, *Public Nuisance.*

PHRS LIGHTWEIGHT DIVISION: 1, *Alpha-Powa* (Neil Statis/Vanessa Dudley); 2, *The First Eleven* (Bruce Mead); 3, *Scandal* (Trevor Butler).

PHRS DISPLACEMENT DIVISION: 1, *Mal Pratt Homes* (Tony Woodcock); 2, *Nero* (Bob Taylor); 3, *Challenge II* (Jim Daley).

CRUISING DIVISION: 1, *Aotea-Rushcutter* (John Barton).

LINE HONOURS: *Windward Passage II* (Rod Muir) — 2 days 19 hours 16 minutes 30 seconds.

Beyond Thunderdome *(Warren Johns), winner last year had to settle for Division First this year. (Pic — David Clare).*

Sponsor off to sea: Mike Brown is not only marketing director for Sydney-Mooloolaba race sponsors, Caltex, but also competed in the race himself this year, skippering his East Coast 31, Russell Dean II. *(Pic — David Clare).*

Gymnastic exercise for bowman aboard the 1988 race winner Beyond Thunderdome *as he adjusts the spinnaker pole topping lift soon after the start of the 1988 race from Sydney Harbour. (Pic — David Clare).*

IOR winner of the 1989 Caltex Sydney-Mooloolaba Race was tho half-tonner Pemberton III, *pictured by David Clare as they prepare for the start on a murky morning on Sydney Harbour.*

Kathleen Gillett Comes Home

By Bruce Stannard

IN 1947, not long after he sailed her in the very first Sydney-Hobart yacht race, the marine artist, Jack Earl took his lovely double-ended ketch, *Kathleen Gillett*, out of Sydney Harbour, around the world and into Australian maritime history.

Six years of war delayed what should have been the first Australian circumnavigation. That honor fell instead to the scooner, *Sirius* and yet, nearly half a century later, it is the voyage of the *Kathleen Gillett* that remains most vividly etched in the public mind.

Earl's beautifully illustrated logs were posted home from dozens of exotic ports and published as a kind of romantic running serial. In the grim austerity of the post-war years, *Kathleen Gillett's* voyage came to be seen as the ultimate escapist adventure for landlubbers and bluewater men alike. After two years of world wandering, she was given a tumultuous welcome.

In June this year, with hundreds of thousands of additional sea miles under her keel, *Kathleen* came home for the last time.

She has been acquired by the Norwegian Government and is to be completely restored by Halvorsens, the wooden boat specialists in Sydney and presented as a Bicentennial gift to the Australian people through the National Maritime Museum. Her arrival coincides with Earl's 80th birthday.

Kathleen Gillett's significance for the Norwegians lies in her origins. She was designed about the turn of the century by Colin Archer, the Norwegian pioneer of naval architecture whose genius inspired the lines of some of the world's loveliest, most seaworthy vessels, including the famous North Sea rescue vessels and pilot boats.

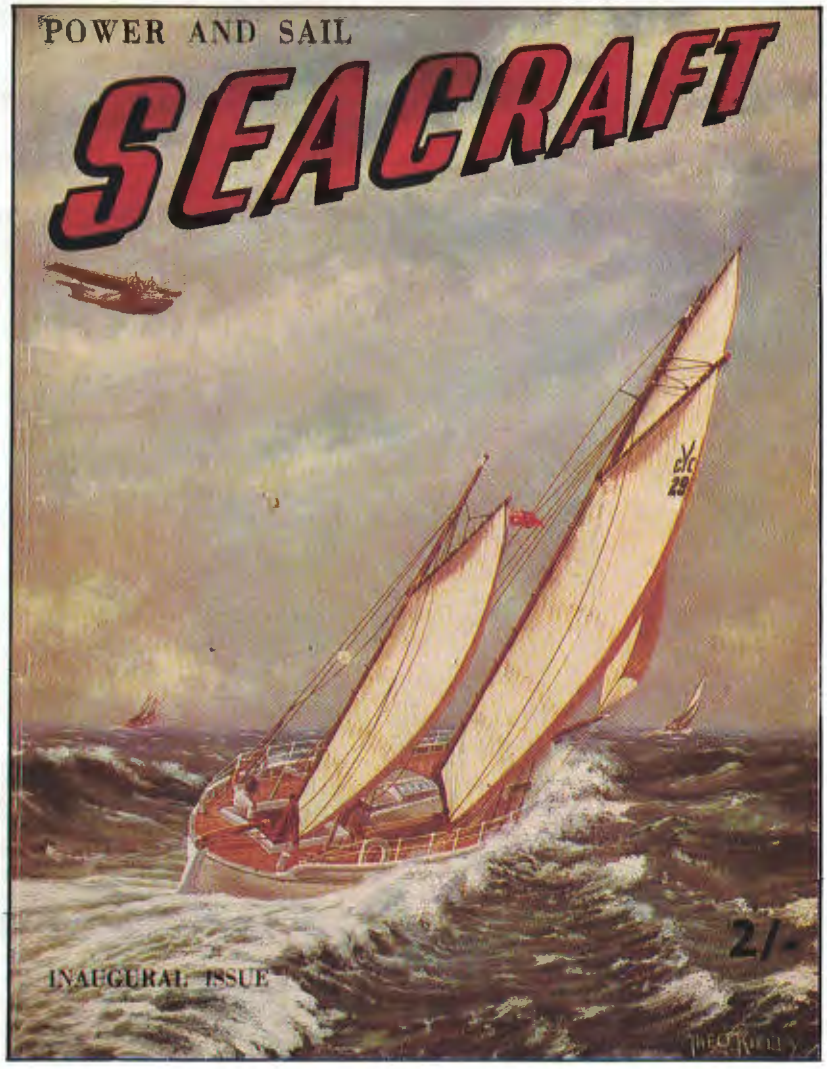
In 1850, Archer, who was then 23, was sent out to join his brothers who were searching, unsuccessfully, for gold on the NSW diggings. Eventually they went north to help establish the beef cattle industry in north Queensland.

The Archer River is named for the family that remains a significant landholder around Rockhampton.

In Queensland, young Archer is believed to have designed his first boat, a small schooner used to haul supplies up the coast to the "Eidsvold", the gracious homestead he also designed and which has become something of a centre for Norwegian pilgrimage in Australia.

Archer returned to Norway on the death of his father and it was there that he completed his most famous designs including *Fram*, the topsail schooner that successfully carried the polar explorer Raoul Amundsen through the Arctic ice.

The Norwegians found *Kathleen Gillett* in Guam. After Earl sold her in the 1950s she sailed throughout the Pacific as a plantation boat, a trocus shell carrier crewed by Torres Strait islanders, and as a crocodile shooter's home in New Guinea before ending up in American hands in Nicronesia.



Finding the boat was one thing, getting her home to Sydney, quite another. The restoration might have remained little more than a pipe dream but for the extraordinary generosity of the Zim Line, the privately-owned Israeli shipping company which offered to bring the yacht home freight-free.

Port authorities in Guam, Hong Kong and Port Botany also waived their stevedoring charges so that all the money allocated by the Oslo government could go directly into the restoration which is likely to take six months.

Kathleen Gillett is to be re-rigged and restored to the sailing elegance she enjoyed in the 1930s before she is formally handed over for permanent display at the National Maritime Museum in Sydney's Darling Harbour at the end of the year.

Aussies Enter BOC Challenge

TWO Australians are among entries already received for The BOC Challenge 1990/91 solo around the world yacht race with the deadline for entries for the marathon 27,000 nautical mile race still one year away.

Organisers of the event expect as many as 45 yachts to start in the race on September 15, 1990 in Newport, Rhode Island, USA.

The Australians are race veteran Ian Kiernan, 48, of Kirribilli, NSW and Don McIntyre, 34, of Fairlight NSW. As well, a number of other Australians are expected to enter the event, including David Adams, 35, of Fairlight; Malcolm Jack, 35, of Dee Why; Alby Burgin, 73, of Lake Macquarie; and John Biddlecombe, 44, of Hunters Hill.

Also included among the entries are two women — Jane Webber of Toronto, Canada and Noelle Corbett of Swansea, Wales. Both women have entered Class II for yachts of 12.2m-15m (40'-50').

The winning yachts from the 1986/87 BOC Challenge, the Class I overall winner *Credit Agricole II* and *Airco Distributor*, the winner of Class II, have been bought by two of the early entrants to sail in the 1990 event. Josh Hall of the United Kingdom has purchased *Airco Distributor* and Roel Engels of Holland has bought *Credit Agricole II*.

Former Race Chairman, Robin Knox-Johnston, CBE, RD, the first man to sail solo non-stop around the globe, has also entered Class I of the race.

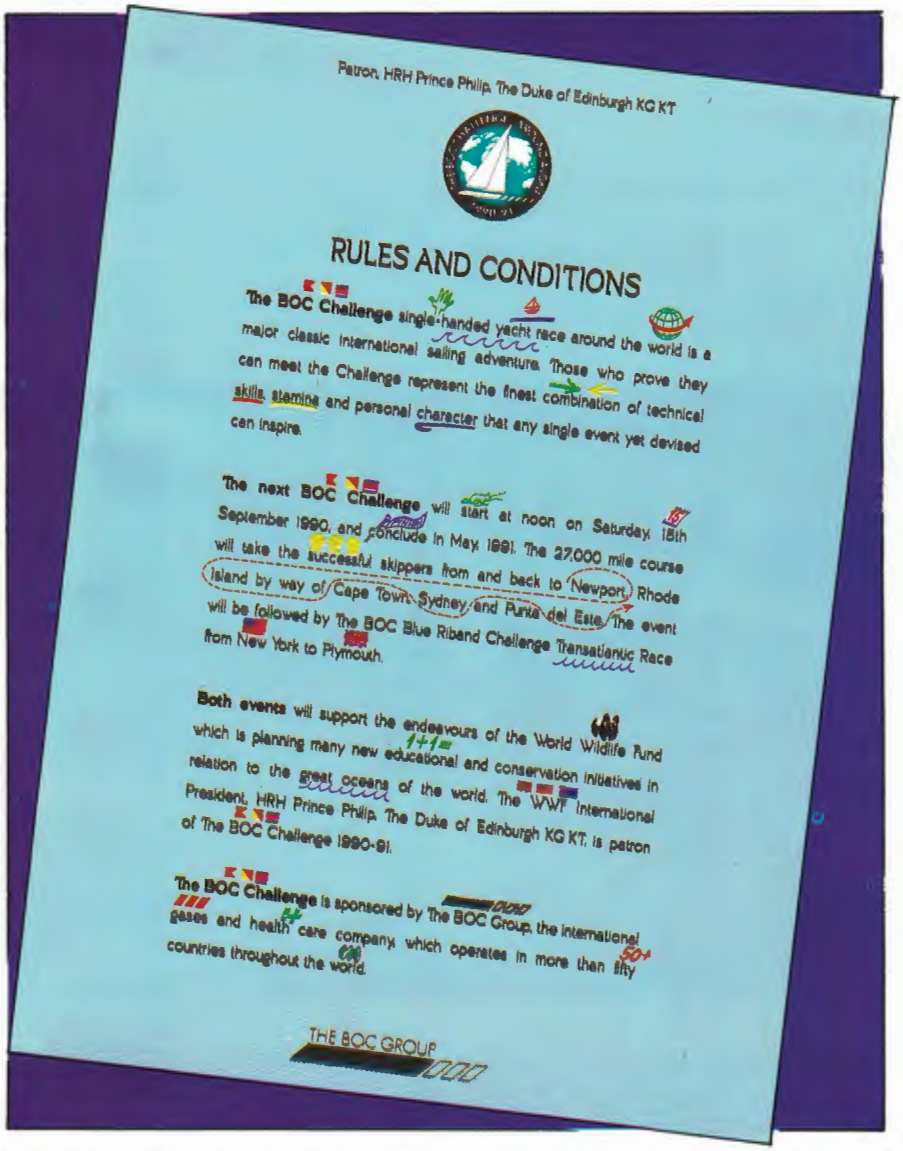
The Australian entrants, Kiernan and McIntyre, are both currently attempting to secure professional sponsorship to enable them to compete effectively in the event.

Ian Kiernan was the only Australian to successfully complete the 1986/87 BOC Challenge. Sailing the 18.2m (60') Ben Lexcen designed *Triple M Spirit of Sydney*, Kiernan finished in sixth place overall from an original starting fleet of 25 yachts. He now holds the Australian record for the fastest solo circumnavigation of 156 days.

For the 1990/91 event, Kiernan intends to build a new hi-tech 18.2m (60') "flying machine" designed by Laurie Davidson.

He is seeking major corporate sponsorship of over $1 million to mount a challenge equal to anything the French (the nation which dominates solo racing) can offer.

"I learned an enormous amount during the last race and know that with the right boat and a bit of Aussie fight I would stand a good chance of taking out the event," said Kiernan, who recently came to public notice when he initiated the highly successful Clean Up the Harbour campaign in Sydney.



His 15.2m (50') Adams/Radford designed yacht is nearing completion in a boat shed in Queensland. Called *Sponsor Wanted*, the yacht is constructed of aluminium and incorporates many new concepts and ideas developed by thoroughly researching innovations in short-handed sailing in Europe.

"I came to Sydney from Adelaide in 1982 to carry out repairs on the BOC boats during the first race and since then all I've ever wanted to do is compete in this race," said McIntyre.

With 30,000 ocean sailing miles under his belt, McIntyre is seeking sponsorship of $250,000 to complete his project. To date, he has self-financed the construction of his boat costing in excess of $400,000. "The sponsorship money will enable us to be more competitive, particularly against the French who invariably have unlimited budgets," he said.

McIntyre believes he has a good chance to take out Class II of the classic race.

On Heard Island, Antarctica, the Australian Antarctic Division lost one of their IC-M12 portable two-way radios.

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Little America's Cup

CRASH!

Pic 1: The USA cat reaching across a port gust. The lee hull comes clear when... Pic 2: the next gust savages the rig and the boat lifts the windward hull too quick for the crew to balance the boat or to depower the rig... Pic 4: the rig destroys itself as the boat is righted and it's the end of a challenge. (Pics by our Auckland reporter Robert Love.)

THE International C Class catamaran group have been on the 'edge' of new development, probably more than any other yachting class over the past thirty years. In 1960 the class became established when it was chosen (or created) to race for the International Catamaran Challenge Trophy, a silver futuristic sail upon sail trophy presented by the Sea Cliff YC in New York for competition in match racing between yacht clubs using the C Class catamaran configuration.

Popularly known as the 'Little America's Cup' because the racing is a match between two challenging clubs, with the first boat to win four races taking the Cup, it was first won on Long Island Sound when *Hellcat I*, the British challenger defeated the USA's *Wildcat* four-nil.

The next challenge was sailed on the Thames Estuary in *Hellcat II* with John Fisk as helmsman and the designer, Rod Macalpine-Downie as crew, and again a win for Britain against the USA challenger *Beverley*.

Australia challenged in 1963 with *Quest* and lost four-nil, but came back in 1965 to nearly take the Cup in a four-three contest against *Emma Hamilton*. Finally, in 1970, *Quest III* won the Cup from the Danes who had previously beaten the Brits the year prior. Australia defended twice against the Americans, losing it in 1976 but winning it back with the Lindsay Cunningham designed *Victoria 150*, a very sophisticated full wing sailed C Class.

The last challenge was to have been sailed off the holding club, the McCrae YC on Melbourne's lower Port Phillip Bay. It was gusting strongly and the American challenger, sporting a totally new design in a high-tech asymetrical solid wing sail which could be flipped end for end during tacks and gybes, took off from the beach first.

Before the Australian defender had left the beach, the USA cat was caught in a gust and had flipped; the powerful forces acting on her sail had occurred too quickly for the crew to take evasive action by spilling the power in the wing sail. The boat, caught in the gust, lifted its windward hull, flipped and the expensive wing-sail crashed into the water. Built too lightly to stand the sort of drag and pull in the water, the wing-sail destroyed itself. The challenge was over without a race even starting.

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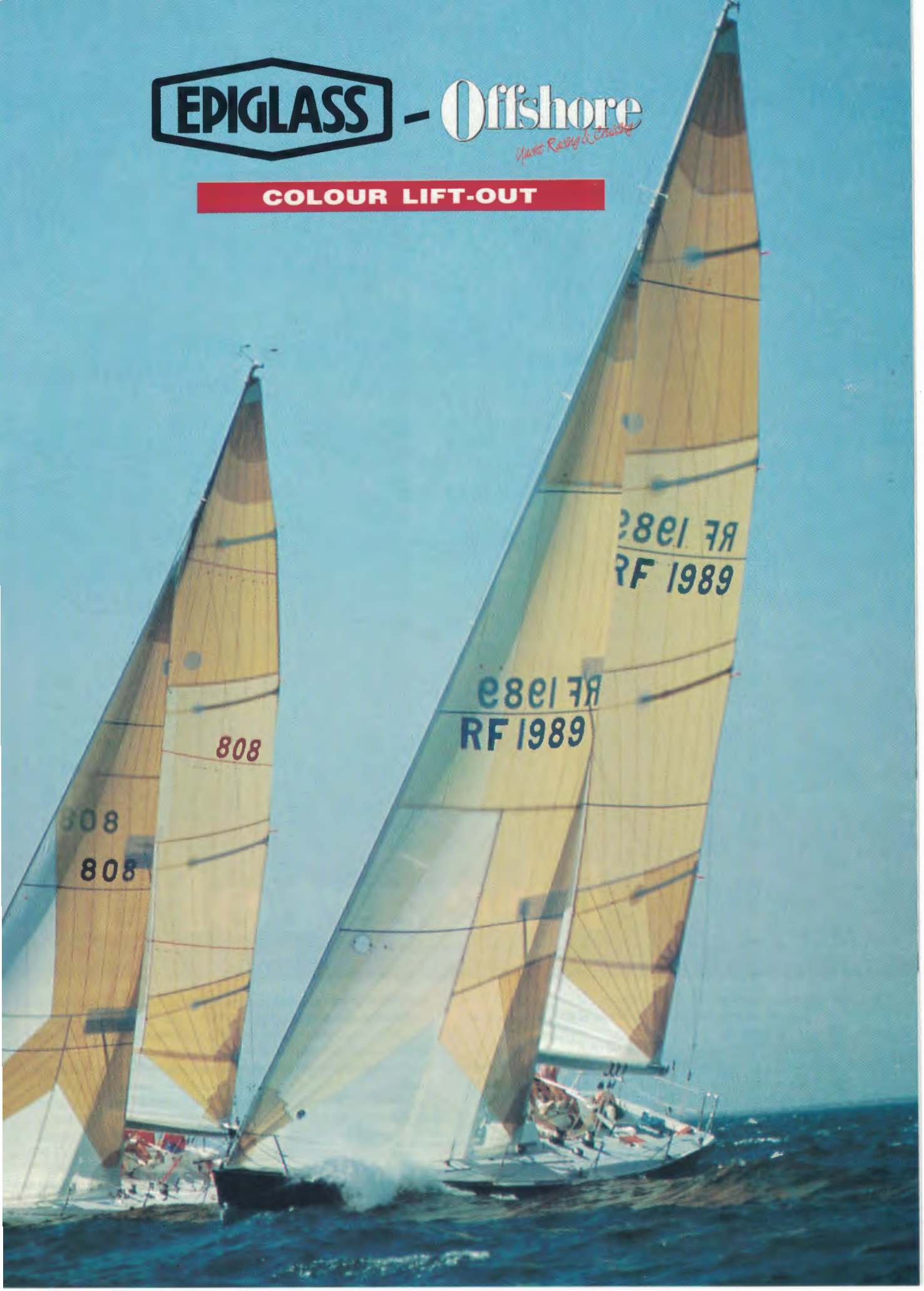

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BOUND FOR COWES

One Tonners cross tacks as they near windward mark in the Admiral's Cup Trials race on Melbourne's Port Phillip. Nearest is Prime Factor. *(Pic — Peter Campbell).*

By Peter Campbell

TWO new One Tonners, *True Blue* and *Joint Venture*, and a revamped veteran of the 1987 team, *Madeline's Daughter* — that's the strong team Australia will send overseas for our major international yachting challenge of 1989, the Admiral's Cup, starting at Cowes on July 27. All three are Bruce Farr designs, the first time the US-based New Zealander has designed all three yachts in an Australian team.

The end result of the 10-race selection trials, sailed in generally light winds on Melbourne's Port Phillip, came as a surprise to many yachtsmen who had expected the Farr 50 *Great News* to lead the team. Certainly, the performance of the WA-owned *True Blue* in topping the pointscore was unexpected, while the efforts of other One Tonners were disappointing.

Despite some controversy at the end of the trials arising from crew changes, the Ocean Racing Club of Australia stayed with the three topscoring yachts making up the Admiral's Cup rating limit of 95.0 feet IOR.

True Blue — Lawson Klopper's Farr 40 from the Royal Freshwater Bay Yacht Club in Perth, which topped the series with 58 points;

Joint Venture — Ron Elliott's Farr 40 from the Sandringham Yacht Club in Melbourne, which finished second overall with 56.5 points;

Madeline's Daughter — Peter Kurts' Farr 43 from the Cruising Yacht Club of

The fleet gets away in the Admiral's Cup Trial Race on Port Phillip, with **True Blue** *in the pin position. (Pic — Peter Campbell)*

The three top-scoring yachts were: Lawson Klopper's **True Blue** *(top), Ron Elliott's* **Joint Venture** *(Centre) and Peter Kurts'* **Madeline's Daughter** *(below). (Pics — David Clare).*

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Australia, which finished fifth overall with 46.5 points.

Madeline's Daughter was the top-scoring higher rating yacht to make up the 95.0 feet IOR rating limit for the Admiral's Cup.

The team will assemble in the UK in early June to prepare for the Admiral's Cup, starting July 27 and extended to six races this year. Part of the preparation will include contesting the Royal Lymington International IOR Regatta, a new event on The Solent and in Christchurch Bay in mid-July aimed as a lead-in series for yachts in the Admiral's Cup teams.

However, Ron Elliott's *Joint Venture* is already on its way to Europe, bound for Naples to contest the world One Ton Cup off the coast of Italy in late May. The other two yachts will be shipped direct to the UK.

Announcement of the team for Cowes — Australia's 13th challenge for what is without doubt the most prestigious offshore yachting regatta in the world — was delayed until the board of the Ocean Racing Club of Australia approved changes to the crews of all three top-scoring yachts.

Notice of race for the trials required owners to sail with the same crew they intended to take to Cowes if selected, with any changes having to be justified to, and approved by, the board of ORCA. In fact, each of the three top-scoring yachts made significant changes which were accepted by ORCA.

Peter Gilmour's place as helmsman of *Madeline's Daughter* has been taken by Gary Gietz, who steered *Wild Oats* so well in the trials, with America's Cup skipper Iain Murray as his tactician.

Perhaps the most significant non-change was that of Chris Dickson who elected to sail with *True Blue* after initially returning to New Zealand for discussions with the New Zealand Admiral's Cup management after not being included in the Kiwi team to defend the Cup. Dickson sailed in the trials as tactician aboard the WA contender, and there is no doubt that his skills, enthusiasm and drive played a key factor in the performance of the Farr 40.

Thus Australia heads for Cowes once more, with a team that will be highly competitive but faces tough opposition from the defenders, New Zealand, and from Britain and Germany. What Australia has to its advantage is excellent organisation and a planned campaign to bring the yachts and their crews to their peak for the Cup regatta.

One of the most significant advantages will be in having, for the first time, a full-time team coach in Mike Fletcher, the AYF Olympic coach and a former Admiral's Cup sailor himself. His input at the trials in Melbourne underlined what he can do to improve yachts and crews in the preparation at Cowes.

Admiral's Cup Team Manager David Hunt.

The keynote to success at Cowes this year will be in crew work and there is no question that the calibre of Australian crews ranks with the best in the world. As we saw in Melbourne, there is virtually nothing in boatspeed between the current batch of One Tonners around the world. It is the ability of their tacticians, their helmsmen and their sail trimmers which makes the difference.

The One Tonners *True Blue* and *Joint Venture* will face the toughest role in the inshore races, with clear wind starts followed by the most perceptive tactical sailing essential to success. One mistake in the rush of 40-footers at the start on the first windward leg will make a yacht history.

Madeline's Daughter's task won't be much easier. Although a 43-footer, she too must break away from the pack of 40-footers and sail to her optimum to achieve the time break on the minimum raters.

Although we have an excellent team for the 1989 Champagne Mumm Admiral's Cup, this will be the toughest to win in a decade. It will require total dedication from the owners and their crews and from the back-up team so essential to success in the high-tech sport on international offshore yachting.

Australia has twice won the Admiral's Cup, in 1967 and 1979, but that was in the days of seat-of-the-pants sailing and rugged skills of seamanship. While those attributes are still vital, grand prix offshore racing today requires the most skilled technical input in every aspect of sailing to win.

Despite a decline world wide in the IOR racing fleet, the 11-boat fleet which assembled in Melbourne for the 1989 selection trials underlined the ongoing strength of IOR in this country. Of the 11 yachts, three were launched within the previous six months, one in late 1987, and three were members of the third placed Australian team in 1987, each having undergone extensive revamping for the 1989 trials.

The trials brought together an outstanding line-up of sailing talent — Australia's most experienced ocean racing yachtsmen being joined by America's Cup sailors, Olympians and one-design keelboat and dinghy champions. As coach Mike Fletcher said, it was the greatest collection of sailing talent he had seen in one place in Australia since the America's Cup at Fremantle.

Peter Gilmour, fresh from his victory over Dennis Conner in the 12-Metre Challenge on Sydney Harbour, was steering *Madeline's Daughter,* with three other members of the *Kookaburra II* crew also aboard. Col Beashel, former *Australia III* and *IV* skipper, and two-times Olympian was at the helm of *Joint Venture,* with Grant Simmer as his tactician.

Phil Thompson, ex *Steak 'n Kidney* helmsman, steered *Hitchhiker III,* while former *Challenge 12* skipper and world E22 champion John Savage was sharing the helm and tactics aboard *Sagacious V.* Former America's Cup, Admiral's Cup and 18-footer world champion Rob Brown steered *Ultimate Challenge* with Olympian Gary Sheard calling the shots.

Another ex-*Australia II* veteran, Hugh Treharne, was aboard *Wild Oats,* while David Forbes, Olympic gold medallist and former America's Cup and Admiral's Cup helmsman, steered his own boat, *Great News.* Then there was Bob

Fraser and Graeme "Frizzle" Freeman aboad the luckless *Southern Cross*.

True Blue had former 12-metre helmsman and world champion Gordon Lucas on the helm, with New Zealand's 1987 America's Cup challenge skipper and current world match-racing champion Chris Dickson as tactician. Also aboard was another Kiwi, Simon Daubney, sail trimmer for world One Ton Cup champion, *Propaganda*, while his NZ skipper, Rik Dodson, joined *Hitchhiker III* as tactician.

With the boats so evenly matched and with such calibre of crews, it was champagne racing on the bay throughout the 10-race series, with seconds often separating the One Tonners in spectacular mark roundings.

Unfortunately, the weather generally was light, with the only fresher breezes being in the opening Series A, with its three races counting only as one race on the overall pointscore. For Series B, the wind never got above 15 knots and mostly was below 10 knots, with some major windshifts in almost every race.

What really lacked in this selection series was a good hard blow of 25-30 knots to really test boats, gear and crews. The story of *Great News*, regarded as one of the fastest 50-footers in the world, was told in her placings as the series progressed and the winds became lighter. Or was it that the One Tonners improved as the series continued?

Whatever the reason, the Farr 50 and highest rating boat in the fleet, won all three races in Series A, then followed with Series B placings of 1-3-11-11-10-6-10, slumping from first in the pointscore to finish seventh overall. Going to weather in anything over 15 knots she was unbeatable, and even in 10 knots she was still able to outpace the One-Tonners to windward. Off-the-wind, the 50-footer was frustratingly slow in anything under 10 knots.

Great News had her share of good and bad luck during the series, her toughest break being in race seven when, as she crossed the finish line after a frustratingly slow final windward beat, the One Tonners picked up a 25-knot squall that sent them on a broad reach to the line. From first place on corrected time at the last mark, *Great News* slumped to last.

However, on the other hand, after being recalled at the start she hooked into a left-hand shift that lifted her from last in the fleet to first at the weather mark the first time. Skipper Forbes later sought redress from the race committee on the grounds that while *Great News* had been called a premature starter other yachts were over the line and had not been recalled.

In a rather remarkable decision, based on the evidence of one member of the Jury, *Great News* won her protest and received a redress of two minutes on her elapsed time. It made no difference to the end result on corrected time, but then the two other yachts also recalled, *Hitchhiker III* and *Prime Factor*, lodged similar protests. However, in their case, the Jury rejected the claims on the grounds that they had been lodged too late.

Had they been heard and upheld, other yachts which had started correctly, were preparing to also lodge protests on the grounds that they had been subsequently prejudiced by starting correctly. Interesting potential case history!

Colin Beashel — helming Joint Venture.

Almost every yacht in the fleet had good reason to complain about the light and shifty wind pattern, but in the end it was the consistently well-placed yachts which came out on top — yachts whose helmsmen in almost every race got good, clear-air starts, whose tacticians picked the windshifts best, and whose sail trimmers adjusted the quickest and best to pressure changes.

Most significant was the use of runner-trim, and it was the backstay and genoa trimmers who anticipated and who reacted to wind strength changes — and there were many — to compliment the steering of their helmsmen, who saw their boat gain that vital edge on the five windward legs of the 29 nautical mile inshore races. In the variable winds of The Solent and Christchurch Bay off the Isle of Wight, their skills will be vital to the Australian team.

The trials were once again conducted with efficiency by the Sandringham Yacht Club, with the team under Race Committee chairman Graham Watts always setting fair lines and good courses. The Race Committee had a trying time because of the windshifts, but the only criticism raised against them was over recalls. The starting lines were rather-long and the small leeward-end boat used initially was too low in the water to gain an accurate view of premature starters.

Although ORCA did not gain a major sponsor for the trials, and at the time of going to press, had not finalised negotiations for a major sponsor for the Admiral's Cup team, it has received on-going support from airlines Qantas and Ansett as well as equipment support from organisations such as sailing shoe makers, Timberland, Ian Dale Ford and Rod Muir, who provided his tender, *The Passage*, as the coach boat for the trials. Sandringham Yacht Club also gained sponsorship on a club basis from Budget Marine Finance, Alcoa Cash-a-Can, and from the civil engineering group, Consulere.

The trials were conducted under the rules the Royal Ocean Racing Club had laid down for the 1989 Admiral's Cup, including the Time Multification Factor (TMF) which is used to derive corrected times (the formula is said to favour the higher boats slightly more this year than in 1987) and the new Offshore Racing Council rules of crew limitations — both numbers and weight.

The result was to see, for the first time in offshore yacht racing, the weighing-in of crews on special Toledo scales set up at Sandringham to ensure that they did not exceed the 84kg average set for each crew. The toughest hit were the One Tonners and the lower rating Farr 43, *Wild Oats*.

As from July 1, crews on One Tonners are limited to nine and with the 84kg per man limit this meant that the big men either fasted or were out. *Wild Oats'* rating came under 34.19-feet and her crew was limited to 11 whereas *Madeline's Daughter*, on 34.28, was able to have 12 crew members and thus spread the weight further.

Owners Bob Oatley *(Wild Oats)*, Gary Appleby *(Sagacious V)* and Peter Briggs *(Hitchhiker III)* all were forced to diet (or starve) and spend sessions in a sauna to meet the limit. *Wild Oats'* crew were on a diet of lettuce, celery and carrots for a day before the start of the regatta. The lack of food caused several crew to feel faint during the first race.

Two more weigh-ins were conducted by ORCA officials and before the final one Peter Briggs had to spend an hour in a sauna to enable him to sail aboard his boat. Needless to say, everyone involved, including ORCA officials, were far from impressed with the 84kg limit imposed by the RORC for the Admiral's Cup — the ORC limit is actually 87kg. ORCA chairman David Hundt intends submitting a critical report to the RORC.

The other controversial new crew rule introduced — and policed by officials — at the Australian trials, concerned the new ORC special regulation regarding legs over the side: no crew members shall have their legs over the side between sunset and sunrise.

Officials made spot (and spotlight) checks on crews during the overnight race but found no infringements. But next day there were lots of complaints by crews of muscle cramps caused by sitting in an awkward position on the weather rail instead of the more familiar, comfortable and, according to most ocean racing yachtsmen, safer position of sitting facing outwards, with one's legs over the gunwale.

Yacht inspections were also carried out after each race, with officials going aboard to check for any breaches of ballast positioning, double-measured sails, etc. Again no breaches were found.

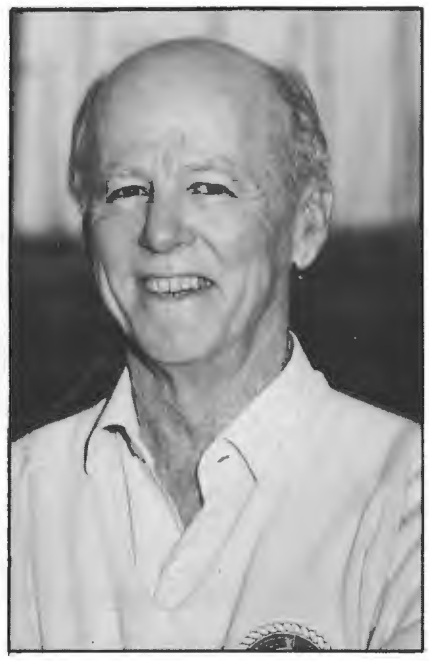
As in recent years, the trials were split into two series — Series A being three races, with the best two to count to one total points race, Series B being seven races of full points with each yacht able to discard its two worst pointscoring races, including the combined Series A. Between the two series the fleet was given five days for any rating, sail/rig or crew changes.

The regatta opened with a setback for two of the fancied yachts, Gary Appleby's *Sagacious V*, the topscoring Australian boat of the 1987 team, and Bill Gilbert's newly-launched *Southern Cross*, which had finished second in the 1988 Sydney-Hobart. Both damaged their masts — *Southern Cross* in an accident while being trucked from Sydney to Melbourne, *Sagacious V* in a local bay race the week before the trials.

Bill Gilbert ordered a new Sparcraft mast from Britain by air, but instead of arriving in Sydney during the week before Series B it ended up in New York. It was not until the last race of Series B that *Southern Cross* showed her real ability — far too late. *Sagacious V* looked off the pace for most of the series, also suffering from incorrect tactical decisions during the race.

Great News, owned jointly by David Forbes of Sydney and John Calvert-Jones of Melbourne, swept the fleet aside in the opening race, sailed in 34 degree temperature and a variable 10-16 knot northerly. The big boat, which had led Australia to victory in the 1988 Kenwood Cup, won by 45 seconds from Ron Elliott's state-of-the-art One Tonner, *Joint Venture*, launched at the end of January. Peter Kurts' 1987 team yacht, *Madeline's Daughter*, took third place, just ahead of Lawson Klopper's Farr 40, *True Blue*, launched in Perth last October.

Next day saw great racing in a 20 knot



Peter Kurts — heading for Cowes once Again.

southerly, with *Great News* revelling in the conditions to beat *Madeline's Daughter* and *Joint Venture*. The 50-footer made it a hat-trick on the Sunday, sailing to victory in a building sea-easterly seabreeze, this time winning from *Sagacious V* and *Joint Venture*.

"The Coach" — Mike Fletcher.

Three great wins by *Great News*, but sadly, as it turned out, they were worth just one win. Nevertheless, hopes were high when racing resumed for Series B, with *Great News* winning her fourth successive win on another hot Melbourne day. This time the wind eased away from 20 knots to only 6 knots, but the big boat still held her time. *Madeline's Daughter* finished second, *True Blue* was third, winning a boat-for-boat duel with *Joint Venture*.

It was a clash not just of boats but of the helmsman-tactician teams, all ex America's Cup sailors with Gordon Lucas and Chris Dickson aboard *True Blue*, Colin Beashel and Grant Summer on *Joint Venture*.

Race five saw the end of *Great News'* winning streak. In the light winds which were to continue for the rest of the week, the 50-footer slipped down the corrected time ladder as the race progressed to last at the end of the sixth leg of the 29 nautical mile course. It was also a day of upsets for other boats, with top contenders *Madeline's Daughter, Joint Venture* and *Sagacious V* recalled at the gun.

In a freshening seabreeze, Peter Briggs' *Hitchhiker III*, the former British Admiral's Cupper, *Jamarella*, surfed downwind on the last spinnaker run and went on to win from the veteran Farr 43, *Wild Oats*. *Great News* fought back to regain third place.

Race six was the one long overnight race of the regatta, 100 miles around Port Phillip and in the light winds, it was a One Ton benefit. *Joint Venture*, the winner, crossed the line only 36 minutes astern of *Great News*, which placed last. Second place went to *True Blue*, third to *Sagacious V*.

Great News had by now been displaced from the pointscore lead by *Joint Venture, Madeline's Daughter* and *True Blue*.

Joint Venture, probably the most expensive One Tonner ever built in Australia, virtually clinched her place in the team for Cowes in race six, with the programme back to the 29-milers. The same race virtually ended *Great News'* chances of making the team.

The big boat looked an almost certain winner after recovering brilliantly from a recall at the start as she rounded the last mark with a three minute corrected time lead over *Madeline's Daughter*. But as she crossed the finish line, a thunderstorm-generated squall swept across the bay, giving the One Tonners a surfing two-sail reach to the finish and success. *Joint Venture* won again, with the two WA boats, *Hitchhiker III* and *True Blue* next. *Great News* placed last.

Next day was a non-event, with the resail deferred until the Sunday, but for Race Nine, Port Phillip turned on yet another fickle day of windshifts and the

first win after a consistent series for *True Blue* with *Madeline's Daughter* sailing a brilliant face to finish second. *Great News* had a sixth after a mediocre start while *Hitchhiker III* lost the top section of her rig when a spreader broke.

With two races to sail, Race 10 and the resail Race 8, *Joint Venture* headed the pointscore with 39.5 points, followed by *True Blue* 39, *Madeline's Daughter* 37.5, *Great News* 37, *Hitchhiker III* 35 and *Sagacious V* 32.

Race 10 saw the first major upset of the regatta, with the veteran *Wild Oats* finally rewarding the abstinence and fasting (not quite 40 days and nights — although it probably seemed like it) of Bob Oatley and his crew. The Farr 43, built in 1986, sailed away with a delayed race to win from *Sagacious V* and *True Blue*, with *Madeline's Daughter* ninth, *Great News* 10th.

Going into the re-sail of Race 8 and the last race of the regatta, *True Blue* and *Joint Venture* looked almost certain of a place in the team for Cowes, with the third berth going to either *Madeline's Daughter* or *Great News*, with the 43-footer having a 3.5 point advantage. *Great News* had to finish in the top four places on corrected time and still beat *Madeline's Daughter* by four places to finish ahead.

It was not to be, although owner/skipper David Forbes got his boat away to a fine start. Peter Gilmour at the helm of *Madeline's Daughter*, dogged the transom of the big boat and she was never able to break away. As the wind eased during the afternoon, the One Tonners again took control, with another upset result seeing *Southern Cross* score her first win, in fact, first

Hitchhiker III *helmsman Phil Thompson explains to Macquarie Network's Patrick Bollan how the yacht's mast broke. (Pic — David Clare).*

placing of the series, in beating *True Blue* and *Joint Venture*. *Madeline's Daughter* finished ninth, *Great News* 10th.

Final placings for the 1989 Admiral's Cup trials were:
1, *True Blue* (Lawson Klopper, WA) 5-3-5-2-3-2-1-3 = 58.0;
2, *Joint Venture* (Ron Elliott, Vic) 2-4-7-1-1-3-4-5 = 56.5;
3, *Hitchhiker III* (Peter Briggs, WA) 8-6-1-4-2-4-Ret-7 = 48.5;
4, *Sagacious V* (Gary Appleby, NSW) 4-8-6-3-4-7-9-2 = 47.0;
5, *Madeline's Daughter* (Peter Kurts, NSW) 2-2-4-7-8-8-2-9 = 46.5;
6, *Southern Cross* (Bill Gilbert, NSW) 10-10-9-5-5-1-7-4 = 41.5;
7, *Great News* (David Forbes and John Calvert-Jones, NSW) 1-1-3-11-11-10-6-10 = 41;
8, *Wild Oats* (Bob Oatley, NSW) 5-9-2-9-10-9-8-1 = 37.5;
9, *Prime Factor* (Bob Brady, NSW) 7-5-10-8-7-6-3-8 = 37.0;
9, *Ultimate Challenge* (Lou Abrahams, Vic) 9-7-8-6-6-5-5-6 = 37.0;
11, *Westernport Express* (Peter Grant, Vic) 11-11-11-10-9-11-10-11 = 10.5 points.

Race one results are the net best two races of Series A. Final points are after discard of worst two races, including Series A net total.

THE TEAM

Australia's 1989 Admiral's Cup Team for Cowes:

TRUE BLUE, Lawson Klopper's Farr 40, Royal Freshwater Bay Yacht Club, Perth. Sail number: RF 1989. Rating: 30.45' IOR.

Principal helmsman: Gordon Lucas (skipper, *Australia III*, 1986-87 America's Cup defender trials).

Tactician: Chris Dickson (skipper, New Zealand, *KZ7*, 1987 America's Cup challenge; 1988 world match-racing champion).

Race history: Launched October, 1988, winning 220nm Fremantle-Geraldton and 240nm Cape Naturaliste races in WA before being transported across the Nullabor for AC trials. Top-scoring yacht in trials.

Close encounter at the first windward mark shows True Blue *leading* Wild Oats *and* Ultimate Callenge. *(Pic — David Clare).*

Crew: Gordon Lucas (helmsman), Chris Dickson (tactician), Lawson Klopper, Andrew Hunn, Keith Marshall, Barry Johnson, John Wallwork, John Sharpe, Peter Milner, Dean McAulley, Ron Packer.

JOINT VENTURE, Ron Elliott's Farr 40, Sandringham Yacht Club, Melbourne. Sail number: Sm 50. Rating: 30.56' IOR.

Principal helmsman: Colin Beashel (skipper *Australia IV,* 1987 America's Cup defender trials; Olympic Star class helmsman, 1984, 1988).

Tactician: Grant Simmer (navigator *Australia II,* 1983 America's Cup, navigator *Australia III* and *IV,* 1986–87 America's Cup defender trials).

Race history: Launched January, 1989, with club race wins before finishing second overall in AC trials.

Crew: Colin Beashel (helmsman), Ross Lloyd, Ron Elliott, Peter Elliott, Steven Kemp, Robert Wilmot, David Giles. Two to be named.

MADELINE'S DAUGHTER, Peter Kurts' Farr 43, Cruising Yacht Club of Australia, Sydney. Sail number: KA 3000. Rating: 34.28' IOR.

Scales on scales — Toledo scales used to weigh in Admiral's Cup crews showed this excellent schnapper landed by the media boat during a lull in the racing (Pic — David Clare).

Principal helmsman: Gary Gietz.

Tactician: Iain Murray.

Race history: Launched December, 1986 and member of Australian teams, 1987 Admiral's Cup (3rd) and Southern Cross Cup (1st). Fifth on pointscore AC trials.

Crew: Gary Gietz (helmsman), Iain Murray (tactician), Peter Kurts, Peter Shipway, Rod Johnson, Phil Wulff, Michael Coxon, Alistair Pratt, Tim Ede, Robert Scrivenor, Steve McCallum.

Team manager: David Hundt, chairman, Ocean Racing Club of Australia.

Team coach: Mike Fletcher, AYF Olympic team coach.

Team meteorologist: Dr Roger Badham, 1986–87 America's Cup and 1988 Olympic meteorologist.

Dickson Misses NZ Cup Team.

AUCKLAND, (NZPA) — World champion yachtsman Chris Dickson's attempt to be part of the New Zealand team to defend the Admiral's Cup has failed. An American has been appointed in his place.

Announcing the key team positions today, Royal New Zealand Yacht Squadron commodore Don Brooke said experience had shown "there is no place for individuals" in an Admiral's Cup team.

The American is John Bertrand, who was tactician on the team yacht *Propaganda* when she won the world One Ton Cup in San Francisco last year. Bertrand, who has three world dinghy class world championships and an Olympic silver medal, was tactician on the New York Club challenger *America II* in the America's Cup series off Fremantle.

Dickson, after being evaluated on the two prime team yachts, went to Australia, sailing as tactician aboard *True Blue* in the trials to select Australia's three-boat team to contest the Admiral's Cup.

New Zealand's million-dollar effort to defend the cup, which it won in 1987, has not required trials because four New Zealand yachtsmen are interested in the highly specialised International Offshore Rule craft which compete for this so-called world ocean racing championship.

Only two suitable yachts were immediately available, *Propaganda,* which was top-scoring yacht in the 1987 cup-winning teams, and her Bruce-Farr-designed sister ship *Fair Share.*

Propaganda is owned by Tim Bailey, David Richwhite and Michael Fay.

Fair Share is owned by the Wellington Syndicate of Peter O'Neil, David Ross, John Benton and Del Hogg.

A third boat for the New Zealand team, a 12.4-metre sloop designed by Farr, is being specially built. Cost of the new boat is being underwritten by the Fay Richwhite merchant bank. However, the Royal New Zealand Yacht Squadron is seeking a sponsor to meet the cost of the boat and other costs associated with the cup defence.

The team positions named are:

Propaganda: Skipper: Rick Dodson, twice world OK dinghy champion, and One Ton Cup winning skipper. Tactician: John Bertrand. Navigator: John Newton, who has crewed in three Admiral's Cup regattas.

Fair Share: Skipper: Tom Dodson, brother of Rick, and twice Olympic representative in the Soling class. Tactician: David Barnes, three times world 470 dinghy champion, world championship of *KZ7* and helmsman aboard *KZ1* in the last America's Cup challenge. Navigator: Graeme Handley, who will be taking part in his second Admiral's Cup regatta.

New boat: Skipper: Peter Lester, former world OK dinghy champion, skipper of *Propaganda* in the last Admiral's Cup, and tactician aboard *KZ1* in the San Diego America's Cup campaign. Tactician: Rod Davis, Californian-born and now New Zealand resident, Soling class gold medallist at the 1984 Olympics, and with seven world championships to his name. Navigator: Tom Schnackenberg, brother-in-law of Davis, who has been involved in scores of international sailing campaigns, including three America's Cups.

Russell Coutts, Finn class gold medallist at the 1984 Olympics and skipper of *Fair Share* in the San Francisco One Ton Cup series, has been named as afterguard reserve. He is moving to Britain about the middle of the year for career reasons and his prime selection is a matter of availability.

Announcing the nine key crew positions, Brooke said: "This is the most powerful offshore campaign the squadron has ever mounted. It would be hard to imagine anyone putting together a more impressive team core, and I emphasise the word team, because it takes a team to win the Admiral's Cp, not a group of talented individuals."

He acknowledged that Dickson had worked towards becoming a member of the team, having sailed on both *Fair Share* and *Propaganda* "But the decision was made from the team aspect, not his ability," Brooke said. "We feel the team as selected is better in the manner it was put together than it would be with Chris as a tactician."

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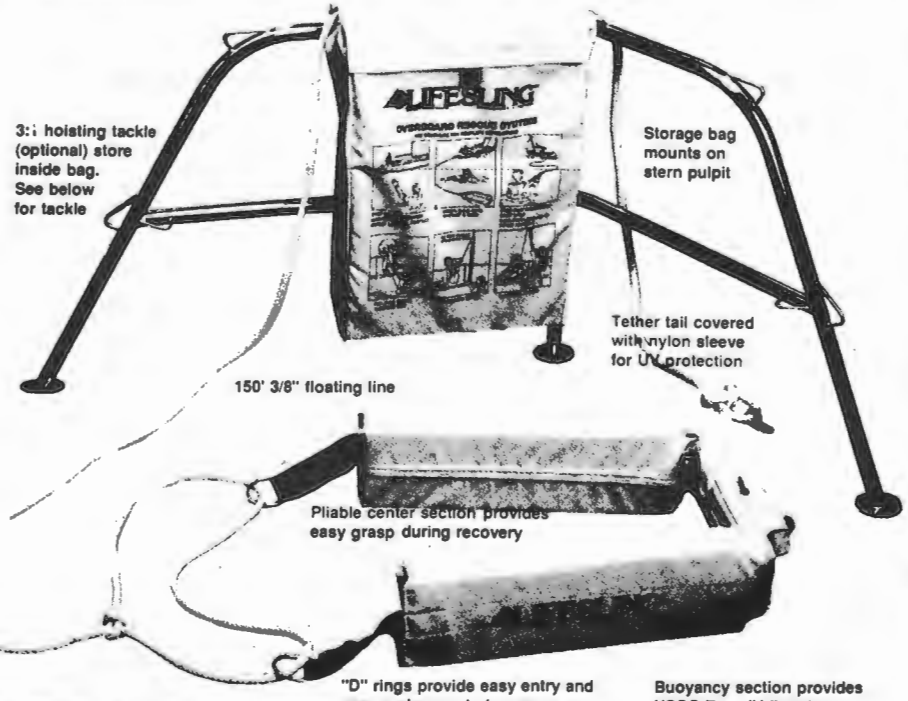
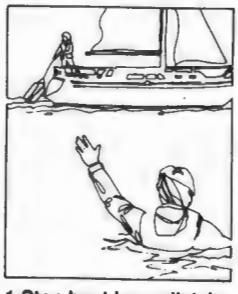
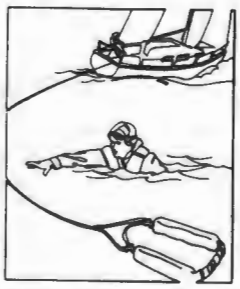
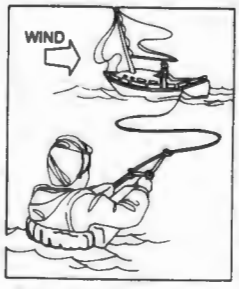




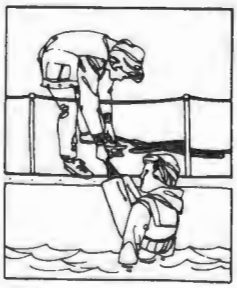
1.Stop boat immediately. *Maintain Visual Contact.* Deploy Lifesling.



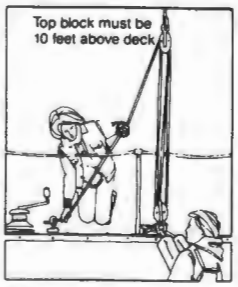
2.Circle M.O.B. until contact is made.



3.Stop boat immediately. Drop Sails. M.O.B. puts Lifesling on *Do not tow victim.*



4.Pull M.O.B. slowly alongside boat.



5.Rig hoisting tackle Top block must be 10' above deck.

6.Hoist M.O.B. aboard.

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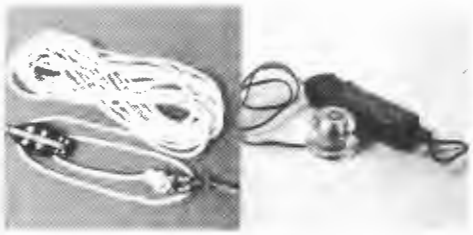
It sounds simple: the LIFESLING is basically a buoyant horse collar which is properly attached to a recovery towline. Let's examine it more closely: The sling itself is a foam filled flotation device which the victim slips into. A snap hook at the bottom of the yoke enables the wearer to clip the two sides together so he won't fall out while being hoisted on to the boat. The tether is 150 ft. of polypropylene (floating) line. One end is attached to the LIFESLING, the other to the boat. The sling bag, which straps to the stern pulpit, holds the sling and tether and has a pouch designed to hold a block and tackle (not supplied).



3 to 1 Hoisting Tackle

Attach to halyard or other high point and lift the victim out of the water onto the boat. Includes: 1 ea. Schaefer 303-45 fiddle, 1 ea. 03-13 single with becket, 1 carabine hook, 65' of 5/16 Sta-Set Line.

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Double Handed Around Australia Yacht Race

7.5M JOG RACER - SEAFLYER N.A.

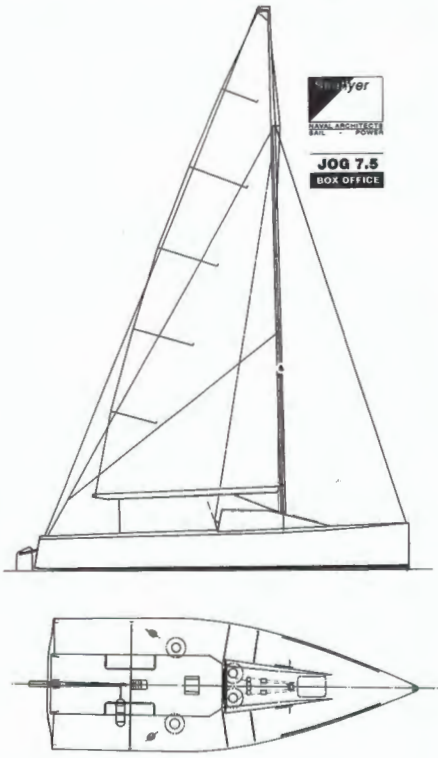
SEAFLYER Naval Architects was formed early in 1988 by David Lyons and Tony Laubreaux, based in Sydney.

The design brief for this design called for a no-compromise JOG racing yacht.

The hull has a very fine entry with hollow waterlines and an upright stem intended to ease the boat through choppy seas as well as extend the waterline well forward. Maximum beam has been extended all the way aft to maximise the effect of crew induced stability. The waterline beam is relatively narrow and stern sections are flat.

All weight has been concentrated centrally with an inboard engine installed directly over the deep elliptical keel.

The sail plan is generous and incorporates the revisions to the JOG Rule to allow 5 battens in the mainsail.



The first boat of this design, *Box Office* commenced construction in September, 1988, and was launched just three weeks before the National JOG Titles in Sydney.

She was constructed using combinations of uni-directional Kevlar, R-Glass and Kevlar/Carbon hybrid cloths over a Divinycell core using SP System resins.

Box Office came a very close second in the National titles and then won the first three heats of the Bruce and Walsh Series for a comfortable win overall (She didn't have to sail in the last heat).

Design

Edited by Rob Williams

DIMENSIONS:

LOA	7.525m
LWL	5.900m
Beam	2.650m
DSPL	1184kg

JOG Rating 5.647m

For more information contact: Seaflyer Naval Architects, PO Box 594, Epping, 2121, NSW. Phone: (02) 868-4476, Fax: (02) 428-5283.

JOHN KING BOC ROUND THE WORLD 60ft.

AUSTRALIAN designer, John King, has approached this yacht with the basic design philosophy that "in this type of race it is not how fast you go, but how slow you don't go."

His design concept is for a very easily driven hull with good form stability, to be of minimum displacement to perform safely under all conditions that may be expected during the race.

The hull lines are evolved from John's previous designs and features a bow designed to minimise the effect of wind waves with the intent of limiting subsequent helm corrections.

It is intended that construction is to be of high tech fibreglass to meet ABS Category "O" Scantlings requirements. The boat has two internal water ballast tanks and a short fat bulb on her keel.

The sail plan is a three headsail cutter rig with a fully battened main. The designer feels the water ballast will give the necessary stability to enable masthead extras to be carried.

The deck gear is planned to be simple with as much work carried out from the cockpit. The cockpit is designed with a deep centre trough for added protection in the event of a swamping.

The internal design allows maximum comfort with a chart table that can be used from either side and has the instruments placed so they are visible through the companionway.

DIMENSIONS:

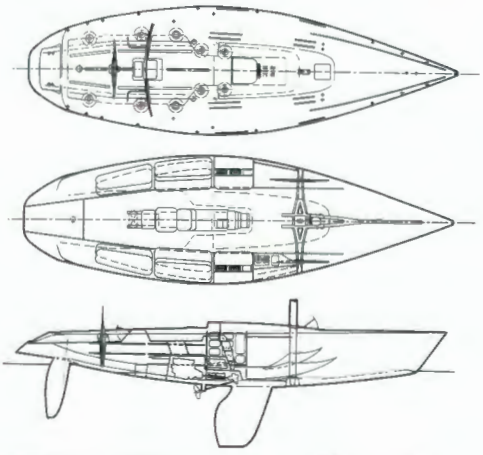
LOA	18.280m
LWL	16.650m
Beam	4.500m
Draft	2.950m
Displacement	11.240 tonnes
Sail area	157.125 sq m

For more information contact: John King, 102 Mitchell Park Rd, Cattai, 2756, NSW. Phone: (045) 72-8669.

REICHEL/PUGH 50ft IOR RACER

REICHEL/PUGH have had extensive design and on-the-water experience in this type of yacht and this design is expected to do very well.

As the designers: "In displacement, this design is well on the light side of the current fleet, with a DSPL of



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10,777kg." To illustrate comparatively, *Great News*, the successful Farr 50, has a DSPL of approximately 10,950kg.

The yacht is designed to have a narrow waterline beam and a long sailing length. A lower prismatic shape enables there to be less volume in the ends, reducing wetted surface and true displacement.

For course racing, a premium is put on upwind performance, maneouvrability and acceleration, and VPP data shows high offwind speed performance.

The keel is of minimum volume, but adequate size, providing optimum lift/drag ratio. In plan form the shape is of the successful "pork chop", the Reichel/Pugh signature.

Construction is to be of a monocoque style, making for a slightly lighter and stronger structure which has more controlled material usage, thus lowering material volume and cost.

As part of the design service the builder is provided with a book detailing the lay-up schedule and sequence, and the epoxies and glues to be used. All custom parts have engineering drawings and all parts throughout the boat and rig go through a thorough weight/efficiency study.

Reichel/Pugh pride themselves on providing an excellent design and project management service integrating their clients requirements into optimum performance.

DIMENSIONS:

LOA	15.362m	L	13.02m
Beam	4.59m	B	4.41m
Beam Waterline	3.67m		
Draft	2.743m	D	1.49m
CGF	.974	RMC	355m/k
DSPL	10777kg	DLF	1.0095
RSAT	128.39sq.m.	SHR	16.00

IOR RATING 40.00ft.

For more information contact: Reichel/Pugh Yacht Design, PO Box 6050, San Diego, CA 92106, USA. Phone: (619) 223-2299, Fax: (619) 224-1698.

Design

NELSON/MAREK LIGHT DISPLACEMENT SLOOP

THE brief for this design called for a 70ft light displacement yacht combining the performance characteristics of a racing ULDB with the accommodation of a large cruising yacht.

The yacht was to be competitive and meet the associated regulations under IOR, IMS and PHRF rules. It had to have a short handed cruising capability and draw no more than 8ft.

The design parameters were developed through a systematic parametric study of the effects of various hull and rig configurations using in-house VPP and IMS rating calculation programs.

Nelson/Marek's large database of actual Maxi ULDB performance data was used to verify predictions and improve VPP. The final lines and the shoal draft bulb keel were computer generated.

To meet these rating requirements this design is larger and more powerful than Nelson/Marek's similar sized ULDB's.

The first yacht to this design, *Peregrine*, was constructed of uni-directional S-glass outer skins and uni-directional Carbon inner skins with a low density PVC foam core. The structure is designed in accordance with ABS guidelines and carries ABS certification.

The internal arrangement features a luxurious tri-cabin layout and is constructed from composite panels to save weight and complies with IMS requirements.

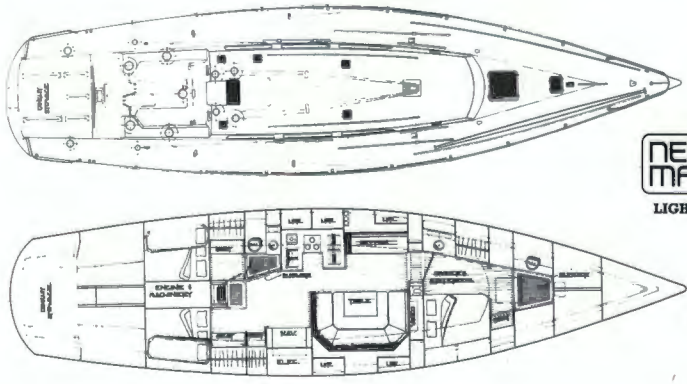
The deck layout is designed for efficiency with minimum crew on deck. The primary winch system is located well aft to facilitate easy communication between trimmers and helmsman while many of the other systems are designed for quick changes between racing and cruising configurations.

In her first IMS race, the 1989 Fort Lauderdale — Key West Race, *Peregrine* won line honours and overall IMS honours, beating the second placed boat by nearly an hour on corrected time. She sailed the 160nm course in just over 15 hours.

DIMENSIONS:

LOA	21.31m
LWL	18.06m
Beam	5.17m
Draft	2.44m
Displacement	13608kg
Sail area	183 sq m

For more information contact: Nelson/Marek Yacht Design, 2820 Canon St, San Diego, CA 92106, USA. Phone: (619) 224-6347, Fax: (619) 224-5192.



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FRASERSAILS

ANCHORING

by Laurie Stubbs

"Were looking for a raft of seven boats dragging their anchor. Have you seen them?"

It's No Joke!

ANCHORING is an important matter, to be taken seriously because your boat and maybe your life and other peoples lives can depend on it.

Listen to the story of a close call I had recently.

My arms ached with the effort; I had to row faster. *Seabiscuit III* was dragging her anchor towards the reef, in minutes she'd be aground on it smashing herself to bits on the coral heads. I put everything I had into paddling, forcing the power to the oar blades. The dinghy flew but I was going to be too late; *Seabiscuit III* was within thirty feet of the reef and still adrift, I was a hundred feet off rowing like a man gone berserk.

Then her bow swung, the anchor chain stretched toward me as the CQR caught on coral.

"Heaven help her to hang there," I thought, belting the oars through the water. A minute later I was aboard, hitting the preheat button for the diesel and thirty seconds later the engine started. Slipping into gear I looked over the stern. Under two metres from the rudder was a yellow coral head, and the depth under the keel was less than a metre.

A very close call!

I have gone ashore, and thus committed what might have been the cardinal sin. "Anchor watch on board is essential while at anchor," says the rule.

I watched from the shore. Sure it was

only a few hundred feet away, but when that nasty little rain squall came those few hundred feet were too far. The locals had all said it was safe. There was a clear patch of sand in about 15 metres. I had dropped the pick onto it and going astern pulled it into place. It had stood the load of Full Astern, and then *Seabiscuit III* lay sweetly in the southeast trade, apparently secure.

The rain squall hit quickly. The wind went round to the northwest and blew 20 knots for a few minutes. *Seabiscuit III* began to move quickly against the direction she's been lying. With 20 knots on her she went over the top of the anchor, pulled it out of the sand and was away like a startled horse.

I'd seen all this and was already on the water in the dinghy, paddling like mad. With the luck of the anchor holding briefly, I made it, though I broke the rule and deserved to have the trouble.

Later, also in the Solomons I sat out the beginnings of cyclones several times on my ground tackle ('tropical lows' they are called). It was a good feeling to know all the gear was in good shape and properly used. I was on watch the whole of the critical periods when wind speeds were up around fifty knots, but I knew the gear was safe for it. I'd done the sums and reduced the windage, and being on watch had the comfortable certainty that nothing could take me by surprise.

When anchoring in such totally protected areas as the waterways round Sydney, most people would never find troubles. How often have you seen a man stop his boat, toss the anchor off the bow and jump into the dinghy and roar away? And because the waters are so quiet he gets away with it.

Suppose a Southerly Buster roars in. Thirty five knots can do a lot of damage. His boat drags, hits other boats, maybe breaks their moorings, and the lot wind up bashing themselves to bits on the shore. Given anything but quiet conditions that man has left a hazard which could cost him his own and several other boats.

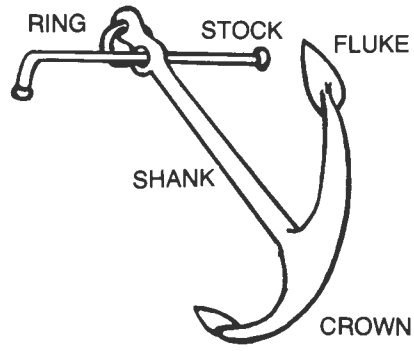
Care in anchoring is the least you can do for yourself, and more importantly for others.

Tide, Waves and Wind

You need to start out with some basic knowledge of kinds of anchor and how they work, so here goes.

All anchors hold a line on the bottom and depend on how much work it takes to make the anchor move, to give up its hold.

The load which tries to pull it out comes from all the forces on the boat. Tide, wind, waves, and other possible disasters such as logs in rivers, and unsecured boats.



Main parts of an anchor.

The really important loads to consider are the tide, waves and the wind. Take the example of a 30 foot yacht. If it takes four horsepower to drive that boat at three knots, then a tide race of that speed will put a load of 1 tonne on the ground tackle. Add wind to that, and at 30 knots the load could go up another 10%.

When you add the action of swells or waves the figures go off the scale. This is why an anchor will drag when the swell hits, or when the wind gust comes in; peak loads are reached then. In these extremes the anchor itself takes the load, it has to hang onto the mud or sand or rocks.

Before the heaviest load is transmitted to the anchor, the rode or cable connecting the anchor with the boat has a big part to play as a shock absorber. Cables hang in curves because of gravity, and as this curve straightens out under load it lengthens the cable, and gradually transfers all the load to the anchor.

For the anchor to stay in the bottom there must be no tendency to pull the anchor out of the bottom, no angle between the rode and the shank of the anchor. This is why a length of chain is attached to shank; it holds the rode down on the bottom.

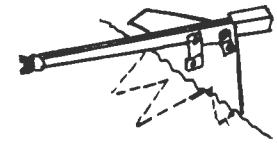
Rope from there on is acceptable, but heavy chain does by far the best job as a shock absorber, and if the bottom is coral or other sharp rocks, chain has the bonus that it won't cut.

How to hold the end of the rode securely in the bottom depends on the kind of bottom. Mud, sand, weed, rock, there's a type of anchor most suitable to each, but none ideally suited to all. Getting figures about how much force each of these types will hold is difficult because most tests use only one type of "bottom" and are done on land! The wisdom of the "old salts" is reflected in the comments alongside each type about where it will do best.

The only new anchor on the scene in years is the Flook.

The new "Flook" anchor is based on folding flukes.

In its planing mode the flukes of the anchor lie against the shank on a unique linkage.

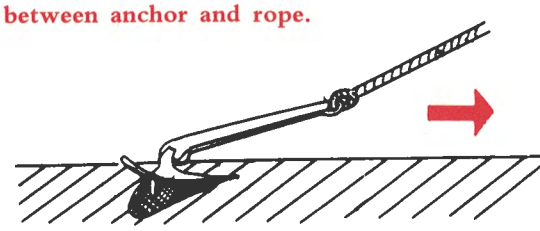


Jerking the rope pulls the linkage into action, tippimg the flukes at an angle to the shank, and allowing them to dig in.

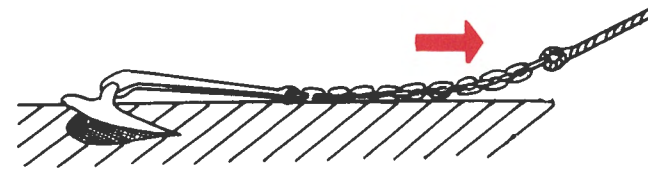
The newest of anchor styles, this design offers a feature nothing else can match. The anchor can be "flown" into a selected position at a distance from the boat. Instead of being dumped vertically from the fairlead, the flook is launched

Effect of chain between anchor and rope.

Rope only on anchor ring allows shank to lift off bottom; anchor doesn't dig in properly.



Chain then rope set-up holds shank on bottom; flukes dig in more effectively.



so as to plane away through the water on its flukes. Designed and made in Australia, it is a real advance in ground tackle.

Its planing angle is 5:1, so if used in water six metres deep it would touch bottom some thirty metres away from where it started. That 5:1 is a significant figure. After it has hit bottom, a sharp tug on the rode puts the flukes into their digging in attitude, and the anchor can be set into the bottom ready for use. It's holding power and general utility are at least as good as the well proven Danforth.

Types of Anchors

Fisherman, or Admiralty Pattern:

Most appropriate to weedy and rocky bottoms. This traditional anchor has a ring, shank, stock and flukes. The stock should be removable for stowage, but when in place and the anchor is offered to the bottom the stock causes the flukes to lie on the bottom and when load goes on the rode the fluke digs in. If put down carelessly, the rode can foul the anchor, and this may happen also if the boat moves over the top of the anchor. For all that it is a simple and reliable unit, with perhaps least effectiveness in deep mud.

Danforth pattern:

Best in sand, but with good results generally except in weed. Developed in 1939 by the American R. Danforth, there are plenty of variations on a theme within this design, right up to the giants weighing tens of tonnes you see on oceangoing behemoths. It can be that great force is needed to break the anchor out once it is thoroughly set; bent blades are not unknown.

Flook:

The ability to set an anchor at a distance from the boat without having to leave the boat is a major advance. If you have ever been stuck on a bank, you'll have gone through the hassle of loading the anchor and rode into a dinghy, paddling out to dump the lot overboard. Then you rush back to set the anchor, and finally winch in the rode till you kedge off the bank. Usually a harassed and sweaty time. No longer necessary now. The Flook gets itself out there, does the job for you.

There are many other situations where the Flook will give a distinct advantage, as a little thought and the company's advertising material will show.

CQR or Plough:

Best in mud but generally good elsewhere except in weed. This design was developed in 1933 in England, and commenting in 1935 H. Dervin said "...its holding power for a given weight is more than five times that of an ordinary anchor. "... probably referring to a fisherman. However beware the imitators: the design depends for its function on the angles of attack; inaccuracies of reproduction reduce its effectiveness. I have had an imitation bend at the shank above the plough blades, thus destroying its usefulness. The true CQR, a mnemonic for "secure", is forged, not fabricated mild steel!

Bruce:

Best in mud, but sound in general. Designed in 1972 for work with Oil rigs it will land on the bottom with its weight on one fluke. From there the anchor digs in and buries completely. Makers claims for performance are beyond those of other types but with the lightweight small boating types there is some experience to suggest a good deal less effectiveness than this.

ADMIRALTY OR FISHERMAN

The traditional anchor used for hundreds of years in Europe. Similar anchors were used in ancient Roman times and have a record of sound service in all conditions.

DANFORTH PATTERN

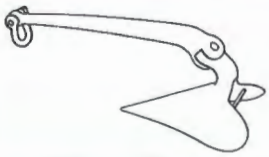
Most often now fabricated in galvinised mild steel, is liable to bend a fluke in very hard packed sand when breaking out unless a tripping line is used.

BRUCE PATTERN

Designed for use with oil rigs in 1974, this anchor has excellent holding power in most bottoms but is ideal in mud.

FLOOK

An innovative Australian design able to be set at a distance from the boat by "planing" through the water, trailing its rope behind it. Once on the bottom, a sharp tug puts the anchor into the "set" mode where it has near the effectiveness of the well proven Danforth. Very usefel for kedging and a number of other applications. Probably most useful in boats up to 30 feet.

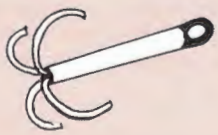


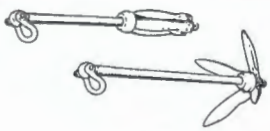
CQR (SECURE)

Most commonly used by small boats, this anchor has excellent holding power in sand and mud and is said by many to be the best all-round anchor. Watch out for imitations, because its effectiveness depends on the angles of attack of the flukes. Originally an all forged unit.

REEF PICK

Useful as an occasional anchor; for keeping a dinghy in position while fishing etc. Not for the serious business of staying in the one place in tough conditions.





GRAPNEL

Has similar uses to the Reef Pick, and has the same limitations.

Reef Pick:

Best as a casual short term anchor in rocky bottoms. One of the unique features is that when snagged, sufficient load on the line will pull the hook straight. You get your "anchor" back, not quite the same shape, but you don't lose it. This is a cheap unit, useful as a means of keeping your fishing dinghy from moving too quickly with the tide, a picnic anchor, but not for the serious business of staying in the one place against adverse conditions.

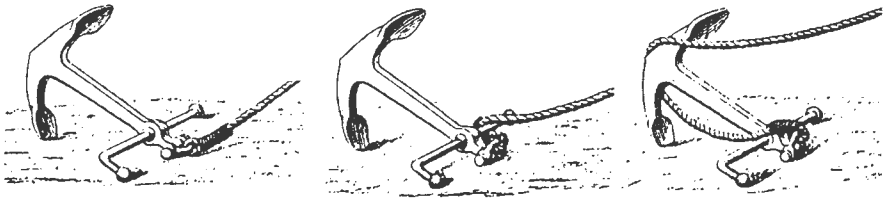
Grapnel:

Similar to the Reef Pick, an occasional anchor for light conditions.

Dropping The Anchor

Dropping the anchor is not just a matter of heaving it over and letting it run.

Commonsense says you lower away till the anchor hits bottom. By that time you have the boat going very slowly astern and as you do that you pay out more rode at the same pace as you are moving, thus laying the rode along the bottom. Then as you reach the amount you want out, the rode is secured and the movement of the boat drags the anchor along the bottom digging it in. By watching the shore you pick when you have stopped moving, and if the need warrants it you use sufficient more power astern to set the anchor securely enough for the conditions.



At left is the anchor in correct position. In the centre, the rope has fouled around the stock and at right ,around the crown. In both cases caused by to much line being put out before the anchor hits bottom.

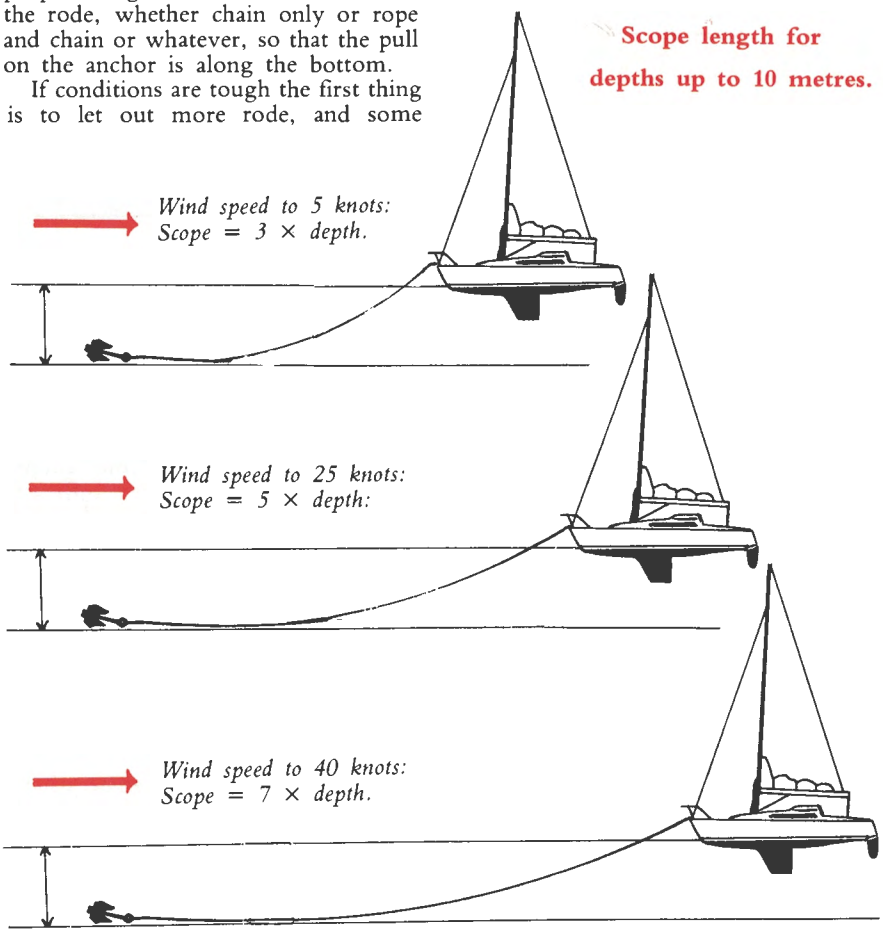
A little thought here will show how essential this procedure is and that anything else is too haphazard for safety.

Having got your chosen anchor on the bottom the next consideration is how much rode to use, technically called the scope. The standard is three times the depth of the water, plus. That proportion gives a reasonable curve to the rode, whether chain only or rope and chain or whatever, so that the pull on the anchor is along the bottom.

If conditions are tough the first thing is to let out more rode, and some authorities say up to seven times water depth for winds up to Force 9. The reason for this is to keep a curve in the rode to act as a shock absorber, less than this scope may mean no shock absorbing capacity if the rode is pulled straight.

So it follows you have to mark the rode some way in order to know how much you have out. Galvanised chain marks well with paint; laid rope lends itself to a piece of light line or cloth through the lays; braided line can be bound with coloured sail twine. Choice of intervals for marks and colours are for the owner, but must be simple, capable of use in near night conditions.

Make sure the rode is secured to the boat at its inner end. It would not be the first time the whole of a set of ground tackle has been lost because no one has thought of the bitter end. That bitter end should be an eye through which a shackle is used; easy to detach should it be necessary.



Then there is the question of how much rode to put out. Thirty metres sounds a lot, but if you have to anchor in 10 metres of water that is just enough. If you have to anchor in 30 metres of water you are going to need 100 metres of rode. The choices you make here are critical because if you do have a problem, you handle it with what is on the boat. You can't nip down to the chandlers and get another 50 metres! The best guide is probably what you think your boat and your life are worth. Maybe a few hundreds of dollars on gear looks acceptable then?

Very ordinary commonsense suggests you then double your outlay; provide a second complete anchor and rode, and keep it all connected and ready to use. On deck preferably, so when you need it it is available quickly. After all your car has a handbrake and a foot brake doesn't it? If any of dozens of conditions occur like a chafed rode so you lose the first anchor, you can then go to the back up.

Once properly buried it takes some real effort to 'break out' an anchor. The sensible way is to go dead slow ahead on engine, taking in the rode as you go. When the rode is nearly vertical and you're getting close to being right over the top of the anchor, the rode is secured, and the engine put out of gear. Inertia takes over, the boat goes ahead past the anchor and because it is now pulling the ring and shank upwards, the anchor breaks out gently. There are other ways of course, but that one requires the least blood, sweat and tears.

If that doesn't work then the best trick is the tripping line which you will have thoughtfully provided before the anchor went to the bottom. At the crown of an anchor is an eye or lug where you attach a line. Pulling on that line in the opposite direction to the way your boat was lying will rapidly un-bury the anchor and getting it back on deck becomes just a matter of lifting.

Often an anchor buoy is sound practice. This is attached by a line of the same length as water depth (allowing for tide) to the tripping eye of the anchor. As well as pinpointing the location of an anchor, the line can be used to withdraw the anchor from the bottom in the event that it is deeply embedded. If there is the remotest chance of the bottom containing sharp edges, like coral for example, the buoy is a must if you want to recover your ground tackle.

This might sound to a newcomer like a lot of action to absorb about a simple matter of anchoring. I offer the thought that if you do go anchoring, you'll be a lot more comfortable if you take these few pages as the tip of the iceberg of possible knowledge about anchoring.

If you know it and use it, you'll sleep soundly while at anchor.

Scott Jutson

... a breath of fresh air for Australian yacht design.

By Rob Williams

SCOTT Jutson is a 32-year-old yacht designer, born in the USA, who now makes his home in Australia.

He had sailed with and against Australian yachtsmen overseas and felt there was a unique opportunity to establish himself, internationally, as a designer if he were based in Australia.

He felt a country with Australia's involvement in international yachting could both support and benefit from local designs considering that smaller countries which participate less in international yachting have good designers. These designers, through local support, are given the opportunities and experience necessary to establish recognition in international competition.

A classic case in support of this assertion is the development of 12 metre designs by the late Ben Lexcen who, with immense local support from Alan Bond, designed the break-through boat which won the America's Cup.

Scott feels that the Australian attitude to yacht design is unique. Comparing the American reaction to the expected Australian reaction to the design of boats competing in the new Pro 30 circuit he points out that the Americans went to recognised designers like Joubert/Nivelt, Nelson/Marek and Rob Humphries. The Australians would probably continue on from the local skiff scene. He is quick to add that he believes the Australian boats could easily be quicker.

As is obvious, a 'Catch 22' situation exists for new designers. Without support, the designers can't gain the hands on experience at the leading edge of the sport necessary to develop their skills. Without this proven development owners are reluctant to gamble on a new design.

Scott believes that it is important for designers to work with the IOR rule as, whether people dislike the rule or not, IOR designs represent the pinnacle of present day yacht design.

IOR yachts, for conventionally ballasted boats, are very fast for their length. Due to the depth of design development and sophistication, downwind "sleds" can seldom match a similar-sized, well-sailed IOR boat around a normal Olympic course.

Scott asserts strongly that there are a lot of lessons designers can learn from IOR boats. While many people look at them as freak boats with their superlight shells, tons of lead in the bilge, they fail to realise that current IOR designs represent a good design equation for speed.

He pointed out that lightweight is not, in itself, a virtue. You can make a boat so light it is virtually unsailable upwind, no matter how much static stability you may put into the design through bulbs or deep draught keels.

To ignore IOR design is to ignore the most refined development rule for offshore racing yachts that exists today, and to also ignore the work of some of the best designers in the world.

The skill of these designers is well illustrated by the continued positive improvements in actual boatspeed each year, due to design development rather than purely fiddling the rule.

The centre of buoyancy is moving back, the keel is moving back and bows are fining up to find a configuration for optimum speed in the hull. Scott points

Middle Harbour Express — *showing Jutson keel.*

out that these changes are not based on the rating rule, but on significant improvements in speed within the given rating.

While Scott has yet to have his first IOR design launched, he has put in a tremendous amount of work in developing an accurate performance analysis system based on improving the performance of established designs.

This sytem sets out to improve the boat through accurate analysis of the existing yacht. The improvements are gained from attention to detail using the most advanced technology available.

Scott hopes this will lead to his office being given the opportunity to design an internationally competitive IOR yacht.

It is encouraging to know that Scott's design philosophy is one based on learning the lessons from past and present design developments and improving on them, rather than going to an extreme design hoping for a big winner, which is a trap a lot of new designers have fallen into.

Three of the more well-known yachts that have benefited from Scott's program are Bob Oatley's Farr 43, *Wild Oats*, Syd Fischer's Frers maxi, *Ragamuffin*, and the 1980 Davidson 37 ex-centreboarder, *Middle Harbour Express*, owned by Ray Stone and George Challoner.

The most significant alterations to these boats were those undertaken on *Middle Harbour Express* and was instigated with the centreboards replacement with a fixed keel some years ago. This was undertaken to improve performance, add to seaworthiness, and to make the yacht's cabin area tidier and more useable.

The keel chosen was lightweight with a lamina flow section, contrary to the prevailing trend of the rule boats of that time. Recently this trend has changed back towards minimum stability.

Last year further alterations were undertaken in configuration, after the yacht lost its rig, to obtain the optimum ballast/sail area ratio using a velocity prediction program. The boat is now in its ideal configuration with regard to the current rule.

Middle Harbour Express's results are testimony to the success of Scott's program. At the present time she is sailing faster and rating lower than the very successful Davidson 36's.

The format and content of Scott's VPP Rating Optimisation Reports are both comprehensive and extremely detailed. After detailing the objective and parameters of the particular project, the method to be used is specified.

In the example Scott provided to OFFSHORE, the project was to determine the optimum mainsail area for a fractionally rigged IOR boat, leaving fore triangle and spinnaker sizes unaltered, with alterations to internal ballast changing both displacement and righting moment.

Wild Oats, *on which Jutson sailed in the Admiral's Cup Trials.*

Eight options were compared. All changes in displacement and righting moments were processed and new values derived with new freeboards. A modified sail area was prescribed and new rating attained.

All combinations were then run through the velocity prediction program and then compared on a second per mile baseline with the rating differences to evaluate whether the changes had a positive or negative effect. Obviously the changes showing the greatest net gain is the chosen option.

The study showed that the subject yacht benefited most from an increase in internal ballast, thus increasing righting moment. The additional displacement slowed the boat slightly downhill in light air, but this effect was minimised by additional sail area.

The changes are specified fully and include not only the amount of additional ballast but its specific location and measured freeboards forward and aft.

Scott notes in his submission to the owner ". . . VPP requires tuning for each boat. The results . . . may not accurately reflect your on board target speeds, however, the relative comparisons between configuration remain accurate."

All computations and comparisons are included in the report. The VPP examines each wind strength at angles from hard on to running and specifies optimum downwind and upwind angles for maximum VMG.

Samples from the reports at tables 1 and 2 show the depth and accuracy of Scott's work and should be viewed in conjunction with the abbreviation key below.

VTW — Velocity True Wind
BTW — True Wind Angle
VAW — Apparent Wind Angle
V — Boat Speed
VMG — Velocity Made Good
HEEL — Optimum Heel Angle
REEF — Reef expressed as % of total sail area
FLAT — Flattening reef, as per reef.

TABLE 1

Example of Results for a section of one of the configurations evaluated.
Detail of change: 1 sq.m. of mainsail added with 250kg of additional internal ballast.
IOR 27.28 VS IOR 27.36 197.5 SEC/MILE VS 196.95
Time Variance in Ratings = .55 sec

VTW	BTW	Vc	VS	Vn	SEC/MLc	VS SEC/MLn	NET VARIANCE
20	175.4	7.59		7.59	474.31	474	− .55 sec
	80	8.33		8.4	432.43	428.67	+3.2 sec
	37.0	6.49		6.546	554.78	549.95	+4.275sec

TABLE 2

VPP in optimal configuration

VTW	BTW	VAW	BAW	V	VMG	HEEL	REEF	FLAT
16	180.0	8.58	180.0	6.781	−6.781	−0.3	1.0	1.0 W/Spin
	174.6	8.58	170.6	6.827	−6.798	−0.3	1.0	1.0 W/Spin
	135.0	11.28	106.3	7.699	−5.444	4.2	1.0	1.0 W/Spin
	36.5	20.05	22.6	6.425	5.166	30.4	1.0	0.649 No Spin
20	175.6	11.65	172.7	7.588	−7.566	0.9	1.0	1.0 W/Spin
	36.7	23.38	23.8	6.546	5.247	31.4	0.905	0.626 No Spin

*After spending some hours with Scott, it is our opinion that Australian yachting will benefit greatly from his work. It is refreshing to find a young designer with the thorough and professional approach he exhibits.

A SPECIAL REPORT PRODUCED BY THE EDITORS OF AMERICAN SAILOR, NEWSMAGAZINE OF THE UNITED STATES YACHT RACING UNION.

GETTING INTO IMS

An introductory guide to the International Measurement System for individual sailors, race committees and racing fleets. How it works, how to get started and how to enjoy great handicap racing.

By Gail Scott Sleeman. Edited and Designed by Mark Smith

GETTING INTO **IMS**

THE Australian Yachting Federation has decided to support the introduction of the IMS Handicapping System into Australia and have demonstrated their resolve with the purchase of three and one by the V.Y.C. of the latest designed IMS measuring units. These consist of a surveyor's precision tripod, a specially designed measuring head and wand, and an accompanying pre-programmed computer. An American measurer from the USYRU has visited Australia and conducted a training forum with the senior IOR measurers from each state. Since then, Gordon Marshall, NSW's senior measurer, has measured one local yacht *All That Jazz* (see photograph in the accompanying article) and Tony Mooney of the AYF has successfully processed the results using the computer programs supplied from the Offshore Racing Council.

In the meantime, the Board of the CYCA has authorised the expenditure of upwards of $10,000 on installations on one of its slipway cradles in order to streamline the measuring procedures soSthat measuring time is kept to a minimum. At the time of this writing this work is almost complete.

It is the intention of both the CYCA and MHYC to include IMS Divisions within next season's yachting calendar and our next Sydney to Hobart Ocean Race will be handicapped both by IMS and IOR.

The CYCA envisages that IMS, judging from its outstanding acceptance and success in the US, will fill the void created by the far-reaching design development of the IOR and thus offer satisfying racing for the many yachts which can now be classed as "Cruiser-Racers", but which are otherwise obsolete for IOR racing.

We are now ready to offer IMS handicapping to Australian yachtsmen, and the following article, taken from the USYRU's magazine "American Sailor" of February 1989 is ideally suited to explain this new handicapping system, and thus encourage owners to offer their yachts for certification.

The article has been "Australianised" in a number of its references in order to fit our local circumstances and the USYRU are to be thanked for giving us permission to republish. They have asked that we credit them as follows:

"Reprinted with permission from the AMERICAN SAILOR, the news magaine of the UNITED STATES YACHT RACING UNION".

This we do willingly, and furthermore we add our congratulations to Gail Scott Sleeman and Mark Smith from the US, who were responsible for such an informative article.

The International Measurement System (IMS), the most precise method yet developed to handicap a broad range of dual-purpose racer/cruisers, has come into its own. More than 2550 yachts in the US have been measured for the speed-predicting handicap system. The lines of 600 production hulls are in the international IMS library. Major events, from the Transpac to the Southern Ocean Racing Conference, are fielding IMS fleets. In 1988, 90 percent of the Chicago-Mackinac and Newport-Bermuda yachts raced under IMS. Local fleets are established in the Chesapeake, the Great Lakes, New Orleans, Texas, Long Island Sound, Seattle, San Francisco, Nova Scotia and Hawaii. And where an ever increasing number of skippers have discovered that IMS serves to more equitably handicap boats — no matter how different they are, no matter what the wind or course — more local fleets are forming.

Welcome aboard!

How IMS works ...

AS the name implies, IMS is a handicapping system based on measurement, rather than on observed performance such as is the basis of PHRF handicapping. From precise hull, rig, sail, propeller and flotation measurements, a powerful computer accurately "draws" the boat in its memory. It then uses the Velocity Prediction Programme (VPP) to predict each boat's potential speed in a wide range of wind conditions and points of sail, including a non-spinnaker variation.

The boat's predicted speeds are then converted to a table of handicaps, expressed in seconds per mile for four typically used courses and the non-spinnaker variation. The handicaps on the table vary according to a selection of six different wind speeds and five course types.

The goal of all this science and selection is to fairly handicap a broad range of boats over a broad range of conditions — to make racing under IMS as close to a true test of sailing skill as possible. Keep in mind that IMS isn't perfect. No system ever is, but it *does* provide a degree of responsiveness and fairness in handicapping boats that is unprecedented in sailboat racing history.

This ambitious system was developed from USYRU's Pratt Ocean Race Handicapping project, initiated at MIT in the early 1970s under the direction of the late Irving J. Pratt's USYRU Steering Committee. The project aimed to analyze sailing speed factors and develop an instrument for hull measuring. USYRU supported the project, which was the basis for the Measurement Handicap System (MHS), implemented in the US in 1978. In 1985, MHS was adopted by the Offshore Racing Council (ORC) as an international yacht handicapping system, to take its place alongside the International Offshore Rule (IOR). The system was then re-named the International Measurement System, or IMS.

How is IMS unique? First, an IMS boat does not have a single "rating" or handicap. Instead, the certificate presents a *table* of handicaps corresponding to various course types and wind velocities. To produce the table, the Velocity Prediction Program actually simulates the sailing performance of each yacht in

each of the listed conditions. This is critical because it eliminates the "light air" boat and the "heavy air" boat advantages inherent in a single-number rating or handicap. The IMS system recognizes that a boat's relative performance will vary with different wind strengths and over different courses, and matches handicaps to these variables.

The five courses are:

- **Windward-Leeward,** presuming a beat over 50 percent of course;
- **Olympic (6-leg),** presuming a 45-degree right triangle with three legs to weather (55 percent of the distance), two 45-degree reaching legs, one downwind leg;
- **Circular Random,** presuming equal distances in every wind direction as though sailing around a perfectly round island with a constant wind direction (25 percent beating);
- **Linear Random (LR),** which presumes equal periods in time of wind from every direction (16 percent beating) and
- **Linear Random** sailed with no spinnaker.

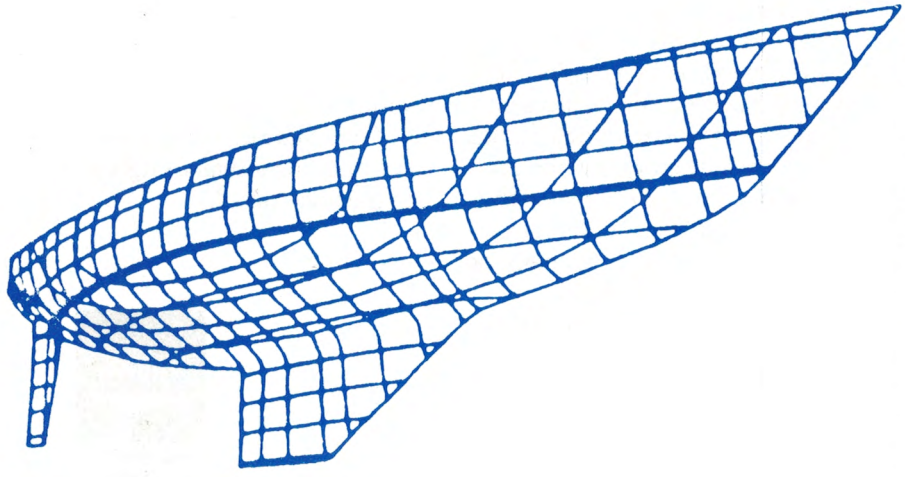
"The certificate presents a *table* of handicaps corresponding to various course types and wind velocities. To produce the table, the Velocity Prediction Programmeactually simulates the sailing performance of each boat in each of the listed conditions."

IMS Regulations for rig, sails, and interior accommodations are designed to protect the IMS fleet as a place where true dual-purpose boats can enjoy great racing. The J/40 China Cloud, *racing with a full cruising interior, won her division in the Chicago-Mackinac Race in '86, '87 and '88*

Another unique feature is the ability of the IMS programme to literally "draw" the full hull lines of the boat. Unlike other measurement rules in which only a few hull points are measured and approximations made of the shape and characteristics of the rest of the hull, under IMS no approximations are made.

Values of unprecedented accuracy for displacement, sailing length, vertical centre of gravity, wetted surface area, and so forth, are available for the VPP sailing simulation: Distortions of hull shape at critical measurements points ("bumping") offer no advantage under IMS.

There are other benefits to this informational depth and detail. The speed prediction tables on the IMS certificate provide the boatowner with a complete set of performance "targets" which can be very helpful in evaluating whether a boat is sailing up to its potential. This information can also be ordered in the form of plotted "polar diagrams," which present these targets in graphic form. Race committees can even order perspective drawings for trophies.



Using detailed dimensional information data taken during measurement, the IMS VPP program literally draws the hull lines of the boat with unprecedented accuracy. Because no approximations of shape are made, distortion of hull shape at critical measurement points (bumping) offers no advantage.

The IMS boat ...

ACTUALLY, there is no "IMS design." The goal of the system is to fairly handicap a broad variety of boats, not to define or encourage any one type. Despite yacht designers' eternal quest to "beat the rule," they are enjoying IMS because it gives them more freedom. IMS boats can have smooth, fair hulls, be reasonably stiff, and be designed to excel in virtually any wind velocity or point of sail and still be competitive. IMS thus eliminates the old saw — "We didn't get our weather today!" If a boat performs poorly in one condition, her handicap will reflect it.

Boats applying for IMS certification do have to meet a few qualifications, intended to protect IMS as a handicapping format for true dual-purpose boats. The limitations are defined in the IMS rule book which is available from your State Measuring Authority. In summary, these are the high points:

- **Size limit** (as judged by predicted speed): An IMS boat must not be faster

Winners always cover the finer points before the race.

Winners know what it takes to win. They know the margin between winning and losing is very small. In the highly competitive sport of offshore racing the difference between winning and losing can come right down to the very smallest equipment detail. Winners know this and always cover the finer points before the race.

It's the same in insurance. Club Marine are the leaders in insuring ocean racing yachts because we cover all the finer points of insurance. Like our advanced computer racing system that gives your boat its own insurance rating.

You are covered for the full value of sails, masts, and rigging lost or damaged while racing. There's no deduction of two thirds new for old.

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Melbourne: 77 Beach Road, Sandringham 3191.
Tel: (03) 598 4644.

Brisbane: Argyle Place, Argyle Street, Breakfast Creek 4010.
Tel: (07) 262 7877.

Gold Coast: Short Street Plaza, 12 Short Street, Southport 4215.
Tel: (075) 91 1833.

Adelaide: 230 St. Vincent Street, Port Adelaide 5015.
Tel: (08) 341 1744. Fax: (08) 341 1778. Telex: AA186435.

Perth: 890 Canning Highway, Applecross 6153.
Tel: (09) 364 9855.

NEW ZEALAND:

25 Quay Street, Auckland 1/PO Box 824, Auckland 1.
Tel: (09) 393 781.

than 420 seconds per mile, Linear Random 10 handicap. This is roughly equivalent to an IOR "maxi". There is no limit at the other end of the scale. The smallest IMS boats rated to date are J/24s.

- **Rig:** IMS has mast diameter handicapping limitations intended to encourage sturdy masts and does not accept mainsails with large roaches. Although carbon fibre spinnaker poles are acceptable, other spar materials are limited to wood, aluminium alloys, steel alloys, and fibreglass.
- **Hulls and keels:** Lead is the densest material permitted in boat construction. IMS also rejects all but traditional centreboards and normal appendages, except that shallow draft wing keels are equitably handicapped. Movable trim tabs are not permitted.
- **Stability:** IMS yachts currently must have an upper limit of positive stability greater than 95 degrees.

With the rapid pace of today's design and technological advances, these parameters are under ongoing review. The aim is to avoid an "arms race" in materials and encourage true dual-purpose boats.

IMS regulations ...

THE IMS Regulations, which apply to boats of 28' LOA or greater and are scaled to boat size, are now required unless the race organiser specifies otherwise. Older style cruising boats may be grandfathered if some details of their equipment are not in compliance. The goal of the regulations is to permit dual-purpose boats to compete without disadvantage.

The regulations are available from your State Measuring Authority. Although they are too extensive to reproduce here in full, the following list of controlled items does provide an overview:

- Mast rake or bend shall not exceed 2 percent of mast height.
- Bloopers are prohibited.
- Total crew weight (recorded on the certificate) must not exceed the IMS limit for the boat.
- The minimum displacement limit (recorded on the certificate) must be observed.
- Sail limitations are more restrictive than for IOR.
- Systems relating to living, eating and sleeping must be fully functional and appropriate for a dual-purpose boat. There should be a real 6'3" berth (with a 4" thick, 5lb/cubic foot density mattress for a hard-bottomed berth) for each seven feet of LOA. Stoves must be gimballed or fitted with high rails. Sinks — with fresh water pumps — must be permanently installed with a drainage system that works when heeled. Ice box must be built in, providing one cubic foot of storage for each berth. Separate stowage must be provided for cooking utensils, cutlery, glasses, dishes, etc. and food stowage must be in rigid lockers above the cabin sole.
- The head must be enclosed and roomy enough to sit, stand, and turn around. The marine sanitation device has to be an approved type, permanently installed. The wash basin can be folding or sliding but must have a drainage system that works underway.
- Water tanks must be permanent and fuel capacity is prescribed.
- Hanging lockers and stowage areas for personal gear are prescribed.
- A cabin sole is required in living areas.
- A permanently installed table must have a working surface of at least 1.4 square feet for each berth up to a maximum of 14 square feet.
- A scaled-to-size headroom requirement applies, and a navigation space is required.

The IMS Regulations include a table of compliance scores for the required accommodations by boat length. The score, which may be self-checked by the owner, must total 100 points. Minor deficiencies in some areas of accommodation can be made up by ample compliance in others.

The IMS hull measuring machine enables a measurer to take precision lines off a yacht more quickly than ever before possible. Between 600 and 800 points are registered by the wand connected to the machine head by a spring loaded kevlar line. In this illustration, the venue is a "hard stand", but the CYCA installation replaces the tripod with a specially designed rolling carriage mounted on rails on a beam whic runs alongside the yacht. This avoids the need to shift and realign the tripod at each of twenty or so stations required on each side of the yacht for full measurement and should speed up the overall operation.

1st EVERY MAJOR REGATTA THIS SEASON

1st: I.O.R. SYDNEY/HOBART	ILLUSION
1st & 2nd: I.O.R. SYDNEY/HOBART	ILLUSION/HARBINGER
1st: I.O.R. MELB./HOBART	PRIME SUSPECT
1st: I.O.R. SYDNEY/COFFS HARBOUR	LEROY BROWN
1st: I.O.R. COCK-OF-THE-BAY	PRIME SUSPECT
1st: I.O.R. KING-OF-THE- DERWENT	PRIME SUSPECT
1st: LINE HONOURS - COCK-OF-THE-BAY	SCAVENGER
1st: TEAM RANGE ROVER REGATTA	LEROY BROWN
1st, 2nd, 3rd, 4th: VIC. WINTER SERIES I.O.R.	HARBINGER, PRIME SUSPECT, FIRST LIGHT, CHRIS'S CHOICE

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Getting measured ...

TO start the process, contact your State Measuring Authority. They will provide you with the name of the IMS measurer closest to you and discuss what measurements will actually be required. Although your certificate will be issued by the AYF, the measurer will be your contact throughout the process.

If your boat is one of more than 600 productions hulls in the IMS library, you're already halfway there. All you have to do is have the rig, sails and prop installation measured and inclining measurements done. It's even easier if you also have a valid IOR certificate or you seek a "one-design certificate" (for a J/24, Luders 44, New York 36, North American 40, OOD 34, Pearson Flyer, Tartan 10). Except for hull, IMS accepts valid IOR data, and much of the measuring work is already done for registered IMS one-designs.

If you are starting from scratch with a new boat, however, allow plenty of time for measurement. Count on a day for hull measurement on land and at least half a day for flotation and rig measurement in the water. Allow time for weather delays and for your measurer's other commitments.

An IMS hull measuring machine, of which three have been purchased by the AYF, and one by the VYC enables a measurer to take the exact lines off a boat more quickly and easily than was ever before possible. This is done by marking the hull in sections and then measuring and recording many measurement points at these sections with an electronic wand.

To establish a reference for the points, the measurer locates the centreline of the boat and sets a parallel baseline on either side, about two feet outside the maximum beam. The custom electronic measuring head is set on a surveyor's tripod, and a measurement wand attached to the head by a spring-loaded Kevlar line is extended to each measurement point. The head records the distance and angle of the wand tip from the baseline. The measurer repeats this for some 600-800 points on the hull.

The boat must be securely level for measurement. It should have a clear three-foot working area around it, and prop, shaft and rudder need to be in place. If the boat is not properly prepared in advance, the measurer cannot do his work. The machines, designed by MIT, were built by Harris Textile Machinery in Rhode Island and the electronics were designed by Ockam Instruments. To arrange for measurement, the owner, boatyard and measurer need to coordinate schedules. And if the weather is bad, even a perfectly set up measurement will have to be postponed.

The computer is programmed to calculate and store the hull lines, and at the completion of each station, the measurer can call up and view the shape he has recorded. thus enabling him to identify and rectify any mis-cues or omissions.

"The IMS certificate also provides calculated hydrostatic data ... the kind of information that, in recent history, America's Cup yachts paid thousands of dollars to obtain."

As complex as the hull measurement may seem, once it is done properly, it is done for all time (unless the hull is subsequently modified). One of the results is a near-perfect reproduction of the hull shape.

Flotation and rig measurements take less time but are no less dependent on good boat preparation by the owner and on good weather (calm water and little wind are musts for the inclining tests). The boat must be in measurement trim, which means rigged and equipped, minus sails, crew and gear, and tanks properly prepared. Your State Measuring Authority has a helpful measurement preparation checklist that describes what needs to be done before the measurer arrives.

Sails are checked and certified by an AYF Measurer.

After measurement data is processed by the IMS Velocity Prediction Programme in the computer at the AYF office the completed certificate is sent to your measurer for approval and signature. He will then contact you when the certificate is ready.

INVEST WITH INTEREST

For those few priviledged to own a Swan 59, investment is not simply a matter of fiscal return — it is a reflection of their achievement, their perception and perspective.

Not only do they enjoy a financial asset whose value is assured — irrespective of local economic climates — the Swan 59 is an investment which compounds interest far beyond mere monetary values.

It is an investment in classic design, embodying the artistry of German Frers. It is a statement of style and refinement. It is also a demonstration of performance par excellence, to be savoured by those who appreciate finesse.

The very substance of a Swan 59 comprises the skill and craftsmanship that is Nautor's tradition yet, embraces the signature of owner personalisation, which makes every Swan unique.

From double to triple-spreader rig from optional interior cabin-plans to finishing fabrics, the Swan 59 is the true expression of personal taste.

A masterpiece must stand comparison — what other masterpiece offers such capital returns? A few will offer the comparable status of owning a Swan. No other, however, will give you the portfolio of interests that is a Swan 59.

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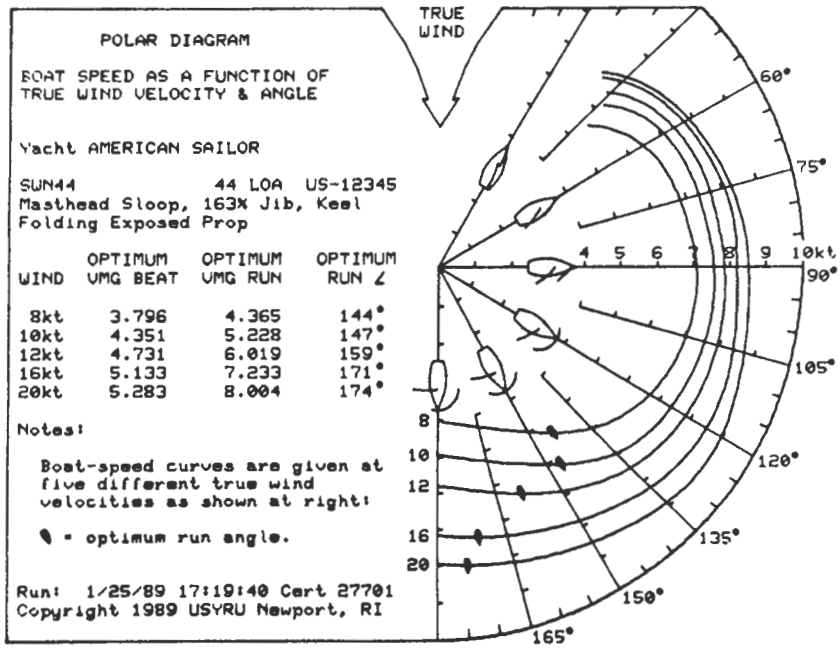
NAUTOR's SWAN 59

Kymmene Corporation, Nautor
68601 Pietarsaari, Finland
Tel: +358 67 67001 Telex: 7547 Nauto SF
Telefax: +358 67 67364

Polar Performance...



Polar diagrams graphically illustrate predicted speed at different wind angles and wind speeds. They can be especially useful in selecting gybing angles downwind.

A spin-off from the intricate measurement information fed into the IMS VPP is the ability to prepare polar performance diagrams. The diagrams aid the skipper and crew in optimising boat performance far more efficiently than were they to follow the old routine of teaming with a peer for on-water testing. Equipped with accurate instruments and the polars, a skipper can read optimum speeds for different wind conditions and aim to match the VPP-projected performance.

A polar diagram graphs wind angle versus boat speed at a particular velocity of wind. Graphs are repeated for different wind speeds, resulting in a family of curves of performance by wind speed and point of sail.

The graphic representation is especially useful downwind. It reveals the gybing angle that delivers optimum VMG downwind at a given true wind speed, and typically illustrates a dramatic fall-off point in optimum VMG in lighter conditions. On any point of sail, the diagrams serve as a constant standard of potential performance. A skipper can quickly see when his boat is not sailing to potential, particularly at night when few of the usual speed indicators are visible.

Although a resourceful and graphically inclined skipper can create his own polar diagrams, the AYF will ultimately offer an IMS Performance Package that contains all the necessary information and equipment plus additional stability information relating to the skipper's boat. The package contains instructions on how to read polar diagrams, how to do sailing tests, how to correct instrument readings for the most accurate comparisons, what to do if the boat's performance isn't up to the mark, and how to understand the stability concept. The package also contains the tables from which the boat's polar is derived, several printed polar diagram graphs, detailed information about the boat's stability and a static stability graph, two waterproof transparencies of the polar graph to use as overlays, and several blank polar diagram forms, useful for recording actual performance from the boat's instruments and comparing with the overlays.

IMS scoring

SCORING IMS can be as simple or sophisticated as a race committee wants it to be. At the simplest level, the committee uses the General Purpose handicap printed on each boat's certificate as if it were the boat's fixed "rating." Each competitor's General Purpose time allowance is multiplied by the distance of the race and that number is subtracted from the competitor's elapsed time to achieve a corrected time. This is a simple single-number scoring scheme like PHRF.

In the second basic level of handicapping, the race committee chooses a wind velocity value for the race that is factored into each boat's handicap. For example, if the local afternoon breeze typically fills in at 18 knots, the race committee can select a wind strength of 18, and choose whichever course configuration they believe is most representative of the course to be sailed.

In the third basic level of handicapping, the race committee selects the wind velocity and course categories during or after the race, based on actual observation. While the competitors do not know their exact time of allowance during the race, the committee has a better chance of handicapping the race according to actual conditions.

"Scoring IMS can be as simple or sophisticated as the race committee wants it to be."

More sophisticated options generally require a computer. Course configurations other than the five offered on the certificate can be produced if someone in your race committee is handy with the necessary conversion of speeds to handicaps. Recently, a computer program has been developed that relieves the committee of selecting wind values entirely. The program, the primary version of which will ultimately be available from the AYF, is called Performance Curve Scoring and it works on an IBM-PC/XT/AT or close compatibles.

In simplified terms, the programme takes the elapsed finishing time for a boat and uses the boat's velocity prediction table to back-figure how much wind the boat must have "seen" to achieve its actual elapsed time. With its purely electronic logic, the programme will conclude that a competitor who has sailed the course well must have had

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3rd Hitchhiker

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more wind (i.e. sailed faster) than a competitor who did not sail as well. The competitor with the highest calculated wind velocity for the race sailed best over the course, and is the winner.

The wind velocity calculations are then converted back to hours, minutes, and seconds for a corrected finish time — primarily because competitors are accustomed to seeing results that way.

The most commonly asked questions about IMS ...

1. Good grief? What are all those time allowance numbers?

The numbers on an individual IMS certificate or scratch sheet are tables of time allowances, expressed as seconds per mile, for each yacht's predicted performance on specific course configurations in specific true wind velocities. The volume of numbers, in effect, is a representation of the IMS system's unique ability to adjust a boat's handicap to changing conditions and courses.

2. Isn't scoring terribly complicated?

There's nothing mysterious about it, there is a handy booklet available on the subject, *The IMS Race Committee Guide*. The booklet provides much basic information, with examples of the scoring methods clearly described. The *Guide* is a must for race committees and highly recommended for owners. It is available from your State Measuring Authority or Yacht Club.

There are a number of levels of handicapping that a race committee can manage effectively without the aid of a computer, using only the certificates of the competitors. Add an IBM-PC or compatible, and you can let the USYRU/IMS Performance Curve Scoring programme "do all the work." At all levels of scoring, the velocity prediction tables prepared for each competitor provide the basic numbers used for scoring an IMS race.

3. Why is LR 10 assigned as the General Purpose time allowance?

If nothing is known about the wind direction(s) the yachts will experience, it is assumed that all possible wind directions have equal probabilities of occurring. The Linear Random handicaps are based on equal time in all wind directions. The IMS Committee estimates that, on the average, the wind velocity most likely to be experienced on a race course will be something close to 10 knots. Therefore, LR 10 is considered to be the "safest" choice in circumstances where the race committee does not tailor the handicap to the course. This subject is now under active review to see whether an improved General Purpose Handicap can be ascertained to replace LR 10.

4. Does IMS account for *all* the variables in racing?

No. Although IMS provides superior relative handicaps over a wide range of boat designs and racing conditions, assumptions have had to be made about several factors that affect boat performance. Assumptions underlie *all* handicapping systems. PHRF and IOR, for example, effectively handicap for a single condition (a third each for beat, reach, run in ten knots of wind) and that's it. IMS, in addition to its comprehensive accounting of drag and drive factors, assumes:

a. that the crew sails the boat to its optimum.

b. that sails are of good design and well maintained (or new).

c. that the underwater surfaces of the boat are fair and clean.

d. that the boat is sailing in calm water (as with any rule, wave action and pitching moment are not accounted for).

e. and makes no attempt to handicap design elements such as bad hull or appendage form, keels too small to carry the boat to windward, etc., akin to "towing a bucket."

5. If a committee chooses to select wind values and course configuration after the race, how can I tell how my boat stands in comparison with my competitors during a race?

If the committee is using the basic LR approach and establishes a wind velocity value before the race starts, you know what the relative time allowances are, just as in PHRF or IOR.

If the committee is using post-race selection of conditions, you are somewhat on your own and will not know your relative time allowance until after the finish. Some mathematically inclined competitors have constructed comparative tables using time allowance numbers supplied by the race committee. They read the wind and make an educated guess as to the velocity and course that will be in effect, then compare how they are doing relative to the others.

Most don't worry about it, and concentrate on trying to sail their own boat to its full potential.

6. How long will it take to process my IMS measurement?

The processing isn't what takes the most time. It's scheduling and setting up for measurement. During peak measurement periods like the spring, the measurers may be flat out with measurement requests, particularly if weather has been bad. Plan ahead, right from the beginning of measurement!

7. What's the best boat type for racing under IMS?

Theoretically, the rule handicaps all boats fairly, but is nonetheless continually being upgraded. If a loophole appears, or as new research makes IMS improvements possible, the committee will change the rule. Currently, the IMS Committee is conducting new research to address the effect of pitching moment and any performance advantage to boats with light ends and those which can plane or semi-plane on reaches.

In any case, designers agree that IMS is far and away the most even-handed rule on the scene and that, among other things, the accommodations regulations obviate designing short-lived, stripped-out racing machines for IMS. Because the IMS Regulations are often applied, new boats for IMS racing are being built with full accommodations.

8. Do you have to be a mathematician to understand IMS?

Maybe to fully understand IMS theory, but certainly not to use it — just as you don't have to understand electronics to use a pocket calculator. The IMS publications explain how to use the rule in layman's language.

9. Why does an IMS certificate cost what it does?

While efforts are made to control costs, IMS was not intended to be a "bargain" rule, but rather a thorough, high-quality system — the best available. A big dividend, in addition to great racing, is the elimination of rapid obsolescence and depreciation of boat value.

Ongoing research, managing the current data bank, keeping the measuring machines in good health, and administration all cost money. The big plus is that once the measuring is done, the racing is excellent and the boats are wholesome.

Starting a fleet

HOW do you start an IMS fleet in your area? According to USYRU IMS Committee Chairman Neil Siegel, "You gather a group of sailors and explain to them the advantages of a rating system that is responsive to actual racing conditions. Once this basic concept is understood, racing sailors start getting excited — they want to go out and be competitive in all conditions. IMS satisfies this gut desire.

008 BROADENS YOUR HORIZONS

Now your business doesn't have to be restricted by its location.

With a 008 phone number connected to your office, customers interstate and nationwide can ring you for the price of a local call.

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Measuring the fleet and setting up the actual racing requires hard work, but the results are worth the effort. The key is understanding and then using the system. It sells itself after that."

Your State Measuring Authority will provide guidanceand informational support to anyone interested in forming an IMS fleet, but there are simple steps you can take to get an IMS fleet going. Your energy and leadership will make the biggest difference.

1. Target the reason(s) you want to start an IMS fleet.

According to IMS Committee member Skip Raymond, who has done a fair amount of stumping for IMS, "The basic case for IMS is that it provides a better rating on any given day. Other handicapping systems are single number rules ... upwind or down, heavy air or light, the number is the same. But that's not how the boats' performances actually compare to each other. One will dominate in light, and one will dominate in heavy air, one upwind, one down. It's not as much fun to go to the starting line and know who's probably going to win the race based on the conditions. IMS simply does a better job of turning any race into a test of sailing skill."

Thorough measurement and national processing of handicaps are further reasons which appeal to many owners and race committees alike. Numerous owners would prefer to know that their boat and the competitors' have been carefully measured, but feel they cannot race under other measured rating systems because their boats are not optimised to the rule. Race committees appreciate a central administration for certificates so they do not have to get involved in handicapping issues.

2. Contact all the people you think may be even remotely interested.

The more the merrier. If a local fleet numbers 20 boats, probably 12 will turn out for any given race. And the more boats you have, the better the chance that there will be groups of boats of similar size. Racing is more fun if the size disparity is not too great.

3. Start simply.

All of the groups now racing IMS worldwide started out with the most basic handicapping configuration — the "General Purpose" time allowance. No apologies. The General Purpose value was easier for newcomers to understand because it related to the single number handicapping systems they already knew. As time has passed, more and more groups are advancing to more complete use of the IMS system's sophisticated possibilities, usually in response to the enthusiasm of savvy skippers who see how equitable the scoring under IMS can be.

4. Have fun!

That's what you started racing for in the first place. Typically, IMS eliminates a whole lot of the gripes about handicapping (not all, mind you) and simultaneously gives you the tools to make a giant step forward in sailing performance. What could be more enjoyable to any sailor?

IMS publications ...

The following is a list of publications, most of which were mentioned in this report, that can prove educational and useful to any IMS sailor or race committee:

- **International Measurement System** — The official rulebook for IMS.
- **IMS Certificate** — Copies available for *any* locally measured IMS-rated yacht. Give yacht name plus sail number.
- **IMS Race Committee Guide** — A complete explanation of IMS handicapping methods, with examples. Valuable for race committees and competitors alike.
- **IMS Regulations** — Equipment and accommodations requirements for IMS boats.
- **IMS VPP Disk** — BASIC version of FORTRAN IMS VPP. 1987 edition, IBM-PC compatible. Available direct from the USYRU.
- **Performance Package** — Polar diagrams and performance tables for any IMS-rated yacht. These ultimately will be available from the AYF.

Unless otherwise directed, the publications are available for your State Measuring Authority or Yacht Club.

NOTES:-

(i) A Standard "Series Produced" yacht implies an identical hull within its class, and is one of the class which has already been measured to IMS with its data being available to the AYF (either from the AYF's own file of local measurement, or from the ORC'sfile). If the yacht is one of a class of which none have been previously IMS measured, and if it can be substantiated as being evident in Australian fleets in numbers which the AYF deem as sufficiently large and likely to be certificated, then it may be declared as "Series Produced", and only one of its class will need to be hull measured, (at no additional charge) and the remainder will become Standard "Series Produced". An owner intending to have his yacht so declared, may need to do some "groundwork" with other owners of the class, and then contact his State Measuring Authority.

Having been declared as Standard "Series Produced", in-water stability measurements and rig and sail measurements remain to be done if the yacht has not been previously IOR measured. This work together with hull measurement, if necessary, should be arranged through the State Yachting Association appropriate to your area. They will levy the charge and put you in touch with the measurer who will do the work.

(ii) Yachts which do not qualify as Standard "Series Produced" but which have been previously measured to the IOR need only to have their hulls machine measured. This should be arranged with your local State Measuring Authority as in (i).

(iii) Yachts which are neither Standard "Series Produced" nor previously IOR measured will require a complete measuring routine to be carried out, which can be arranged as in (i) and (ii).

The following are the approximate charges for IMS measurement and certification applicable in NSW. Consult with YANSW or your local measuring authority.

1	A STANDARD "SERIES PRODUCED" YACHT which has been previously measured to the IOR (See note (i) above).	Below 10m LOA — $300.00 10m-15m LOA - $350.00 Above 15m LOA — $400.00
2	A STANDARD "SERIES PRODUCED" YACHT which has NOT been previously measured to the IOR (See note (i) above).	Below 10m LOA — $450.00 10m-15m LOA — $500.00 Above 15m LOA — $550.00
3	A "ONE OFF" YACHT which has been previously measured to the IOR (See note (ii) above).	Below 10m LOA — $550.00 10m-15m LOA — $600.00 Above 15m LOA — $650.00
4	A "ONE OFF" YACHT which has NOT been previously measured to the IOR (See note (iii) above).	Below 10m LOA — $700.00 10m-15m LOA — $750.00 Above 15m LOA — $800.00

GETTING INTO IMS

The certificate ...

THE IMS certificate is not only a detailed record of measurement, but also provides calculated hydrostatic data, such as displacement, and indicates the speeds the yacht is capable of achieving at different wind velocities and on different points of sail — the kind of information that, in recent history, America's Cup yachts paid thousands of dollars to obtain!

At first, the wall of numbers on the certificate may seem forbidding, but, for the most part, it's really quite understandable. A key to translating important abbreviations is presented here, as well as in the IMS rulebook. For those who are mathematically inclined, the IMS book also delineates the formulas. As for the rest of us, the information on the certificate combined with some decent performance instruments on the boat will allow just about any sailor to achieve an improved measure of performance on the water.

Freeboard and prop measurements

SG — specific gravity of water in which boat is measured, needed to equalise fresh- and salt-water differences.

Sail measurements — except for mast diameters, same as an IOR Certificate and generally familiar.

Table of handicaps in different wind velocities, over different course types, expressed in seconds per mile. At the left is the general purpose handicap, which provides a number for general comparison among boats.

"The volume of numbers on the certificate or scratch sheet are, in effect, a representation of the IMS system's unique ability to adjust a boat's handicap to changing conditions and courses."

Owner's statement of responsibility

Centerboard measurements

General boat description

IMS AMENDED NOVEMBER 1987

RATING CERTIFICATE# 27701
BASED ON FULL MEASUREMENT

YACHT: AMERICAN SAILOR
SAIL#: US-12345
CLASS: SWN44

NOT VALID AFTER 12/88

44' SLOOP BY S&S
STD MASTHEAD RIG, 163% JIB
136 FIXED KEEL
EXPOSED, FOLDING PROP

I CERTIFY THAT I UNDERSTAND MY RESPONSIBILITIES UNDER THE IMS.

OWNER: John Sailor

MR JOHN SAILOR
123 CRUISING WAY
WINDY BAY RI 02840

----CENTERBOARD---------COMMENTS----------									
KCDA	.000	WCBA	0						
ECM	.000	CBDA	.000						
CBRC	.000	WCBB	0						
CBMC	.000	CBDB	.000						
CBTC	.000								

----FREEBOARDS----------				PROP INSTALLATION					
FFM	4.420	SFFP	3.098	PSA	19.000	PHD1	.230	PHD2	.000
FAM	3.530	SAFP	41.287	PHL	.590	PSD	.100	SHL	.410
SG	1.000			PSL	1.830	SHD	.210	PRD	1.360

------FORETRIANGLE----------				MAINSAIL----------				MAST-----	
IM	55.430	SPL	18.420	P	48.500	BL1	2.400	MDT1	.600
J	18.530	SL	55.500	E	14.350	BL2	2.400	MDL1	.980
LPG	30.100	SMW	33.500	BAL	.500	BL3	2.700	MDT2	.570
LPIS	.000	HBS	.000	BD	.510	BL4	2.700	MDL2	.760
FSP	.180	SPS	14.060	BAS	5.290	BL5	.000	TL	9.600
LP	30.280	SFJ	.800	HB	.500	BLP	12.500	MSW	.000
HBI	3.636	ISP	55.430	MW	.710	MGU	5.600	PC	48.500
IG	55.190	BATX	.000	GO	.790	MGM	9.400	EC	14.350

----MIZZEN----------									
IY	.000	PY	.000	BY1	.000	MDT1Y	.000	HBY	.000
EB	.000	EY	.000	BY2	.000	MDL1Y	.000	BLPY	.000
YSD	.000	BADY	.000	BY3	.000	MDT2Y	.000	HBIY	.000
YSF	.000	BALY	.000	BY4	.000	MDL2Y	.000	PYC	.000
YSMG	.000	BDY	.000	BY5	.000	TLY	.000	EYC	.000
				BTXY	.000	MGUY	.000	MGMY	.000

-- TIME ALLOWANCES IN SECONDS PER MILE ----------

GENERAL PURPOSE (LINEAR RANDOM 10)	TRUE WIND	WINDWD/ LEEWARD	OLYMPIC (6-LEG)	CIRCULAR RANDOM	LINEAR RANDOM	NON-SPINNAKER
569.2 SEC/MI	8 KT:	886.6	834.9	670.3	640.3	713.9
	10 KT:	758.0	721.0	589.2	569.2	623.9
	12 KT:	679.5	657.4	543.3	528.4	571.0
	14 KT:	629.9	618.6	515.4	502.6	535.5
	16 KT:	599.5	594.2	497.5	485.2	511.3
	20 KT:	565.6	566.4	475.1	461.9	483.4

MEAS# 0 John W. Wright Kenneth B. Weller

MR JOHN W WRIGHT
USYRU CHIEF MEASURER
BOX 209
NEWPORT RI 02840
OTHER MEAS:

MEASURED: 7/12/85
INP RCVD: 1/13/87
ISSUED: 1/25/89
FLOTAT'N: 6/ 2/83

KENNETH B. WELLER
USYRU OFFSHORE
BOX 209
NEWPORT, RI 02840
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Measurement and processing log

```
CERT# 27701    SAIL# US-12345              RUN DATE:  1/25/89
                                           INP RCVD:  1/13/87
YACHT:  AMERICAN SAILOR                 OFFSETS: S1360.LP

FORMER:                                 HULL: 0

----INCLINING TEST-------------------------  LIMIT OF
AW  85.0  AWD  23.600  APD 27.0  PL   1500.0  POSITIVE
BW 170.0  BWD  23.600  BPD 54.0  RMC  1907.2  STABILITY:
CW  85.0  CWD  23.600  CPD 28.0  RM2  1944.0
DW 170.0  DWD  23.600  DPD 57.0  RM20 1731.6  127 DEGREES
                                  RM40 1434.5
----CALCULATED STABILITY--------------------
HEEL IN DEGREES:    25      60      90     120     150     165
RIGHT ARM IN FT: 1.353   2.084   1.696    .374   -.767   -.727
RATIO OF STABILITY CURVE AREAS, POSITIVE/NEGATIVE = 6.227

----MEASUREMENT TRIM-----------------------------------------
KEEL DRAFT    (DHKO)  7.38    MAXIMUM BEAM     (MB)     12.55
ENDPLATE ADJ  (KEDA)   .00    2ND MOMENT LGTH  (LSMO)   35.39
DISPLACEMENT  (DISP) 28250    WETTED SURFACE   (WSO)    395.9
SAIL AREA     (SA)     872    PROP PROJ AREA   (PIPA)    .072

----SAILING TRIM (CREW & GEAR ABOARD)-------------------
SECT AREA @ MAX  (AMS1) 26.87   RATED BEAM      (B)      11.19
BEAM/DEPTH       (BTR)  3.38   SINK FORWARD    (SKF)     -.09
KEEL DRAFT       (DHKA) 7.52   SINK AFT        (SKA)     .30
CENTERBOARD EXT  (ECMA)  .00   WETTED SURF     (WS)     408.1
EFFECTIVE DRAFT  (D)    6.18   DISPLACEMENT    (DISP)  30525
EFFECTIVE CB EXT (ECE)   .00   CREW RT'G ARM   (CRA)     4.32
2ND MOMENT LENGTHS:      0 DEG HEEL     (LSM1)   35.57
                         2 DEG HEEL     (LSM2)   35.57
AVG LENGTH (L) 35.35    25 DEG HEEL     (LSM3)   35.19
                        SUNK CONDITION  (LSM4)   39.52
OPTIONAL REGULATIONS:
MINIMUM DISPLACEMENT IN MEASUREMENT TRIM:  12228 LBS.
MAXIMUM CREW: WEIGHT LIMIT=1899 LBS: NUMBER LIMIT= 11

--------SPEED AS A FUNCTION OF SAILING CONDITION---------

          OPTIMUM BEAT                  OPTIMUM RUN
 VTW  BTW     V     VMG  HEEL     BTW     V     VMG

   8   46  5.476  3.796  11       144  5.383  4.365
  10   45  6.199  4.351  16       147  6.267  5.228
  12   43  6.490  4.731  20       159  6.433  6.019
  14   42  6.653  4.976  22       167  6.899  6.712
  16   41  6.759  5.133  24       171  7.316  7.233
  20   40  6.883  5.283  28       174  8.046  8.004

        REACH         REACH         REACH         RUN
        BTW = 80      BTW =110      BTW = 135     BTW=180
 VTW      V  HEEL       V  HEEL       V  HEEL       V

   8   6.920  14     6.976   7     5.984   2     4.020
  10   7.421  22     7.543  11     6.948   3     4.942
  12   7.739  16     7.938  15     7.502   4     5.798
  14   7.996  20     8.244  20     7.920   5     6.598
  16   8.184  25     8.480  25     8.277   7     7.183
  20   8.407  32     8.810  33     8.892  12     7.976
```

Inclining test results, including righting moment and limit of positive stability. Limit of Positive Stability indicates maximum heel angle before the boat is more likely to turn turtle than return to upright with the crew aboard; higher is more stable. This is a primary ingredient in seaworthiness, and provides a useful comparison among boats.

Calculated stability at different heel angles, from 25 degrees to 165 degrees.

Important hydrostatics calculated in "measurement trim" — fully rigged but with no crew, supplies or sails aboard and, generally, tanks forward of the companionway empty, tanks aft, full.

Hydrostatics in "sailing trim" — with crew and gear aboard.

Beam to depth ratio (BTR) — general proportion of hull amidships. The lower the ratio, the slimmer and deeper the hull.

Wetted surface (WS) — immersed area with crew and gear aboard. Displacement (DISP) and wetted surface are given in both measurement and sailing trim, so owners have the chance to see the effect of loading the boat.

Second moment lengths — identify sailing length at different angles of heel. Average length (L) is a function of the first four measures.

Minimum displacement permitted in measurement trim under IMS Regulations.

Predicted speeds — This table is the most useful to skippers trying to coax maximum performance from their boats. VTW is true wind velocity. BTW is angle between boat's course and true wind, V is the boat's velocity through the water. VMG is the boat velocity made good directly into the wind or directly away from the wind.

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The Electronic Chart In Future Navigation

IN a previous talk to the Australian Institute of Navigation, I covered the development of the navigation chart in Australian waters, and alluded to the current and future development of the electronic chart; more properly entitled the Electronic Chart Display and Information System (ECDIS). Since then the Council of the AIN has agreed to establish a Users' Group for Australia and the terms of reference are currently being determined.

The navigation chart is only one of a series of documents on which the safe operation of a vessel is conducted. If full use of all information is not made, disaster can strike. The chart and associated publications describe a portion of the earth that cannot be seen. A 230,000 tonne vessel may appear to have plenty of tranquil water in which to operate but if a feature, even as small as a 44 gallon drum is lying around, trouble can be in the offing. A vessel of this size, proceeding at its service speed, has 10 times the inertia of a 747. With the engine going full astern, it takes 16 minutes and 43 seconds to stop, in which time it would have travelled 3,800 metres.

By Captain J.J. Doyle
RAN Hydrographer

Navigation of the vessel is controlled by reference to a number of sensors, the most important of which is still the compass. Positional information is derived by compass, radar, satellite navigator and Omega. Information can be gained from other sensors, such as the echo-sounder, a critical source when making a landfall.

This information, coupled with that contained in the sailing directions, list of lights, tide tables, and lists of radio signals, is co-ordinated by reference to the chart. At this point I must stress that all these published sources of information are corrected daily by radio navigation warnings and weekly Notices of Mariners. The enhancement and future replacement of the current system of providing navigational information must take cognisance of the factors outlined briefly above.

Until a new system can be relied upon to achieve the capabilities of the present methods, the new technology must remain a secondary aid. The paper chart is now compiled to the internationally accepted specifications of the International Hydrographic Organisation (IHO) an endeavour that took 61 years.

To achieve international specifications for the electronic chart in a shorter time

frame, a working group was established by the IHO in 1982 and close links with the Safety of Navigation Sub-Committee of the International Maritime Organisation (IMO) have been established through the IMO/IHO Harmonization Group. The outcome of these activities has been the production of a draft set of specifications which lay down the minimum data set which must be included in the internationally endorsed EDDIS.

However, there are more players in the field now. The Radio Technical Commission for Maritime Services has developed its own specifications which are currently in a third draft.

This is causing some concern, as the RTCM has adopted a contrary position as regards the interaction between ARPA and the electronic chart. (The IMO/IHO position is that chartered navigational dangers have higher precedence). Another point at issue is that IMO/IHO are directing their attention to developing one standard. The RTCM have developed standards for three classes of users or equipment.

New technology should be the servant of the user. It should be able to make the task easier, and ship operations safer. This is timely as the thrust comes to minimum manning. The large vessel mentioned earlier, although only eleven years old, is old technology and is manned by a crew of 25. Today a similar vessel would have a crew of 12. To optimise safety whilst minimising economic gains, technology such as the ECDIS must be introduced.

It is timely for the Australian Institute of Navigation to become involved in the development of ECDIS. I see in our user group a means of educating Australian mariners, particularly the yachtsmen and recreational boating enthusiasts, a means of disseminating information regarding developments, and a means whereby users can express their opinions. This Institute can act as a major focal point for directing the views of Australian mariners to the relevant authorities.

Chartlink Demonstrated

CHARTLINK Electronic display was demonstrated to the meeting by Mr. Bruce Webb of Datamarine International (Australia) the producer of this navigational aid. Chartlink displays chart details on an 8 inch computer screen at scales of 1:10,000 to 1:5,000,000. Positional information is obtained through an electronic interface to Loran or Satnav. Decca, Omega or GPS can also be used.

The chart data base for Chartlink is stored on plug-in cartridges, much of which can hold an average of ten paper charts. Any chart can be displayed with ease, and the display centred on and desired location. The chart can be zoomed in or out to vary magnification.

Waypoints for a voyage are defined to Chartlink by simply moving the cursor to the appropriate point on the screen. The track will then be shown on any relevant display. Position co-ordinates are displayed for each waypoint, and course and distance to the next waypoint.

Chartlink allows easy determination of the course and distance between any two points, and will join the points by a line on the screen. When connected to a positional source the vessel's position will appear at the centre of the screen. Speed, heading and position are displayed at the side. If the tracking function is turned on, the vessel's past track, will be shown on the screen.

Formation of joint Australian Institute of Navigation/Hydrographic Society Electronic Chart User Group

BEFORE national and international maritime authorities can endorse the general use of electronic charts in all classes of vessels, there are many policy and technical problems to be identified and resolved. What is considered suitable for the northern hemisphere, where extensive (and expensive) navigation and ship management infrastructure is in place and where the development of this new technology is occurring, may not be applicable in Australian and adjacent waters. Australian industry should be given the opportunity to become involved.

The development and introduction of the electronic chart, or more correctly termed, the Electronic Chart Display and Information System (ECDIS), will require the national maritime authority, the Federal Department of Transport and Communications, to co-ordinate input from a wide range of sources, including users, ship owners/operators, port authorities, hydrographic authorities, ship classification societies, standards associations, marine risk insurers, communication authorities, equipment manufacturers and educational authorities. A great contribution to the identification of many of the aspects surrounding the introduction of ECDIS can be made by the current and future users, namely the mariners stating their needs.

It has become obvious that there is need for an Australian forum in which the whole subject of ECDIS can be freely examined and discussed. In the Australian Institute of Navigation there is a readily available, well placed body, covering the whole spectrum of chart users, including the masters of large bulk carriers, port operators and recreational boating enthusiasts. Besides this maritime expertise, the AIN has members with wide practical experience with current aeronautical navigation systems, equipment which is the airborne version of the maritime ECDIS. The expertise within this body means that the opinions of some of its members can be invaluable on a whole range of matters.

To this end the Electronic Chart Users Group has been formed by the AIN in conjunction with the Australasian Branch of the Hydrographic Society, the latter representing the wider body of providers of hydrographic data. The User Group will be chaired by the Australian Institute of Navigation and will be supported by a small advisory panel comprised of a senior member of the RAN Hydrographic Service, a member of the Hydrographic Society East Australia Region and secretariat facilities. Subsequently it may prove desirable to add to that panel.

It is stressed that the main function of the User Group will be to clearly identify and state the mariners' concerns and perceived needs. It will not be to seek the administrative and technical solutions, which will firmly be within the domains of the maritime and hydrographic authorities and manufacturers.

The Australian Institute of Navigation proposes to hold a meeting in Sydney in early 1989 to which parties with an identified interest will be invited. The outline for the meeting will be the presentation of papers and questions arising during the morning and an open forum during the afternoon. The agenda proposed is:

- Broad outline of current situation and direction of policy. (Commonwealth Authorities)
- Shortcomings of current procedures and broad outline of requirements. (Marine/Users)
- Present and future requirements of the insurance industry. (Insurers)
- Broad outline of current state of the art and direction of research and development. (Manufacturers)
- Further development of format of ECDIS User Group/periodicity of meetings etc.

User Group Contact telephone numbers for the meeting are:
Captain J.J. Doyle (02) 925-4801
Commander E.R. Whitmore (02) 27-6114.

Sailing with the RUSSIANS

By Chris Terry, Stuart Nettleton & Peter Atkinson

OUR Hobart to Sydney race onboard *Veter* with her Russian crew was bound to be an experience from the outset and this was obvious from the first meeting with the crew at the YOTS briefing before the Sydney-Hobart. This introduction was interesting to say the least, and once we began to overcome the language barrier we knew we were in for quite an adventure.

Our journey began on Wednesday January 4 at 7.00 pm as we sailed into the very peaceful Derwent River bound for Spring Bay. Outside the Derwent we faced 25 knot winds, sea sickness and cold, all of which the Russians were quite adapt at but which us Aussies took some getting used too. Eventually we anchored at the rear of the channel which leads across to Triabanna and settled down to some "borscht" dinner.

The second day of our journey began at 7.00 am when the tide was high enough for us to pass through the channel. Unfortunately, *Veter's* engine began to overheat but luckily *Group Therapy* was kind enough to tow us through, until we met a Police boat which continued to tow us until we could continue under sail. The Police gave *Veter* a badge as a souvenir and Pavel, our skipper, told us all we must behave or he will arrest us as he was now an official Tasmanian Police Officer.

Us Aussies were fitting in well as Sharron showed by throwing all our cutlery overboard not realising it was at the bottom of the washing up bucket. We sailed all day and eventually made the start of the Crayfish Derby only four minutes late. The race was extremely interesting for us and to see the Russian crew work together was incredible. They have been sailing together for ten years and each had his own job, and all four of us were left to look after the back and stay out of their way. Our hard work paid off and we took out 2nd place on handicap and four delicious crayfish. Back at Spring Bay we all joined in the party atmosphere with the other boats and most of us stumbled into bed in the early hours.

Our third day began mid-morning and with our next port of call being Wine Glass Bay, we challenged *Mercedes IV* to a friendly race. Following the spectacular coast line we raced all day into a strengthening nor' easter and eventually beat *Mercedes IV*. Wine Glass Bay left us all speechless; sheer granite dropping into water protecting a magnificent bay with crystal clear water and a superb white beach running across the back. After dropping anchor we settled down to freshly caught flathead for dinner, given to us by one of the other boats who caught about 100, then a good nights sleep before an assault on Bass Strait.

The next day began the part of the journey which we all were anxious about, the crossing of Bass Strait. All the yachts began to file out of Wine Glass Bay began about 10.00 am and following the breath taking coast line we stayed in touch with *Witchdoctor*, *Animal Farm*, *Sir James Sopwith* and *Mercedes IV* before leaving them behind us by dusk. We were now beginning to adjust to the four hour shifts. When on deck we worked hard between Russian lessons and when off watch we eight ate or slept.

At around 8.00 am on the second day into Bass Strait we were wakened by a call on deck "whale" and us four newcomers raced on deck to see two whales no more than 200m from the boat. The wind now began to weaken and our boat speed continued to drop. Bass Straight was not what we had expected, yet we now had a chance to practice our navigation skills with the sextant, to dry out our soaked gear and to eat a hot meal! With dusk came a school of dolphins to dine with us and the start of a night with no wind, our progress being only 3 miles in 8 hours.

The new day saw a freshening wind which was very welcome. We were joined by a shark around lunch time and more dolphins in the afternoon. Then with a strengthening nor easter, eventually sailed into Eden around 12.00pm and to our surprise found that *Mercedes IV'* was already there, but later the truth was discovered as they admitted they were assisted by a 1500 rpm southerly from under the boat!

Eden proved a welcome rest for us and gave us a chance to shower and get a great big steak at the Fishermans Club. After all, one can only eat so much "borscht". Eden also gave us a chance to restock supplies and carry out some repairs to our engine which was overheating.

Bidding Eden farewell we set our sights to Sydney — our last leg of the journey. The wind had now turned south-west and with *Witchdoctor* in sight, we had a more leisurely cruise up the NSW coast. Our Russian was beginning to improve and we could actually communicate with all the crew now, even when they were yelling at us we could understand what they meant.

This part of the journey was more relaxing and enabled us to set a spinnaker for the first time. With our boat speed now around 8 knots we made good time and by the end of the second day, after Eden, South Head was in sight. Rounding South Head we were greeted by the yachts competing in the Wednesday twilight race and further down harbour we exchanged waves with a Russian container vessel departing Sydney, before heading for the CYC.

Arriving at the CYC we sat down for our last "borscht" dinner before being joined by our friends from the other yachts, which had also arrived that day for a party. The party continued onboard until the early hours in the morning and eventually we headed for our own beds to wake every hour in a bed you swore was rocking!

Three young Australians sailed aboard the Russian yacht Veter *on the return YOTS cruise from Hobart to Sydney. Despite the language barrier the voyage proved an immense success under Skipper Pavel Vassiltchenko from Vladivostok (pictured wearing visor).*

continued from page 15.

Yamaha Osaka Cup On Again in 1991

COMPETITORS are already gearing up to compete in the Yamaha Osaka Cup — the second Melbourne to Osaka Double-Handed Yacht Race, which starts on Saturday, March 23, 1991.

The yachts will sail from the Port of Melbourne to the Port of Osaka in Japan, a distance of 5500 nautical miles. The race consists of two legs, the first within Port Phillip Bay, and the second leg from Portsea to Osaka. It is the only yacht race in the world that crosses the Pacific longitudinally.

The race is planned by the City of Osaka, sponsored by Yamaha Motor Co. Ltd and organised by the Nippon Ocean Racing Club with the co-operation of the Sandringham Yacht Club.

The objective of the race is to promote a challenging long-distance, short-handed racing event that traverses the Pacific Ocean, and which provides a proving ground for true seamanship. It is also designed to encourage the development of suitable seaworthy yachts, with appropriate gear, supplies and techniques for short-handed crossing under sail.

The first race which took place in 1987 was a resounding success, attracting 90 entries from 10 nations. The event commemorated the 120th anniversary of the Port of Osaka, which is a sister port to the Port of Melbourne.

Councillor, Trevor Huggard, Chairman of the Melbourne Committee said, "We are very pleased to be associated with the yacht race, and with Osaka which is our sister city."

"I was involved with the first race when I was the Lord Mayor of Melbourne, and as I am a keen yachtsman it's very gratifying to play a continuing role in such an exciting event", he said.

Indentiboat Introduced

AN initiative aimed at both safe boating and vessel security, the Identiboat system, is being introduced to NSW as part of the Neighbourhood Watch, Marine, scheme. This follows discussions between Police, insurance groups and a wide cross section of the boating industry.

"Identiboat simply involves the engraving of a serial number on the hull of every craft, as well as the engraving of that number on every item which is removable", says Police Minister Ted Pickering. "The serial number complies with an internationally recognised standard which allows for immediate recognition of any craft.

"In the area of search and rescue, the Identiboat code will allow rescue personnel to immediately determine whether items found during a search actually belong to the missing craft.

"At the same time, Identiboat will become a great deterrent to marine theft. In much the same way as a householder engraves their valuable possessions with a driver's licence number, Identiboat numbers can be engraved onto portable marine possessions.

"Items such as outboard motors, radios, depth sounding equipment and other expensive gear will be protected with a ready form of identification.

"Identiboat will be used as an integral part of Neighbourhood Watch, Marine, and will offer unprecedented safety and security to the boating public".

An Australian yacht finishing the inaugural Yamaha Melbourne-Osaka Race.

30-Day Limit on Boat Registration

BOAT owners in NSW are to be required to pay their 1989 licence and registration fees on time or face cancellation.

The General Manager of the Maritime Services Board, Mr Les MacDonald, says that from January 1, licence holders and boat owners will be given only 30 days notice from the due date to pay the fees. Those not paid in that time would be cancelled.

There are 242,000 licensed recreational boat drivers in NSW and 140,000 registered recreational boats. This number had increased by an average of more than 10 per cent in recent years.

A person must be licenced to drive a boat at 10 knots or more, while all recreational vessels capable of more than 10 knots or more than nine metres long must be registered.

Historic Limited Edition Print

AN historic Limited Edition print of the 1988 Bicentennial Australia of the Year, Kay Cottee, has been released for sale.

The colour 440mm x 550mm print shows Kay and her famous yacht Blackmores First Lady off the east coast of Australia with Kay waving an Australian flag.

As an added bonus, Kay has agreed to personally sign each of the prints or even endorse them to a company or individual.

Proceeds from the sale of the prints will go to Kay and will represent her first real chance to earn money from the voyage around the world. Since her return home in June last year Kay has dedicated all her time to raising funds for the Rev Ted Noff's Life Education Centres and to date has raised more than $400,000. Her fund raising efforts have precluded her from earning any real income for herself.

To order one of the historic prints send $130 plus $15 delivery to Showboat Productions, Suite 2, 113 Willoughby Road, Crows Nest, NSW, 2065. Phone (02) 439-1781 Fax (02) 957-1638. Allow at least 14 days for delivery.

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Beam:
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Draft: Shoal *(Wing)*
4'9"

Deep
6'8"

Displacement: Shoal
14,900 lbs.

Deep
14,700 lbs.

Ballast: Shoal *(Wing)*
6,000 lbs.

Deep
5,800 lbs.

Mast Height *(Fr DWL)*:
59'0"

Headroom:
6'3"

Sail Area *(@ 100% foretriangle)*:
704 sq. ft.

E *(Mainsail foot)*:
15'6"

J *(Foretriangle base)*:
13'6"

P *(Mainsail luff)*:
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I *(Foretriangle height)*:
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Double Passage to Newcastle

The annual MSB-CIG Sydney-Newcastle Race drew a good fleet headed by Rod Muir's maxis — Windward Passage II, *skippered by Muir, and the original* Windward Passage, *skippered by his wife Kathy. (Pics — Max Press)*

INTRODUCED in 1988 as part of the aquatic celebrations for the Bicentenary, the Sydney to Newcastle Race has become part of the Cruising Yacht Club of Australia's offshore programme, bringing with it the enjoyment of a fast overnight passage race to a different port and the subsequent social activities ashore at the finish.

The second event, in mid-February, again attracted the support of the Maritime Services Board and sponsorship from CIG, along with enthusiastic support ashore and afloat from maxi yacht owner and developer, Rod Muir. Muir not only entered his two maxi yachts, the timber-hulled 20-year-old 72-footer *Windward Passage*, and his state-of-the-art new 80-footer, *Windward Passage II*, but he also turned on a magnificent post-race party for the visiting yachties.

This was held in the Windward Passage Tavern, a bar built around the mould used to construct the exotic hull of *Windward Passage II*.

Muir had good reason to lead the celebrations around the port of Newcas-

tle, his two maxis took line honours in their respective divisions and they also won on corrected time.

Muir, skippering *Windward Passage II,* sailing her first overnight race since the setback in the Sydney-Hobart, took line honours in the time of 6 hours 58 minutes 52 seconds but only an hour ahead of the veteran *Windward Passage* — skippered by his wife, Kathy, and sailed by a crew of all woman.

The old boat, refitted for cruising after a long and illustrious international racing career, was superbly sailed by Kathy Muir and her crew, which included Around Australia Race co-skipper Cathy Hawkins, Olympian Nicola Green and experienced ocean racing helmswoman Vanessa Dudley. In a boat-for-boat dual up the coast, *Windward Passage* beat the fast 60-footer *Rager* across the line by seconds.

On corrected time, *Windward Passage II* won the IOR Division while *Windward Passage* won the Performance Handicap Division in what must have been an historic result in yachting.

Sailed in mild east nor'easterly winds, the MSB/CIG race attracted a fleet of 46 yachts. Race conditions were ideal, just one yacht, *Chloe,* failed to finish the event.

Second to *Windward Passage II* in the prestigious IOR category for grand prix race yachts was Warren Johns on *Beyond Thunderdome,* trailed by Max Ryan's *Venture I* which crossed the start line early and was forced to circle back through the fleet.

Ocean Blue Resorts sailed by Graeme Lambert, took fourth in the IOR Division from *Swuzzlebubble Six,* the ex-New Zealand Southern Cross Team yacht now sailed by Sydney's Colin Boyle and *Nadia IV,* owned by the Canberra based author, Teki Dalton.

In Division II of the IOR fleet, John Eyles' *Indian Pacific* took the honours from Ray Stone in *Middle Harbour Express* and *Invader* sailed by Eric Stano.

Apocalypse, *Ben Lexcen 50 was sailing for the Lexcen Memorial Trophy.*
(Pic — Peter Campbell).

Impeccable *(John Walker) heads for Newcastle.*
(Pic — Peter Campbell)

Above Left: Farr Out.

Above: Nadia IV *recovers from a recall at the start.*

Left: The late afternoon sun silhouetted the fleet and the Harbour Bridge following the start of the MSB-CIG Sydney-Newcastle Race.

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The Petersville '89

Victoria's popular Petersville Regatta once again attracted a huge fleet, racing under IOR, CHS and VYC divisions. Highlighted by the final race from Portsea to Blairgonrie (top). Among the more radical entrants was Elliot designed Sportscar *(above) while a Sydney competitor was* Phoenix Contractor *(left). Pics by Bill Bachman.*

More Magic from Illusion

THE PETERSVILLE, Melbourne's annual weeklong regatta for IOR, VYC and CHS-rated yachts continues to grow in status and in the size of the fleet that it attracts each January for the six-race series on Port Phillip. This year the total entry exceeded 100 boats, and the fleet included recent international competitors *Great News, Prime Factor, Phoenix Contractors* from Sydney, *Ultimate Challenge* and *Once A Jolly Swagman* from Melbourne, and the 1988 AWA Sydney-Hobart winner, *Illusion*.

Great News, the Farr 50 which led the Australian team to victory in the 1988 Kenwood Cup in Hawaii and went on to win the Big Boat Series in San Francisco, *Prime Factor* and 1987 Admiral's Cup team yacht *Ultimate Challenge* were all using the series as part of their preparation for the 1989 Admiral's Cup trials — unfortunately, with not great success.

The grand prix big boats found themselves being outsailed, as they were in the Sydney-Hobart, by the Three-quarter ton rating lightweight Davidson 34s, with Melbourne yachtsman Gino Knezic proving that his victory in the Hobart race with *Illusion* was not sleight of hand off the east coast of Tasmania.

Knezic is only the second Victorian to win Australia's major ocean classic, and he followed this fine victory by winning the 1989 Petersville Regatta. He now follows closely in the wake of the only other Victorian to win the Sydney-Hobart, veteran bluewater yachtsman Lou Abrahams.

Both are members of Sandringham Yacht Club and both followed their Hobart wins with a victory in the Petersville, Abrahams winning with *Challenge II* in 1983-84. Both have also now won the Petersville more than once, Abrahams' tally being three wins since the regatta began in 1979.

As Gino Knezic pointed out, it is one thing to win the Sydney-Hobart, another to outsail Victoria's best offshore racers — and some of the best in Australia — in round-the-buoys racing.

Knezic is now considering taking the Davidson 34 to Greece to contest the world Three-quarter Ton Cup. "Not only is *Illusion* fast, but we believe she is at a stage of development comparable with the latest One Tonners, and possibly ahead of the latest European boats of her size and rating," Gino said after winning the Petersville.

Principal helmsman in the Petersville, as in the Hobart race, was Ross Lloyd, North Sails manager in Melbourne and former world Quarter Ton Cup champion. However, guest helmsman for the two mid-series 15-milers was John Bertrand, making a welcome and impressive comeback to big boat racing with a first and a third. Later in the week he joined the Farr 50, *Great News,* as the planned driver for the last two races, but 20 minutes into race five *Great News* twisted her mast and retired from the race and the series.

Illusion, built in Melbourne by Ken Jago to the latest concept of Laurie Davidson, won three of the six races in the Petersville, finishing with a remarkably consistent scoreboard of 4-4-1-3-1-1 for a total of 493 points.

Lou Abrahams' Dubois One Tonner, *Ultimate Challenge,* steered by Olympic Soling skipper Gary Sheard, finished second on 489 poins with placings of 10-1-6-1-3-2 while the other new Davidson 34, *Chutzpah,* was third on 481 points. Owned by Bruce Taylor and Hank Shilte, *Chutzpah* placed 6-2-2-NF-7-2.

The regatta was sailed in generally good breezes, the only complaint being in the opening race, a 60-mile day/evening race which saw many of the bigger boats parked down the bay as the smaller yachts brought the seabreeze with them. Future regattas will see this "long" race kept within the northern half of the bay to avoid the split winds further south.

The bigger boats suffered in the first race, with yachts rating Three-Quarter Ton or less filling the first six places. *Great News,* the champion 50-footer owned jointly by David Forbes of Sydney and John Calvert-Jones of Melbourne, had a 16th in race one, but improved with an 8th, two thirds and a second. Then, in the passage race from St Kilda to Portsea, two checkstays broke at the start, the mast twisted badly and skipper Calvert-Jones pulled out.

The 1989 Petersville Regatta attracted some 112 entries in the three rating divisions — IOR, VYC and CHS. The largest was the VYC division with more than 60 entries and keen competition that saw consistency the key factor in an overall win by Graham Baldwin's Quarter Ton rating *Horizon Sails,* skippered by Graham Baldwin. *Horizon Sails'* placings were 22-3-9-2-4-7 for 475 points, giving her a last-race victory.

Vendetta, Tony Cittadini's Inglis 50 won three races in the VYC division, but a 26th in race one and a 32nd in the final races saw it slide from first to third in final standings with 470 points. Second place went to *Evasion,* skippered by Peter Davidson with 472 points, with a second its best place.

Two Farr 750s, *Farr Better* (Chris Carlile) and *Farrnatic* (Malcolm Carey) dominated the CHS division, raising some doubts as to equality of the Channel Handicap system. *Farr Better* won four straight races then finished with an 8th and a 2nd to finish with 498 points. *Farrnatic* had four straight seconds, a 13th and a last-race win — by seconds — to finish with 492 points.

The traditional massed start of the final race off Portsea Pier, with the regatta fleet joined by the trailable yachts, Jubilees and 'Couta Boats for the last race of their three-race Petersville Series, again produced a great spectacle. In all more than 180 yachts took part in the final race from Portsea to Blaigowrie.

Overall winner of the Petersville Series for trailable yachts was *Frolic,* a Boomerang 20 skippered by Andrew Guiney, with a three-race series of 8-5-1 to finish with 287 points. Runner-up, on 284 points was the Timpenny 790, *Fringe Benefit,* skippered by Fred Stebbing from placings of 2-3-11, with the Noelex 25, *High Society* (Peter Taylor) third with 276 points from placings of 10-12-2.

In the 'Couta Boats division, with the entries totalling 27, the overall winner was *Helen* (Richard Hoppe) from *Alice* (Robert Kimpton) and *Jessie* (Milton Green).

Petersville Regatta 1989 — IOR Division:

1. *Illusion* — Davidson 34 — Gino Knezic, SYC — 4-4-1-3-1-1 = 493 pts;
2. *Ultimate Challenge* — Dubois 40 — Lou Abrahams, SYC — 10-1-6-1-3-2 = 489;
3. *Chutzpah* — Davidson 34 — Bruce Taylor/Hank Shilte, RYCV — 6-2-2-NF-7-2 = 481;
4. *Prime Factor* — Farr 40 — Bob Brady, CYCA — 12-5-5-4-4-4 = 478;
5. *Once A Jolly Swagman* — Davidson 40 — Chas Jacobsen, SYC — 14-6-4-5-2-9 = 474.

Victoria

Royal Geelong's 125th Australia Day Regatta

THE Australia Day long weekend saw the usual mass exodus of yachts from all over Port Phillip racing to Geelong. The weather was kind and as usual Royal Geelong Yacht Club provided facilities and a welcome that ensured all participants had a great time.

This year saw a change of format for the representative teams events with the traditional overnight race, starting on the Friday night, being replaced by a zig-zagging day race to Geelong on the Saturday. This added to the spectacle of the yachts arriving as all the fleets entered Corio Bay on Saturday afternoon.

GEELONG ADVERTISER TROPHY

The team representing the Royal Yacht Club of Victoria won the IOR Advertiser trophy by a narrow 1.75pt margin from the favoured Sandringham team, with the Ocean Racing Club finishing third.

The first race started in a fresh northerly breeze that died away for a time before the arrival of a southerly that got the fleet into Geelong.

As expected in these conditions the lower rating boats performed well with the "Zulu Tribe" Quarter Tonner *Imazulutu*, sailed by Simon Dodds from Geelong, winning from Hans Van Meus Half Tonner *Sirocco* and John Molloy's Kaufman Quart, *Great Scott*.

Sunday afternoon's Olympic course race was sailed in a fresh southerly and the many spectator boats were treated to an excellent exhibition of One Ton racing by Ron Elliot's crew on his new Farr design, *Joint Venture*. They led for most of the race to be pipped in the closing stages for line honours by John Taylor's Frers 44, *Contractor*, but leading the next One Tonner by nearly four minutes.

Second on corrected time was Bill Hales' veter an S&S34, *Red William*, with the Davidson 34, *Chutzpah*, sailed by Bruce Taylor, third.

The trophy for the top scoring boat of the series was won by an ecstatic Bill Hales, sailing *Red William*, with placings of 5th and 2nd.

Veteran former Admiral's Cupper Mercedes IV *is still winning in Melbourne Bay racing. Skipper is Rob Williams.*

TEAM PLACINGS:

1st, Royal Yacht Club of Victoria, 40 pts — *Red William*, 5, 2; *Chutzpah*, 6, 3; *Great Scott*, 3, 21; *Hummingbird*, 23, 22.

2nd, Sandringham Yacht Club, 41.75 pts — *Joint Venture*, 13, 1; *Ultimate Challenge*, 8, 7; *Once a Jolly Swagman*, 14, 6; *Illusion*, 7, DSQ.

3rd, Ocean Racing Club of Victoria, 56 pts — *Shenandoah II*, 4, 9; *Fire & Ice*, 9, 11; *Nuzulu*, 10, 20; *Challenge 3*, 24, 13.

STRIPROLL INDUSTRIES TROPHY

The Striproll Trophy, raced on VYC Performance Handicap, was won by the team from Royal Melbourne Yacht Squadron by a comfortable margin from Sandringham and Hobson's Bay's teams.

The first heat was won convincingly by Royal Melbourne's *Sportscar*, a skiff-like Elliott 10 metre, which had recently benefitted from a somewhat controversial handicap adjustment. Second was the veteran Van de Stadt, *Poseidon*, with Mornington's *Take Five*, third.

The big Inglis designs, *Vendetta* and *Scavenger*, both representing Royal Melbourne, revelled in Sunday's fresher conditions to place first and second over the line and on handicap. Third on handicap was the Cole 43 *Ariane* from Royal Brighton.

TEAM PLACINGS:

1st, Royal Melbourne Yacht Squadron, 59.5 pts — *Sportscar*, 1, 12; *Vendetta*, 21, 1; *Scavenger*, 38, 2; *Starlight Express*, 23, 23.

2nd, Sandringham Yacht Club, 68 pts — *Dorado III*, 13, 7; *Poseidon*, 2, 20; *Lulagui*, 4, 30; *Dry Land*, 22, 22.

3rd, Hobson's Bay Yacht Club, 79 pts — *Fantasea*, 15, 8; *Widgeon*, 17, 9; *North Encounter*, 14, 17; *Ericka*, 28, 16.

JOG VICTORIA TROPHY

The JOG series this year was contested by only five teams with victory going to Sandringham Yacht Club from Royal Geelong and the Royal Yacht Club of Victoria.

In the first heat the Farr 740, *Spaghetti Machine*, won from Geelong Half Tonner, *Ali Del Aria*, and another Farr 740, *Farr Better*.

Ali Del Aria won the second heat on her home waters comfortably to take the Martini Trophy for the top scoring individual entry. The Davidson Quarter Tonner, *Shambles*, finished second with *Great Expectations* third.

TEAM PLACINGS:

1st, Sandringham Yacht Club, 24.75 pts — *Spaghetti Factory*, 1, 5; *Farr Better*, 3, 4; *Hi Hopes*, 5, 7.

2nd, Royal Geelong Yacht Club, 42.75 pts — *Ali Del Aria*, 2, 1; *By Pass*, 6, 13; *Osprey*, 11, 11; *Gone With the Wind*, 10, 17.

3rd, Royal Yacht Club of Victoria, 44 pts — *Shambles*, 8, 2; *Re-Invention*, 9, 5; *Indian Pacific*, 12, 8.

Digby Trophy To Patrol

THE Royal Yacht Club of Victoria's E.O. Digby Trophy was won this year by Kevin Wolfe's Mottle 33, *Patrol*. Geoff Hope, sailing his Diamond, *Hot Stuff*, was second with Daryl Abraham's Adams 40, *Carina*, third.

Farr 50 *Great News*, sailed by John Calvert-Jones and working up for the Admiral's Cup Trials, had a good race taking both line and IOR honours.

She lead Alex & Tony Cittardini's Inglis 47, *Vendetta*, over the line by a comfortable margin and narrowly beat Ron Elliot's Farr 40 *Joint Venture* on IOR by .02 minutes. Lou Abraham's Dubois 40, *Ultimate Challenge*, ws 1.5 minutes further back to take third on rating.

Other Divisional winners were as follows:

DIV 2 VYC — *Sirocco* (Hans Van Meus).

DIV 3 VYC — *Warrana* (Geoff Barret).

CHS DIV — *Starlight Express* (Buster Hooper).

JOG DIV — *Great Expectations* (Graham Baldwin).

New South Wales

The Australia Day Cup — A Corporate Feast

ON Australia Day this year, amid the confusion of spectator craft and the spectacle of the ANZ 12 Metre Challenge, history was being made on Sydney Harbour in another way. While the MSB battled to restore order, some of Sydney's best known ocean racing yachts were engaged in their own battle for the honour of winning the inaugural race for the Australia Day Cup.

Established to accommodate the growing need for a significant fully-sponsored yacht race, the Australia Day Cup invites companies and yacht owners to support each other, to participate in the celebration of Australia Day and to assist the development of youth sail training.

Honours and the Waterford Crystal Australia Day Cup went this year to Esanda Finance, represented by Warren Johns on *Beyond Thunderdome*. In an exciting finish under the Harbour Bridge, *Zap* narrowly took second place from *Ocean Blue Resorts* representing Mercantile Credits. Closely behind came the spinnakers of Chas Corporation, Imperial Peking Harbourside, TNT, State Bank of Victoria, Peters Ice Cream, Rheem Australia, Harrison Electrical and King Gee. Out of the placings but well sailed were *Rager, Starlight Express, Animal Farm, Vanguard, Nadia IV* and *Buckle Up*, the backmarkers at the handicap start having to suffer a fading breeze.

Funds raised from this year's Australia Day Cup were used to purchase two Pacer dinghies to be used by the Yachting Association of NSW in their youth coaching and training program. The Pacer was chosen because of its versatility, being a stable training boat with light weight racing performance.

Mr Bernard Peelgrane, Executive Director of the Yachting Association of NSW, has confirmed the YA's support for the Australia Day Cup and will be encouraging all Yacht Clubs to get behind this event. Mr Peelgrane said "The YA of NSW is pleased to be associated with the Australia Day Cup which, through its organisation and its generous corporate sponsors, is making a real contribution to the future of our sport. We look forward to a continuation of the race each Australia Day and to bigger and more competitive fleets in the future."

Alby Wins Again

"A good lazy run sailing under a big kite all the way to Coffs" is how Alby Burgin described his victory in the monohull division of the Budget Lease Management Sydney-Coffs Harbour short-handed race.

Alby, 73, sailed his 15.2m Adams design *Alstar* across the line 11 minutes ahead of the 18m *Crusader* sailed by John Biddlecomb and Sarah Wilks.

Burgin and 21-year-old crew member John Belcher who sailed together in the Around Australia Race completed the course in 29 hours 14 minutes. *Alstar* was engaged in a tacking dual with *Skoiern IV* throughout the race with the two yachts constantly in sight of each other. *Alstar* eventually jibed inside of *Skoiern* and stole the lead.

Australia's champion multi-hull sailing team, Cathy Hawkins and Ian Johnston claimed their fourth consecutive line honors victory in the Budget Lease Coffs Harbour Race, sailing their 13m trimaran *Verbatim*.

Sails for Cancer Raise $100,000

THE fifth Annual Sail for Cancer Research on Sydney Harbour raised $100,000 for the Leo and Jenny Leukaemia and Cancer Foundation.

Sydney Harbour was filled with over 200 boats flying the red Sail for Cancer pennant and red balloons. To see the fleet heeling around Pinchgut was a thrilling sight, *Windward Passage 1* threaded her way through a mass of boats with apparent ease chasing *Ragamuffin*, you could almost step from boat to boat.

Huge fleet on Sydney Harbour for the fifth annual Sail for Cancer Regatta. The event raised $100,000.

The *Banjo Patterson* was with the Sail, and the crew and guests had more excitement than they bargained for when they rescued the guests aboard the burning charter vessel *Sveiardis*. The rescued Americans had a quick whip around to support the fund.

The Royal Prince Alfred Yacht Club, Pittwater, organised a Pittwater Spectacular with sailing races, barbeques, a dinner dance and over 200 boats participated throughout the weekend. The RAN, Jervis Bay put on their first Sail for Cancer with the support of other clubs in Shoalhaven to help raise funds for the Leo and Jenny Leukaemia and Cancer Foundation.

Sponsors for the 1989 Sail included AGC, McDonalds, Honda, Artarmon Motor Inn and Caltex and all the generous boatowners and their guests who entered the three Sails for Cancer.

The Sail may be able to support three to four research and treatment programmes into leukaemia and cancer in the next year, a very significant contribution to the fight against malignant disease.

News From All Ports

Queensland

Nero Burns Them Up

NERO, a typical American cruising sloop designed for comfort and speed, and skippered by Bob Taylor, which is on an extended cruise to Australian east coast ports, won the Arbitrary Division of the Australia Day Harbours and Marine Regatta at Mooloolaba with a 6-1-1 series.

Taylor and his attractive crewmates were a distraction on the course with the deck rig to suit the warm climate. Tney were also good sailors proving *Nero* sailed as well as she and crew looked.

Gerry Humphries' Radford-Adams sloop *Valkyrie,* a withdrawal from the Melbourne-Osaka race and second to the Kel Steinman *Flying Colours* (John Lake) when she shattered the Melbourne-Hobart Westcoaster record, came out of retirement to finish second overall.

John Watson, the Mooloolaba Yacht Club secretary/manager and winner of the Arbitrary SCOR championship at Mooloolaba last August, finished third with the Adams 10, *Alchemy.*

Good Exposure for Sponsor

NORTH Coast skipper John Ponton has offered excellent exposure for his sponsor Hyatt Regency Coolum resort. Ponton contested the North Queensland JOG title at Mackay and the XXXX Classic at Southport before winning the JOG title at Mooloolaba. *Hyatt Regency Coolum* won the series in the final race from Mooloolaba to Noosa and return.

Fellow Mooloolaba Yacht Club member Bruce Laming, who shared a rare dead heat with Ponton in race two, entered the final race as the series leader. But the extensive racing program favoured *Hyatt Regency Coolum* to win the series by 1.27 pts highlighting the closeness of the competitition.

Mike Munro and his Bowen crew scored a deserved third place with *Eric IV* finishing another 2.37 pts astern.

The Farr 40's *Queensland Maid* (Bob Robertson) and *The Gambler* (Ian Kenny) staged a very close boat on boat go-fast match race for the IOR Class title. Robertson again showed an upwind advantage to finish with the perfect 1-1-1 score, but the gap between both combinations was only minor.

Kenny's crew are improving with every hard race and have the potential to end Robbo's domination of Queensland Offshore racing in the late summer long distance races. Reg Brost finished third in each race but gained valuable experience with his sloop, *Charade.*

A spirited three-way struggle developed for the Channel Handicap title between Royal Queensland Yacht Squadron skipper Andrew Wiklund *(Blue Peter),* Mooloolaba's Brian Keelty *(King Arthur)* and Queensland Cruising Yacht Clubs *Bonaventure* (Warren Smith).

Blue Peter won the showdown by the narrow margin of one point after placing 2-1-4 from *King Arthur* 3-4-1 and *Bonaventure* was another .5 away with her 1-tie 2-5. The tie shared with Tony Woodcock's *Pabati III* which carried 2.5 pts instead of the outright second place 2pts was the difference between second and third overall.

South Australia

By Geoff Kingston

COLIN Smith, one of South Australia's best known yachtsmen has almost completed one of the most exciting and adventurous projects in his long career.

He has recently retired and with the help of Peter Lauridsen, is putting the finishing touches to his Hank Kaufman designed 48-footer.

Smith is building the boat in rented facilities at the John Duncanson yard at Port Adelaide and figures it will be ready for launching in June.

The cedar epoxy cruiser-racer to be named *Rapid* after the boat sailed by Colonel Light — the architect of Adelaide's envied city design — will be used by Smith for extended cruising.

And he plans to do a share of racing also.

In fact, one of his priorities will be the challenging China Sea Race out of Hong Kong in the Easter of 1990.

The 600-mile classic will give Smith the chance to renew friendships with some old friends from his five years in the British Colony.

Smith worked in Hong Kong while on assignment with the government in two tours of duty — from 1969 to 1972 and from 1977 to 1979. Mates from those heady days will form most of the crew for the China Sea Race.

It was during Smith's time in Hong Kong from 1969 to 1972 that he won selection for the Munich (Kiel) Olympics, representing Hong Kong in the Flying Dutchman class after beating Neil Pride in the Olympic trials.

This past season, Smith has been at the helm of a chartered Etchell — *Excalibur* — and has guided to near the top of the fleet in the chase for the State championship.

GEORGE Snow's *Dr Who,* with Fred Neil at the helm, dominated racing in South Australia during a quick raid after the Sydney-Hobart race.

The slick Davison 52, formerly the Rod Muir owned *Dr Dan,* took line honours in the prestigious Adelaide-Lincoln race and even in the light conditions which prevailed, almost grabbed first place on handicap.

She also grabbed a first and a second in Division 1 and IOR during the Lincoln week regatta which followed the Lincoln race before heading back east.

Race officials hope that *Dr Who's* presence at Lincoln might help entice other interstate boats in future years to a week of sailing and social encounters that many believe are unrivalled in Australia.

SA designer and boat builder John Duncanson, might just have done it again.

The highly regarded and successful Duncanson has for the past 25 years produced yachts of high quality and performance that won him wide acclaim.

There was the Duncanson 29, 34, 35, 37 and 40. It was the Duncanson 40 which earned for him the prestigious Prince Philip Award for Australian design in 1986.

Now his new design, the Duncanson Offshore 30 is making heads turn just as some of his earlier designs have done.

It is the first production cruising yacht in the series which includes the Offshore 37, the Offshore 41 and the Offshore 43.

Brian Mellors of Searles Boat yard is in the process of getting the boat established in the minds of Australian buyers. . . "It is a long term project," he said. "But we have enormous confidence in the potential of the yacht which many who have seen it believe is ahead of its time."

Tasmania

RYCT retains the Sayonara Cup

THE Royal Yacht Club of Tasmania has again retained the historic Sayonara Cup, now sailed in International Dragons. This year the Cup regatta, sponsored by National Mutual, drew challengers from two Sydney clubs, the Royal Sydney Yacht Squad-

News From All Ports

ron and the Royal Prince Alfred Yacht Club, and two Victorian clubs, Royal Geelong Yacht Club and the Royal Melbourne Yacht Squadron.

Geoff Morris and his crew, Andrew Cutler and Andrew Spring from the RSYS, won through to the cut-throat elimination series to become the challengers with *Intrigue*. Nick Rogers, Bill Bourne and Phil Taylor, sailing *Karabos IV*, won the right to defend the Cup from other Tasmanian crews.

In the Challenge Match, Nick Rogers retained the Sayonara Cup 4–0, after a give-no-quarter battle with Morris. The series produced outstanding match-racing, with intense tacking duels, tactical manoeuvres and fine sailing by both crews — not to mention the odd protest.

US Admiral's Cup in disarray

THE US Admiral's Cup team plans are in disarray. Potential team members Randy Short *(Sidewinder)*, Irv Loube *(Bravura)* and John MacLaurin *(Pendragon)* were each intending to enter their boats as the US team.

Since then, MacLaurin has withdrawn his entry and Short has halted work on his new *Sidewinder* in favour of chartering a British boat for the event. He is reported to be looking at the Castro-designed *Turkish Delight*.

The re-keeled *Bodacious*, a Farr One Tonner, is currently in Brazil and also said to be available for US charter.

Gilmour second in Congressional Cup

AUSTRALIA'S Peter Gilmour finished second in the 1989 Congressional Cup — an excellent effort considering that he and his crew reached Long Beach, California, a day late because of the extra day of racing in the Admiral's Cup in Melbourne. They flew out of Melbourne for the US on the night the trials finished and went straight into tuning up their allocated Cal 38 sloop.

"It was like stepping out of the space-age into Noah's ark," said Gilmour, who steered *Madeline's Daughter* into a place in the Admiral's Cup team.

Gilmour last year became the first Australian to win the prestigious Congressional Cup, this year again sailing with most of the same crew who are now part of the Bond America's Cup sailing team. Sailing with him were Chris Harmsen, Glenn Bourke, Iain Smith, Tony Bellingham, Greg Cavill and Mark Walsh.

This year he faced a fleet of largely US invited match-racing experts, along with expatriate American Rod Davis who now lives in New Zealand, Eddie Warden-Owen from the UK and Japan's Makoto Namba.

Davis, who finished second to Kiwi Chris Dickson in the 1988 world match-racing championship in Perth, won the series with an unbeaten string of nine wins in the round-robin series. Gilmour finished second with seven wins and two losses — one to Davis, the other an unlucky loss to local Long Beach sailor John Shadden.

Third overall was American Peter Isler, the *Stars & Stripes* tactician with a 6–3 score, followed by *America II* tactician and Olympic silver medallist John Bertrand with a 5–4 score.

Then placed John Shadden 5–4; Eddie Warden-Owen 4–5; Dave Perry 4–5; Makoto Namba 3–6; Bill Lynn 1–8; Steve Steiner 1–8.

JOG Nationals To Gingerbread Man

TWO outstanding yachts dominated the Crisis Couriers Australian JOG Australian championships sailed off Sydney in January. Winner in the fleet of 35 was the South Australian yacht *Gingerbread Man*, the 7.34m lightweight yacht designed by John Duncanson and built and skippered by his son Scott.

Runner-up was the 7.52m *Box Office*, skippered by Steve Gunns and Tony Zanelli of Sydney, which set a new standard for the JOG fleet by being built IOR-style from exotics by John McConaghy.

Racing was conducted by the Royal Sydney Yacht Squadron on the Manly Circle off Sydney with a variety of races in distance from eight to 60 miles. Most courses were compact with exciting racing, quick trips in close company to the laylines and plenty for all crewmembers to do in the shifting south-easterlies and demanding seaway.

The top yachts quickly showed out as *Gingerbread Man* won the first two races with *Box Office* second. Races three and four saw the positions reversed. Races five and six were decisive and it turned out to be all the South Australians as *Gingerbread Man* won both with the Sydney crew again second.

For the record the last race went to *Box Office* with *Gingerbread Man* second. Showing how close the racing was between the two, the corrected time margins never exceeded one minute.

Final score 1st, *Gingerbread Man* 1, 1, 2, 2, 1, 1, 2 and second *Box Office* 2, 2, 1, 1, 2, 2, 1.

Third spot was a struggle between the new Phil Atkinson designed *D4*, sailed by Noel Leigh Smith of Queensland, and two Sydney yachts, the MASRM 720 *French Connection* (Rik Dovey) and older sistership to the regatta winner, *Itzalizard* (Peter McNamara). All three yachts were tied on points for third going into the last race. In the end it was the *Lizard* third ahead of *French Connection* fourth. All five were in division one for the custom designed lightweight designs.

Division two, for production yachts, was a clean sweep for the Farr 740 *Completely Harmless*, skippered by Peter Townsend and Bruce Whyte, ahead of another Farr 740, *Small Commission*, skippered by Bill Slater. The Farr 727 *Corfu*, skippered by Alfie Hancock and Neil Taverner, was third.

Division three, for heavy displacement yachts, went to the Defiance 30 *Crackajack* with Leigh and Barry Killingworth in charge. Second place went to the Holland 38, *Derailed*, skippered by David Fairfax, third to another Defiance, *Justine*, skippered by David Parsons.

The overall victory to *Gingerbread Man* marked the end of a successful campaign for skipper Scott Duncanson and crew including designer John. The three year old boat, built by Scott from fibreglass sheathed cedar, was a development of a five year old design.

Gingerbread Man first raced in the JOG Nationals two years ago to finish second behind multiple winner *Two Desperados*. Scott then began planning for the 1989 nationals and with John began a program of fine tuning and modification aimed at getting good speed in all conditions.

A new, deeper elliptical fin, lighter by 100 kg but with lower centre of gravity and a small bulb added to the tip improved light weather performance. New hull ends were added too, in the bow the forefoot made a little deeper and the stern finer with chines to reduce buoyancy and bow down attitude when hard reaching.

New sails and a highly refined deck layout made the yacht easy to sail and the crew of four did an excellent job throughout the series.

In contrast, the one thing the crew of *Box Office* did not have was time, she was launched just before the championships. Owners Steve Gunz and Tony Zanelli went to David Lyons and Tony Laubreaux of Seaflyer Naval Architects (NSW) for "a no compromise" JOG boat.

The result was a fast yacht with low rating that was built IOR grand prix style, from exotics with little expense spared. Her hull incorporated uni-directional Kevlar and R-glass laminates and the deck had uni-directional Kevlar and carbon/Kevlar hybrid cloths. Vacuum bagging of the hull over divinycell foam cores resulted in a superb finish and, according to Lyons, a yacht which was very stiff and light, particularly in the ends.

It was not only the construction materials that set *Box Office* apart from the rest, her design was very different too with an extremely fine entry with hollow waterlines, narrow waterline beam, flat run aft and somewhat pinched in stern below flared topsides that carried maxim beam right aft to the transom and put crew weight right outboard at all times.

At times *Box Office* was as fast as the winner, but her crew needed extra time to get the boat consistently to its potential.

Off the water there was inevitable debate over *Box Office* and whether it was "good" for the class. The argument was solely along the lines of the cost of exotic materials and whether it was worth spending about $100,000 on a 24 ft yacht, 30-40% over the timber/fibreglass norm.

The Australian JOG Association decided that next season it will consider banning such exotics as Kevlar and carbon in hulls and titanium in fittings.

It should be an interesting debate.

Rik Dovey

Tasmanians on Top in Dragons

THE Commonwealth Bank Australasian Dragon Championship, for the Prince Philip Cup, was sailed out of the Royal Yacht Club of Tasmania in January, comprising two invitation races, the Charles Davies Memorial Race, and seven Championship heats.

Apart from consistent Royal Geelong Commodore Peter Jackson and his crew, Stephen Peel and Stephen Jackson, sailing *Breanne*, who managed fourth, none of the interstate competitors made much impact on what must be Australia's strongest Dragon fleet, the 18 strong group that sails out of the Royal Yacht Club of Tasmania.

It wasn't local knowledge either; OOD Brian Donaldson set fair courses with good starting lines and the current and weather signs were there for all to see.

The fleet of 26 was half fibreglass and half timber. Some beautifully refurbished mahogany dragons are now making their appearance and 1986 Prince Philip Cup winner Steven Boyes sailing 31-year-old *Maj Britt* which has been re-decked, the hull routed down to 11mm and a 6mm mahogany skin glued on, won two heats, as did Ted Laing sailing the re-decked 27-year-old *Cambria*.

The 1977 winner *Chip*, magnificently refurbished and sailed by Justin Barr from Mornington Yacht Club in Victoria, nearly won a heat too but his forestay pin dropped out somewhere on the second run while in the lead and he sailed the final heat with the mast supported by the luff of the genoa only and finished 5th!

Nick Rogers, Bill Bourne and Phil Taylor sailing their radical fibreglass Dragon *Karabos* won the series with a consistent 1, 5, 2, 3, 3, 2, 2 = 20.4. Rogers is a multiple Australian Mirror champion and made 3rd at the Mirror Worlds in Ireland in 1986. He made the transition into Dragons 15 months ago and originally performed well in winds

Chardonnay, *sailed by Murray Walters, winner of the J24 Nationals on Melbourne's Port Phillip Bay.*

up to about 15 knots but had more difficulty in heavy airs.

Karabos was radical in having a particularly clean deck layout, below deck drums instead of winches and runner wheels, gybing lines which lead from each spinnaker clew, through the end of the spinnaker pole to the cockpit, jam cleats mounted just behind the brace barber hauler to hold the brace and minimise stretch, and a very high cockpit floor.

The hull was built by Ridgeway in 1985 and spars were Alspars. Rogers used a North genoa and main for the heavy airs in flat water, a McDairmid main for choppy water and a Frazer genoa for light races. A crosscut HST Walker spinnaker was used throughout.

Results:

1. *Karabos VI,* N. Rogers (Tas) 1, 5, 2, 3, 3, 2, 2 = 20.4
2. *Maj Britt,* S. Boyes (Tas) 2, 9, 9, 4, 1, 4, 1 = 34.0
3. *Ragtime III,* D. Healey (Tas) 8, 1, 4, 12, 6, 1, 8 = 47.7
4. *Breanne,* P. Jackson (Vic) 4, 8, 11, 11, 2, 3, 5 = 57.7
5. *Cambria,* E. Laing (Tas) 21, 7, 1, 1, 12, R, 3 = 63.7
6. *Tickleme,* T. Moody (Vic) 9, 4, 6, 8, 7, 5, D = 71.7
7. *Kirribilli II,* J. Ford (Tas) 7, 10, 3, 5, 15, 10, 6 = 72.4
8. *Jock Robbie,* B. Calvert (Tas) 10, 2, 19, 6, 4, 11, 13 = 74.7
9. *Nan II,* H. Gibson (Tas) 6, 3, 12, 9, 9, 8, 10 = 77.4
10. *Rage,* P. Jackman (Tas) 16, 11, 13, 2, 8, 6, 9 = 79.7.

Class Newcomer Wins J24 Nationals

THE first heat of the J24 National Championships, held by Royal Brighton Yacht Club on Port Phillip Bay, gave a good indication of things to come being won by *Chardonnay,* sailed by Murray Walters.

Chardonnay sailed an extremely consistent series as evidenced by counting no worse heat result than third. Class builder Ian Bashford also sailed consistently in *Cab Sav* to finish 8 points behind *Chardonnay.*

Third place went to top local boat *Cookie Monster,* sailed by Ian Torode and Nick Chapman, on a count back from Dayne Sharp's *Another Sailpac.*

In a series where the favourites failed to dominate, another relative newcomer to the class, Peter Thompson sailing *Mad If You Don't,* was the only boat to win two heats.

BAINBRIDGE *Around the Sail Lofts*

SAILCLOTH

North Sails Melbourne

Our congratulations to all our customers who achieved good results in both the Sydney and Melbourne ocean races.

We have also built the sails for the new "Sportscar" a boat designed by New Zealander Greg Elliott, with one thing in mind — line honours. This completely new concept of boat features wings in both the hull and keel. In early trials this 33 footer would almost sail with One tonners upwind, and downwind showed amazing speed against all types of boats. Featuring a large roach fully battened mainsail, masthead and three quarter rig spinnakers, this boat will provide high speed excitement plus sailing.

As well as building racing sails the loft has been involved in many large and small cruising projects, both in multihulls and mono's. North Sails can now boast the broadest range of up to date cruising packages on the market.

In conjunction with North Sails Germany we have been developing the latest 420 sails, resulting in two boats finishing in the top ten with our locally made sails at the recent World championships held in NSW.

The lofts One Design team has been further strengthened with the appointment of one of Victoria's most respected sailors, Glen Collings. Glen who has won the OK Dinghy World championships, is the current Soling National title holder, and just recently finished 2nd in the Tasar World championships. Glen's area of responsibility will be to help One Design sailors improve their skills in sailing, sail trim and tuning of rigs and boat.

Steve White from the loft has teamed up with Matt Ross to complete in the 470 class at world level over the next 3 years with success at the Barcelona Olympics as their goal. Between Noel, Glen and Steve the loft can provide the best One Design sailmaking system available.

For information, advice or any sail requirements, please call into our loft, and see Ross Lloyd and our team. You are always welcome at the North Loft.

Hood Sails Perth

HOOD Sailmakers are proud to announce the appointment of Mark Lovelady as the director of their new loft at: 242 Sterling Highway, Claremont, WA 6010 Perth. Tel: (09) 384 8800.

Mark, an experienced dinghy and keelboat sailor, will be offering the full range of Hood Racing Sails and Cruising products.

For Racing Sails the new loft will have direct access to the computer driven plotter for the most up to date designs and precision drawn sails.

For long life cruising sails, Mark will be able to draw on the experience and expertise of the worldwide network of Hood lofts as well as having access to Hood's own specialists sail cloths.

The new loft will continue to offer fast and reliable sail repairs and the sale of Hood Stoway Boom and Furling Systems.

Yachtsails Adelaide

YACHTSAILS (R.J. Brown) P/L of Adelaide formerly Ray Brown Sails, was first formed in 1974. Ray Brown, who served his apprenticeship with Rolly Tasker is one of the leading sailmakers in Adelaide.

Initially with success in catamarans and dingys, Brown recognized the trend towards larger boats and his success in a Duncanson 25 *Quarter Pounder*, which he modified himself and a Farr Sport *Minimum Chips*, established him as the leader in the production of performance sails for the trailer-sailer market.

In late 1984 Brown switched to keelboats and now sails a Beneteau First Class 10 *Silicon Chips* which has performed outstandingly. In the last 2-3 years, yachts equipped with Brown's sails have filled major places in most divisions in the keelboat clubs, as well as every feature event. His reputation as a leading sailmaker has spread Australia wide and Yachtsails now supplies sails to all other states.

Although specializing in the 6 metre plus range including catamarans, Yachtsails still caters for yachts of all dimensions, from the fastest keelboats in the state to the sail training ship *Falie*.

CAD programmes from America have further improved our designs and we are now very proud to represent the UK Tape Drive sails. This method of producing high tech sails offers the best durability coupled with the basic sailmaking principals certainly gives great value and performance.

Yachtsails (R.J. Brown) P/L, 25 Vincent Avenue, North Brighton, 5048 SA.

Hood Sails Adelaide

THE 1988-89 Sailing Season has been an exciting one for us at Hood Sails in Adelaide. The introduction of the Computer Plotter at the Head Loft in Sydney has seen more good sails produced consistently. Sail orders are faxed through to Sydney, which plots the design onto the cloth, then packed and shipped to the local loft to build and finish off. This relates to all types of designs from Crosscuts through to Full Radial and Dacrons through to Spectra 1000.

Spectra 1000, the new blue cloth, has appeared on many boats this season. The most successful result this season undoubtedly was by *Dictator*, the 38ft Duncanson IOR rater, in this years Sydney-Hobart Race. *Dictator*, owned by Adelaide veteran Offshore sailor Dick Fidock, finished sixth overall and second in Class C. The sixth place was the best South Australian overall result since Norman Howard in *Southern Myth* placed third in 1958. *Dictator* was fitted with computer plotted Spectra Main and No. 3, ½ oz reaching spinnaker and 1½ oz all purpose spinnaker prior to the Hobart Race by our Hood Adelaide Loft.

Apart from the big boys, Hood Sails in Adelaide have also begun developing Etchell Sails with Hood owner Haydn Soulsby buying *Empire Strikes Back*. This year we have added a number of new sails to Haydn's boat and though still in the developmental stage, some of these helped him to second overall in the State Championship.

What's New

Sawtron K9 commercial portable transceiver

IMARK Communications Pty. Ltd. have released the SAWTRON KG 109-40D05KW Scanning Portable Transceiver for use in the 450-486 MHz Commercial band.

The SAWTRON KG109 is a UHF FM frequency synthesised portable transceiver with 99 channels. It has dual RF Power Outputs which are able to be preset from 1 watt to 5 watts. The

KG109 is compact in size and has the benefit of being water resistant.

State of the art circuitry includes a microprocessor and EPROM for frequency and function control, Battery Saver circuit and Squelch Tail Eliminator. Two MC Filters and a ceramic filter ensures excellent receiver performance.

The SAWTRON KG109-40D05KW has targeted the professional market area and offers performance, reliability and value to the most discerning user.

Further details can be obtained from the importers:
Imark Communications Pty. Ltd.,
167 Roden Street, West Melbourne, Victoria, 3003
Telephone (03) 329-5433 Fax (03) 328-4431 or Sydney (046) 272-535.

Complete SSB Radio Package from Datamarine

THE days of having to shop around for all the various components that make up an SSB radio package are now a thing of the past. Datamarine announces the release of the SEA 222 synthesised HF/SSB transceiver, SEA 1612 automatic antenna coupler, Rupp mounting systems and Morad whips to provide the complete SSB package in one go.

The SEA 222 is no stranger to our shores. With a coverage from 2-23mHz and 390 channel memory, the SEA 222AUS is the essence of simplicity. Simply punch in the frequency you require and adjust the volume. That's all there is to it. Your signals are fed directly to the SEA 1612 automatic antenna coupler which provides maximum transmitting power over the full 23mHz range. And once the coupler has been tuned to any particular frequency, its own memory ensures instantaneous matching as soon as you key the microphone.

Making sure the full power of the SEA 222AUS gets to its destination is the job of the Morad whip antenna. Available in three sizes, Morad antennas cover the frequency range of the radio equipment and are made of corrosion resistant aluminium base tubing with fibreglass whips on top. They are designed to withstand wind strengths in excess of 160 kilometres/hour.

And to allow you to mount your antenna in the best possible way to suit your craft is the Rupp range of antenna mounting systems. Made of forged aluminium anodized in silver and gold, all Rupp mounts have Delrin clevises to eliminate corrosion and isolate the antenna. The range allows easy mounting to the sterns of yachts, cabin tops of cruisers and towers of game-fishing boats.

Further information: Datamarine International Australia Pty Ltd, 7-9 George Place, Artarmon NSW 2064. Tel: (02) 428 2800, Fax: (02) 428 1650.

Prestressed Concrete Technology used in Whitsunday Coast's First Mainland Marina

A BREAKTHROUGH in modern concrete technology has been used in construction of the first mainland marina servicing the Great Barrier Reef's thriving Whitsunday Passage tourist area.

Koppers prestressed concrete decks and prestressed hollow spun concrete piles, together with double treated hardwood marine piles to provide flexibility in design, were used in the now completed first stage of the Abel Point Marina at Airlie Beach, less than 10 kilometres from Proserpine and just on shore from major Whitsunday resorts such as South Molle, Hayman, Hamilton and Lindeman Islands.

The initial stage of the development, a joint venture between Abel Pacific Limited and Kimberley Securities Limited, consists of 147 berths, with power and water supplied to all pens and provision for telephone and video connection.

Radio Telex: ARQ Benefits 'Discovered'

UNIQUE advantages of a new radio telex system are just beginning to be appreciated by radio telephone users around Australia, say the manufacturers.

The system is the ARQ Radio Telex, made and distributed by the Perth company Barrett Communications — the only Australian manufacturer of automatic request systems.

The company says you can use the ARQ to send error corrected messages over high frequency radio circuits up to half way around the world.

Computer files can be created using a word processor and they can be transmitted direct from disc to air using an ARQ terminal modem.

The system may be used where no telephone lines are available to enter Telecom's telex network via the Overseas Telecommunications Commission and can transmit messages direct to any telex machine in the world.

The system includes a complete selective calling (selcall) system with 456,976 codes. International ship number codes are also accessible to the user.

Panasonic Launches Marine Radio

PANASONIC enters into the Australian marine electronics market with the launch of a high quality marine radio.

Two years in the making, model KX-G2220 is expected to fill a niche in the market for a top quality, water-resistant unit that transmits and receives on the VHF band.

The KX-G2220 has hermetically-sealed boards and water-resistant speaker and microphone. It can be cradle mounted or installed flush in the console. The control housing can be tilted up to 10 degrees to optimise the viewing angle.

What's New

New Robertson Workpilot Autopilot Announced!

ROBERTSON Autopilot have compressed into the familiar compact "black box", a NEW autopilot that frees all crew for the work in hand. Whether it is shooting nets, trawling, towing or cruising, the NEW AP45 will take control of the vessel against the stresses of wind, tide, high seas, towing etc.

Rudder Offset Trim in manual or autopilot is the new feature which gives this pilot its remarkable ability. If, for any reason, the vessel takes on a crab-like attitude when following a given course, the Robertson AP45 can be instructed to take a new rudder position as 0°. Weather and towing stresses will not change this trim. The vessel will maintain course as long as this side drag is encountered.

This facility operates in conjunction with a compatible Sat-Nav. This brings with it all the efficiency of waypoint course maintenance over long distances through constantly updated satellite information automatically computed to give the vessel's correct position. Cross track error can occur and is displayed in the control window, however, this new system is designed to eliminate, or at least, really minimise any cross track error.

The Robertson AP45 actually 'learns' how the rudder of any individual craft responds to commands and compensates to eliminate overshoot during autosteering. Even increasing wear in the steering gear will be taken into account whilst the AP45 is in command.

In order to obtain this high level of performance (a simple procedure during commissioning and/or sea trials) a set of steering parameters applicable to the specific vessel are addressed and stored in the autopilot memory. The pilot can be fine tuned by two push buttons on the control panel marked Rudder and Weather.

As well as the course display window, there is an information window on the AP45 control unit. This states clearly the state of operation, trim, weather compensation etc at the touch of a button.

Further information: Milan Stepanek at Quin Marine Pty Ltd, GPO Box 384, Port Adelaide, SA 5015. Tel: (08) 47 1277. Fax: (08) 47 7331. Telex: 88009. NSW Enquiries: Mobile: (018) 82 0651, AH: (02) 398 6946, Fax: (02) 398 8416.

Navico System 200 From Echo Radar

ONCE again Echor Radar, of Port Adelaide have introduced a range of digital, nautical instruments that operate on the forefront of today's state of the art technology, the Navico System 200.

Compact, waterproof and absolutely surface mounting, these instruments are easily viewed, simply set and perfectly damped to produce optimum readout accuracy.

Navico System 200 instruments are designed to be mounted on the bulkhead or pedestal in the cockpit and, consequently, are able to withstand the tough environment and swamping expected in the open cockpit of a sail or power racer. A tactile rubber key pad ensures reliable waterproofing in what is normally the area most vulnerable in these conditions.

The Navico DS200 digital echo sounder is a highly intelligent instrument, controlled by a powerful, internal, 8-bit computer, offers six user functions whilst carrying out many automatic tasks. All functions are easily selected via the key pad and depth readings remain faithful in all modes of operation.

User functions include top and bottom alarms (or depth guard and anchor watch windows). Both settings are shown on the large LCD display and an audible warning is given if the boat enters a depth of water within the alarm zone.

The Navico DL200 digital speed/log is a quartz crystal which guarantees the supreme accuracy of all time calculations within this highly sophisticated tool. Primary and secondary data is displayed in large and small LCD characters simultaneously and updated instantly.

User functions include Trip/Log, Elapsed Time and Trip Counters which can be locked at the end of a race and recalled to assess racing problems and average speed over the whole race.

The Race Timer functions as a ten minute countdown to the start of a race, emitting alarms at five minutes, five seconds to zero and zero, or race start. Speed readings are transferred from small to large characters when zero is reached, whilst Trip and Elapsed Time set to zero automatically.

The Navico WD200 wind speed and direction system is a dual function instrument which incorporates both digital and analogue displays combined with superb damping to eliminate flutter and present precise readings in the display.

Wind speeds between 0 and 99 knots are displayed on the LCD. Night time illumination is automatic as natural light fails.

The mast head unit comprises a solid state hall effect switch embedded in epoxy resin for total weather proofing and a wind direction vane which is coupled magnetically into the circuitry — also to ensure sound weather proofing. All active parts are so protected resulting in complete reliability.

Matching Repeaters, Close Hauled and VMG Indicators are available options to make the NAVICO SYSTEM 200 as fully comprehensive a navigation/racing instrument system as any available today, most of which are far more costly.

Full colour brochures & details of nearest agent are available from the importers & distributors ECHO RADAR PTY. LTD., GPO Box 12, Pt. Adelaide, SA 5015. Telephone (08) 47 1503. Telex 88009. Telefax (08) 47 7331.

Chartlink Adds New Dimensions To Navigation

THE American marine electronics manufacturer Datamarine has introduced the greatest navigational innovation since the marine chart itself — Chartlink.

Chartlink Model 7000 is an electronic chart, displayed on a small (200mm x 200mm) CRT screen. A compact cassette loaded with 10 charts of the area in which you are interested is loaded into the Chartlink. When the machine is turned on it displays the largest scale chart in the cassette. By pushing the MAP function, the screen shows the boundaries of the smaller scale charts in that portfolio, allowing you to choose the one required. All the charts are based on the official RAN Hydrographic charts using the same boundaries, and are available for most Australian and New Zealand waters.

The position of your boat is superimposed on the chart by input from a sat/nav or GPS system. Your position shows up as a cross-hair, and its co-ordinates are printed out on the display beside the chart.

With the cross-hair as the starting position, you can plot where you want to go and the chart will tell you how far it is and what course to steer. Separate functions allow easy measurement between any two points and the display will show your actual track, speed and course made good according to the sat/nav information it receives.

The chart cassettes are regularly updated, so your Chartlink will always display the latest information.

Chartlink runs off 12 VDC, draws approximately 1 amp, and can take inputs from Omega, Decca, GPS as well as Loran and sat/nav.

Chartlink is marketed nationally with service and back up facilities from Datamarine's distributors and authorised agents in all states.

Further Information: Datamarine International Australia Pty Ltd, 7-9 George Place, Artarmon NSW 2064. Tel: (02) 428 2800, Fax: (02) 428 1650.

GME Electrophone Digital Depth Sounder

GME Electrophone announce the release of the new GME Electrophone Model PL1A Digital Depth Sounder. The GME Model PL1A is an easy to operate Depth Sounder with large LCD Display for easy reading and backlighting for night use. Enclosed in a compact (130 x 76 x 114mm) rugged, splashproof housing, it is ideal for installation in open boats or flybridge installations.

Automatic bottom tracking and gain controls locate the seabed and provide an accurate readout of the water depth. The PL1A also features a Shallow Water Alarm to alert the navigator when depths are becoming shallower than the Alarm Range Setting. When triggered, the alarm produces an Audible Buzz and a Flashing Symbol on the display.

Depth Ranges from 1 to 120 metres are displayed, with depths below 10 metres in 0.1 metre increments. The PL1A operates on a frequency of 120 KHz. As most other Sounders operate on 50 or 200KHz the PL1A can be operated at the same time as other 50/200 KHz Sounders without causing any interference or false readings.

What's New

GME Electrophone of Gladesville, have branches in all mainland States and have some 800 dealers representing their product across Australia. With personal representation and an extremely strong and active Dealer network, GME customers can rely on excellent sales support and, most importantly, on-going service support for all products on a National basis.

Beneteau BWS Beats Osmosis

BENETEAU, the world's largest yacht manufacturer, has recently introduced a revolutionary new system that considerably increases resistance to hydrolysis of fibreglass hulls — code named BWS (Beneteau Water Shield).

After extensive research, Beneteau development have invented the most efficient shield imaginable. The BWS system is slipped between the laminate and the gelcoat and is completely integrated within the manufacturing process.

Designed to reduce polyester shell aging by three times with an internationally registered patent the BWS system is the biggest innovation in 30 years of polyester shell production.

The outcome of this to the average enthusiast is a ten year hull guarantee against marine osmosis on all new yachts. The biggest concern of all boat owners must be the possibility of osmosis.

According to Beneteau, this fear is now solved. BWS and a 10 year warranty backed by the largest yacht builder in the world is sure to guarantee buyer confidence.

More information: Beneteau Yachts Australia Pty Ltd. D'Albora Marina, New Beach Road, Rushcutters Bay, NSW, 2027. Telephone: (02) 327-2088.

New Keypad Microphone

IMARK Pty Ltd have released the Azden DH-T10B hand microphone for use with commercial, marine and CB mobile transceivers.

The Azden DH-T10B Microphone features a DTMF tone encoder as well as an ANI encoder, attractive styling and is housed in a modern ABS plastic moulding. It can be used with any transceiver which uses a standard dynamic microphone without an amplifier.

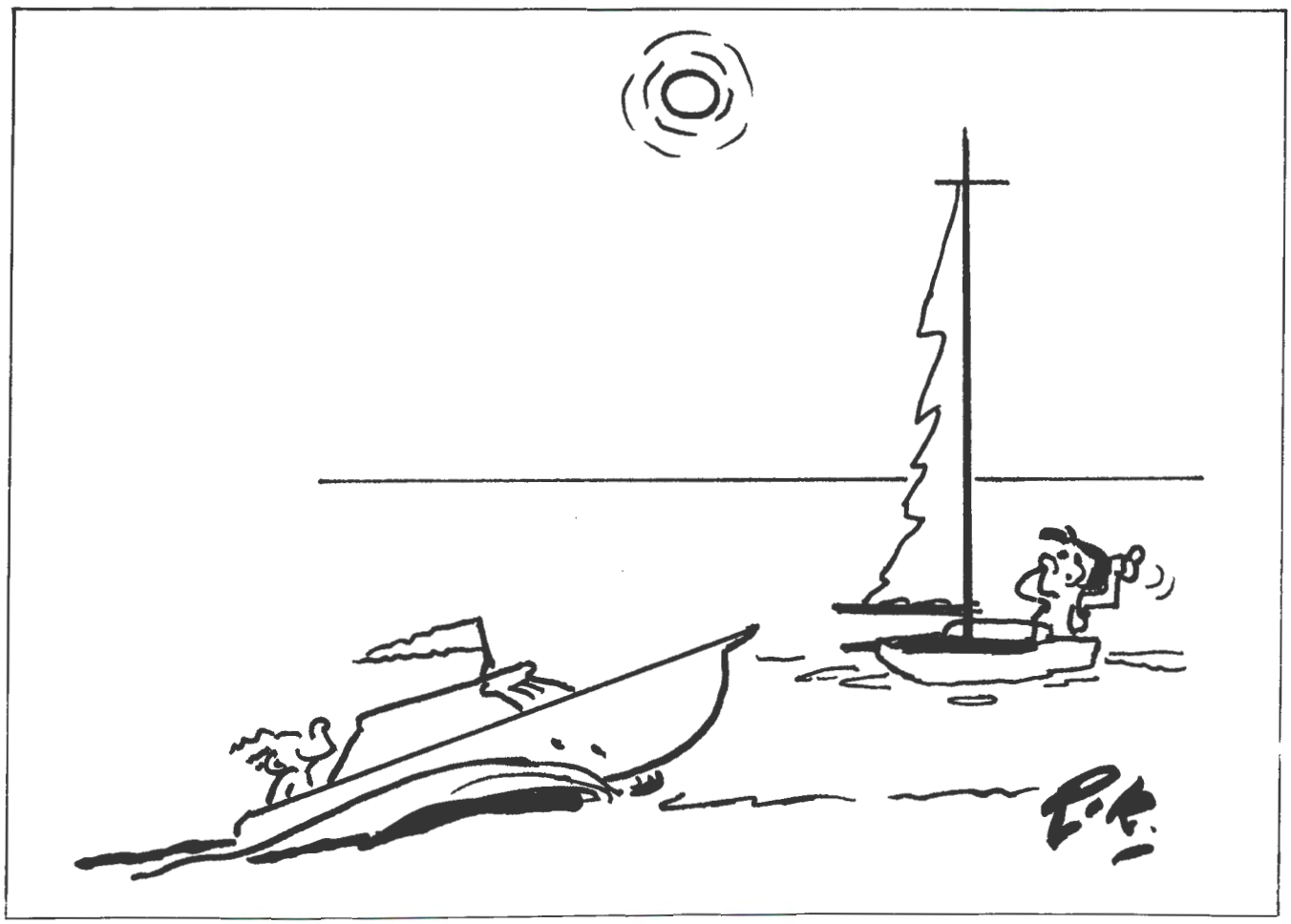
It incorporates a 16 key keypad and a switch to engage (or disengage) the DTMF function as required. A red LED illuminates whenever a keypad key is depressed and the piezoelectric buzzer acts as an Audio Annunciator by reproducing the DTMF tone.

The * or # keys are used to transmit a preset ANI code sequence. This code sequence can be readily programmed and the DTMF dialling speed can be adjusted from 10 to 40 pulses per second.

More information: Imark Communications Pty Ltd. 167 Roden Street, West Melbourne, 3003. Australia. Telephone: (03) 329-5433. Fax: (03) 328-4431.

Affordable Boat Alarm From Solo Marine

SOLO Marine recently announced their appointment as distributors for the Australian-made Adalett boat alarm systems. Extensively tested in Western Australia where they are manufactured, the Adalett system is designed to protect



power-boats, yachts and even outboard motors on trailerboats.

The basic alarm system comprises a control unit, alarm, cables, control and two reed switches or relays, which give protection to two openings — i.e. cockpit entrance and forehatch. However there is no limit to the number of relays that can be fitted. As well as the relays, Adalett have developed pressure mat switches, allowing the alarm to be triggered when, for instance, someone enters the boat or treads on the floor.

When neither the conventional relays or pressure mat switches are applicable, there is an infra-red module that will trigger the alarm when an object passes through its beam.

When tripped, the alarm will sound for two minutes if the relay is closed, or continuously if the relay is left open. An on/off switch must be fitted somewhere externally to activate the alarm when you are leaving the craft.

The Adalett alarm is easy to install and comes with detailed instructions. Priced from $199 including tax, the Adalett alarm system means security for your boat at a very affordable level.

Further information: Solo Marine Pty Ltd, 11 Green Street, Revesby NSW 2212. Tel: (02) 774 5255, Fax: (02) 774 5291.

Marine and Land HF Mobile Transceiver

CAPACITY for 256 channels, approval for both marine and land use, and a host of other unique features give the SB250 high frequency synthesised transceiver the advantage over other comparable transceivers available in Australia, say the suppliers.

Barrett Communications Pty Ltd, of Perth, who manufacture and distribute the single sideband SB250, says their new product includes the following features which are not available in transceivers supplied in Australia by other companies:

1. Capacity for 256 channels;
2. Approved for marine and land use;
3. Marine distress and Royal Flying Doctor Service (RFDS) alarms, both standard;
4. Direct current isolated chasis;
5. Covers broadcast bans to 500 kilohertz;
6. Displays information in English;
7. Receives uninterrupted from 0.5 to 20 megahertz; and
8. More than 60 preprogrammed channels.

Barrett Communications is at 10 Port Kembla Drive, Bibra Lake, WA, 6163. Phone: (09) 418 4141, Fax: (09) 418 6757.

Metal polish for boats

FLITZ is a unique, non-toxic, non-abrasive metal polish and fibreglass cleaner that cleans, polishes, protects and preserves all metals, fibreglass and plexiglas against rust, tarnish, and corrosion.

FLITZ can be used on bronze, chrome, brass, stainless steel, anodized or bare aluminium, zinc, tin, magnesium, alloy type surfaces, fibreglass, plexiglas and painted surfaces. FLITZ is non-toxic, contains no acids, and is safe on gelcoate and painted surfaces. The anti-corrosion and anti-tarnish formula's main objective is to give up to three months of protection to the metal or fibreglass surface.

FLITZ can be used on such things as anodized aluminium, sailboat masts, bow rails, ladders, aluminium window frames, stainless steel stanchions, brass and bronze winches, portholes, cleats, fibreglass and plexiglas hulls and windshields.

FLITZ also safely removes teak oil or cleaner stains, water stains, creosote or rubber scuffs caused by bumping docks or pilings, salt hazing and oxidation on fibreglass or plexiglas windshields.

ALLOY INDUSTRIES

Offshore Racing Calendar 89

NEW SOUTH WALES

SUMMER SEASON 1989

APRIL

1st	Short Ocean Race Race I: Royal Clubs Trophy	(SOPS)
8th	Short Ocean Race Race II: Royal Clubs Trophy	(SOPS)
15th	Short Ocean Race Race III: Royal Clubs Trophy	(SOPS)

WINTER SEASON 1989

MAY

7th	Ladies' Day Race Jill McLay Trophy See Divisions & starting times in list of entries	(NPS)
14th	Commodore's Day See Divisions & starting times in list of entries Veterans Race	HPS(1)
21st	Harbour Race Divisions & starting times in list of entries	HPS(2)
28th	Harbour Race Divisions & starting times in list of entries	HPS(3)

JUNE

3rd	Club Med Sydney-Noumea Race	
4th	Harbour Race Divisions & starting times in list of entries	HPS(4)
11th	Harbour Race Divisions & starting times in list of entries	HPS(5)
18th	Harbour Race Divisions & starting times in list of entries	HPS(6)
25th	Harbour Race — Warren Evans Trophy Divisions & starting times in list of entries	HPS(7)

JULY

2nd	Harbour Race Divisions & starting times in list of entries	HPS(8)
9th	Harbour Race Divisions & starting times in list of entries	HPS(9)
16th	Harbour Race Divisions & starting times in list of entries	HPS(10)
23rd	Harbour Race Divisions & starting times in list of entries	HPS(11)
30th	Harbour Race Divisions & starting times in list of entries	HPS(12)

AUGUST

5th	Sydney-Gold Coast Regatta	
14th	Ladies' Day Race Chris Lee Trophy Divisions & starting times in list of entries	(NPS)

QUEENSLAND 1989

APRIL

1st-8th	XXXX-Anset Hamilton Island Race Week

JUNE

4th	Marine Hull Brisbane-Noumea Ocean Race

WESTERN AUSTRALIA 1989

APRIL

4th	Indian Ocean Race, 130 nm	(FSC)

INTERNATIONAL 1989

APRIL

22nd	Auckland to Fukuoka Yamaha Yacht Race

MAY

9th-21st	One Ton Cup, Naples, Italy

JUNE

3rd	Club Med Sydney-Noumea Race
3rd-7th	TransAtlantic Race from Newport, Rhode Island, to Cork, Ireland
18th	Hiroshima Cup '89 Ocean Yacht Race, from Honolulu, Hawaii
26-8th July	Half Ton Cup, Le Havre, France

JULY

2nd-6th	Seahorse Maxi Series, The Solent, UK
5th-16th	Quarter Ton Cup, Falmouth, UK
9th	Round Britain and Ireland Yacht Race, starts Plymouth
13th-23rd	Mini Ton Cup, Cascais, Portugal
15th-18th	Lymington IOR Regatta, The Solent, UK
23rd-29th	Round Europe Race
29-6th Aug	Cowes Week, Isle of Wight, UK

AUGUST

16th-18th	Three-quarter Ton Cup, Piraeus, Greece

SEPTEMBER

2nd	Whitbread Round the World Race starts from The Solent, off Southampton, UK

NOVEMBER

26th	Global Challenge, Around the World Single-handed Non-stop

DECEMBER

10th-26th	AWA Southern Cross Cup, Sydney, Australia
26th	AWA Sydney-Hobart Yacht Race, Sydney, Australia

1990

JUNE Carlsberg Two-Handed TransAtlantic, Plymouth, UK

SEPTEMBER

15th	BOC Challenge Around the World Alone Race, Newport, Rhode Island, USA

NOVEMBER

Route du Rhum Race

1991

MAY Osaka Cup, Melbourne, Australia to Osaka, Japan, Two-Handed Race

WHITBREAD ROUND THE WORLD RACE, 1989-1990

2nd Sept	Leg 1, Southampton-Punta del Este, 6281 n miles
28th Oct	Leg 2, Punta del Este-Fremantle, 7650 n miles
23rd Dec	Leg 3, Fremantle-Auckland, 3434 n miles
3rd Feb	Leg 4, Auckland-Punta del Este, 6255 n miles
17th Mar	Leg 5, Punta del Este-Fort Lauderdale, 5475 n miles
5th May	Leg 6, Fort Lauderdale-Southampton, 3837 n miles

First yachts expected to finish 21st May, 1990. Total distance of race, approx. 32,932 nautical miles.

BOC CHALLENGE AROUND THE WORLD SOLO, 1990-91

15th Sept-April/May	From Newport, Rhode Island, via Capetown, Sydney, Punta del Este, Uruguay to Newport.

1989 TON CUPS

9th-21st May	One Ton Cup, Naples, Italy
16th-28th Aug	Three-quarter Ton Cup, Piraeus, Greece
26th June-8th July	Half Ton Cup, Le Havre, France
5th-16th July	Quarter Ton Cup, Falmouth, UK
13th-23rd July	Mini Ton Cup, Cascais, Portugal

HAMILTON ISLAND RACE WEEK 1989

APRIL

1st	South Molle and Daydream Island Trophy, 25nm
2nd	XXXX Classics 1 & 2, 15nm
4th	Coral Sea Race, 150nm Short Coral Sea Race (CHS yachts/multihulls) 85nm Mini Coral Sea Race (cruising yachts) 17nm
7th	Ansett Challenge, 25nm
8th	Lindeman Island Trophy, 22nm

TASMANIA 1989

APRIL

1st	BYC 5th Pennant
8th	BYC Hood Two Handed Race
14th	RYCT Navigation Trial
16th	DSS Autumn/Two Handed Series
23rd	DSS Autumn/Two Handed Series BYC Navigation Trial
30th	DSS Autumn/Two Handed Series

WINTER RACES

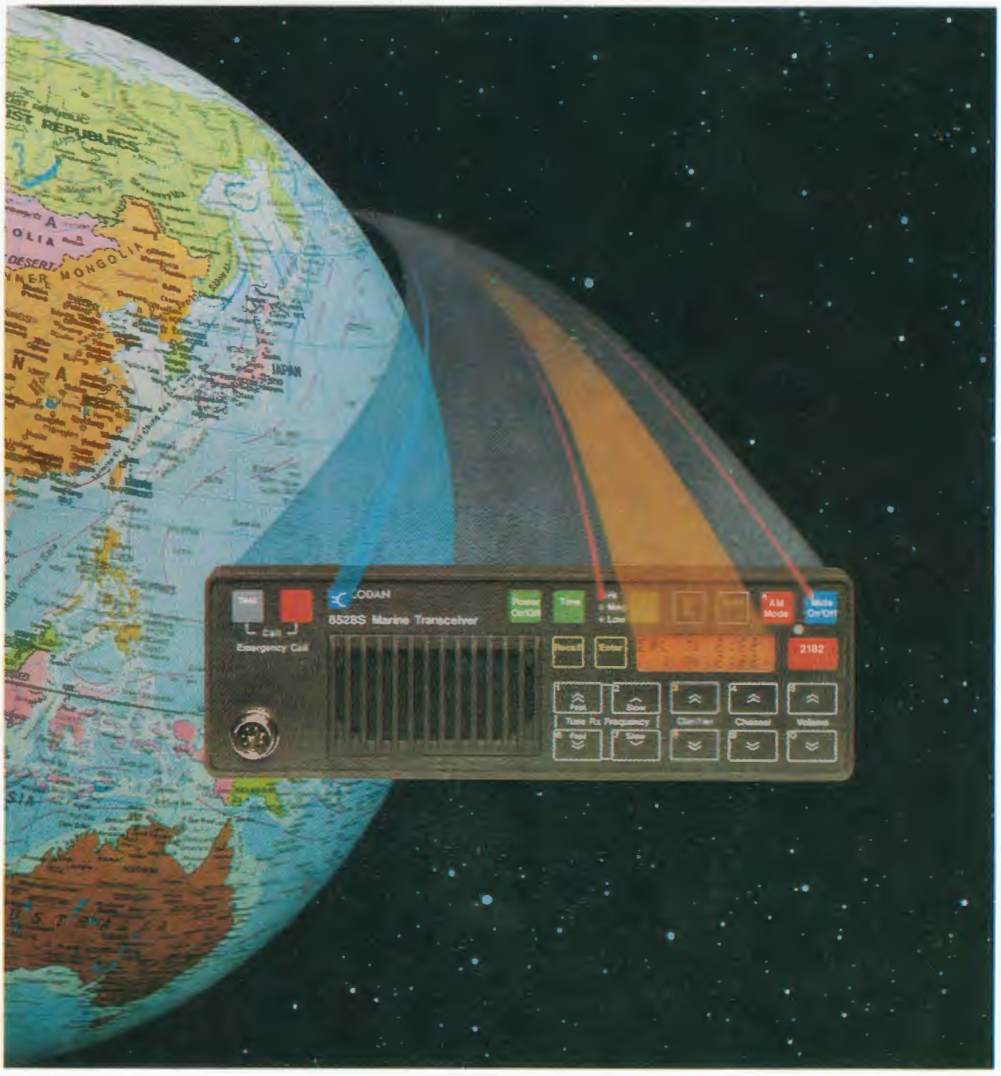
RYCT	DSS	BYC
21/5/89	7/5/89	28/5/89
18/6/89	4/6/89	25/6/89
9/7/89	2/7/89	16/7/89
30/7/89	23/7/89	6/8/89
20/8/89	13/8/89	27/8/89

CHAMPAGNE MUMM ADMIRAL'S CUP 1989

Thurs July 27	Solent Race, 30 nm
Fri July 28	Channel Race, 210 nm
Mon July 31	Olympic Course, Christchurch Bay
Tues Aug 1	Olympic Course, Christchurch Bay
Thurs Aug 3	Long Inshore Race, east of Isle of Wight, 40 nm
Sun Aug 6	Fastnet Race, 605 nm

8528 HF SSB Transceivers

Quality radio communications worldwide



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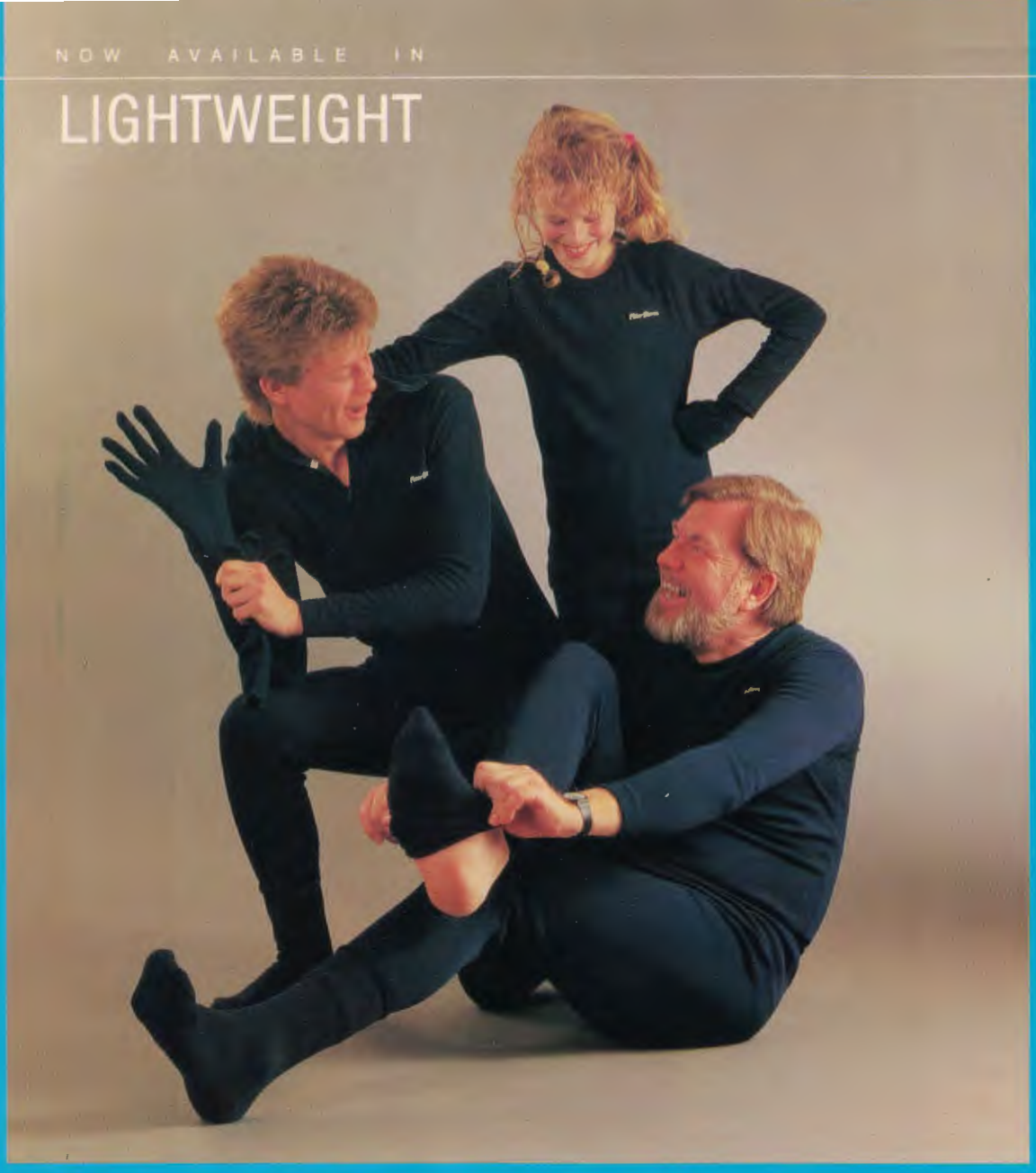

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