

# PLATE ALLOY

## Boats Of Australia

- BOOK 7.5 -

Collector's Edition

CONTENTS - PAGES 1 & 2 of 4



### Foreword 9

Editor Peter Webster looks behind the scenes to observe the changes that have occurred since the very first Edition of Plate Alloy Boats of Australia was published in 1998. Despite some obvious problems, he remains optimistic about the future of Plate Alloy boat building around the world.

### SECTION A: Design & Inspiration

### Lessons from Cruise-Fishing In A Platey 12

There's no doubt aluminium is a terrific, environmentally friendly boat building material - but can it be produced as a 'people-friendly' platform where comfort and safety combine with functional efficiency. Here Peter & Ruth detail the results of their many trips in many plate boats.

### From The Kimberley, WA With Hindsight 24

Readers were in awe of the spectacular trip completed by three trailerboats to one of the world's most remote and ruggedly beautiful regions, the Western Australian Kimberley Coast. In this fascinating report, expedition leader Clint Earnshaw describes the changes he would have made to their preparations - with hindsight!

### SECTION B: Planning & Design

### The Special World of Alloy Boat Building 36

In this exceptional 32 page supplement, we are proudly producing a unique report by our resident boat building and design guru, **Brian Poole**, analysing, criticising and referencing a wide range of subjects of great interest to plate alloy boat builders, both

amateur and professional.

**The Fundamentals Of Why Boats Float** ..... 38

**Flooded Keels: Why They Can Be A Good Idea** ..... 41

**How Big Is The Outboard?** ..... 44

**Measure It For Control** ..... 46

**Cockpit Design For Trailerable Monohulls** ..... 48

**Working The New Floatation Standard** ..... 53

**Learning About Hull Speak** . . . 56

**Dictionary Of Commonly Used Boat Shape Terms** ..... 60

**Actually Getting Started** ..... 63

**Dealing With The Myths About Alloy** ..... 66

### Diesel Sterndrives Vs. 4-Stroke Outboards 69

Yes, another of 'those' perennial questions, but one that in this case is constantly evolving as technology changes (and greatly improves) the efficiency of the products on both sides of this debate. As in any good debate topic, there are equally strong arguments to consider.

### Engine Rooms; Careful Planning Is Everything 76

Superb report by **Chris Wyeth** who explains the methodology in setting up an efficient and practical engine room; where regular maintenance is encouraged and facilitated by the ease of getting to everything that matters, easily and quickly.

### Understanding AC 240 Volt Power Systems 90

**Chris Wyeth** looks at the Big Picture



of AC 240 marine systems - creating distribution boards, battery boards, electrical panels etc. This is a 'must read' article for anybody fitting out a plate aluminium boat - or any other kind of boat, for that matter where shore power is going to be used.

### Electrical Planning - DC 12V Systems 98

Be it ever so humble . . . the reality is the basic 12v power systems are a proven, safe and effective system - but there some important rules and protocols to observe.

### Getting The Building Contract Sorted. Amicably. 112

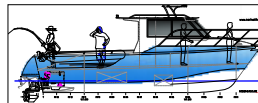
The secret of making any plate boat building project work, lies in having your documentation meticulously prepared. This will help you (and the builder) make sure you don't forget any of the smaller but important details.

### DIY Plate Designs 115-144

Pages and pages of wonderful plate aluminium designs by Australia's top designers and architects, carefully chosen by the PAB-7 team, to be of most interest to most readers.



*Cover: Multi-shot cover reflecting some of the obvious facets of the extensive aluminium boatbuilding in Australia. Centrepiece is "Far-Away" the 8.2m long range, remote area cruiser built in 2005-6, and still the most sophisticated ally trailerboat built in Australia. It changed the way ally boats were built and finished.*



Needless to say, all of the designers have many more plans than these - we've just tried to pick a selection of the most interesting craft for this edition.

### SECTION C: Building & Finishing

### DIY #1 Welding Basics 146

'Live to air' from one of Australia's most popular welding and boatbuilding schools - the basics of DIY welding aluminium.

### DIY #2 Building The PAA 480 Side Console 155

Remarkably in-depth guide to the DIY construction of a neat 480m side console platey from one of Australia's premier design, cut and supply 'kit' boat building groups, Plate Alloy Australia in Melbourne, VIC.

### Filling, Fairing, Painting - and . . . Paying 170

With an exceptional pictorial essay explaining in graphic terms the ultimate in high-end plate boat urethane finishing, this is another must read report by PW.

### Foam Buoyancy Best 183

A short, to the point, explanation as to why positive foam floatation is considered superior to air tanks.

### SECTION D: Significant Project Boat Reports

### The Genesis Project 184

This untouched report has quite historic significance, as this was the first major national promotion of the plate alloy concept, and whilst plate building had been around for decades in 1998, this was the Project that 'lit the fire' under hundreds of



Contents continued over . . .

**READERS: Scroll Down To See 'Plate Alloy Boats of Australia #7.5' PREVIEWS**



**CONTENTS PAGES - 3 & 4 of 4**

readers across Australia and launched what has been called the Plate Revolution.

**Cairns Custom Craft 8.0m Multi Purpose Vessel 198**

Did so love this boat - we 'parked' it at the entrance to the Hinchinbrook Channel after a 'navigationally challenged moment'! Arguably the best 26 footer in Australia, the design and performance of this Yanmar



diesel powered platey is exceptional.

**Is This Diesel Cruiser Our Best Trailerboat? 206**

This is the smaller brother of the red wide-beam *Dusty Rover* (above), also designed by Marcel Maujean. A diesel powered 'bay boat' for a retiring couple seeking an easily handled, safe and comfortable weekender to explore Moreton Bay,



QLD - and handle any conditions likely to be encountered.

**Far-Away Shakedown 214**

*Far-Away* took nearly two years to build and fit-out, in a unique program that attracted national interest from pro builders and amateurs alike. This is the launch cruise; the definitive shakedown that enabled the crew to quickly see what worked - and what didn't.

**SECTION D: Fitting Out**

**Dusty's Gear & Equipment Scorecard 232**

There's no doubt the fit-out on *Dusty Rover* raised the bar in the 2002-4 period. Again it was not so much because what was installed was new - more that few people had ever seen the potential of plate boat building delivering such a sensational result. This report details the key features.



**Yes - It's The 'Throne' Zone - A Vital Report 240**

What every boatowner needs to know about marine toilets, but didn't know who (or how) to ask. Mandatory reading for today's boatowners.

**The Water Story: Working With Desalinators 246**

Desalinators seem like an expensive 'toy' for rich 'white yacht' owners - until you have had one to use on a cruise. Terrific invention, and technology has brought them down in price, size and convenience.

**Far-Away Fitting Out 252**

A comprehensive collation of the fitting out program for *Far-Away*, easily the most extensive of its type ever undertaken in Australia in this class of vessel. A 'goldmine' of info and ideas for anyone fitting out any boat, of any kind. Especially as this 8.2m cruiser is an ideal role model for many smaller or larger craft.



**Solar Power Success 276**

What you need to know about using Solar power to keep your engine batteries charged up, your house batteries full and to have peace of mind that your boat will be ready to go when the fish start biting.

**The Big Cover-Up 282**

Boat covers are one of the most under-rated, but absolutely vital aspects of any boat being built to fish, dive, cruise (or 'd' all of the above) for any length of time, especially if the crew are planning to live aboard.

**Stray Notes From Our Fitting Out Logbook 292**

Each edition we end up with bits and pieces of interesting material left over and what we've done each time is collect them altogether in a quick interesting section for you to enjoy.

**The Magnificent SA FPV 'Southern Ranger' 302**

How the professionals do it. This is close to the cliché 'state of the art' but deserves the accolade, as reported by former Defense specialists Di Ross and John Batty.

**Honda 150 Trials 316**

This is a very unusual, in depth report on our twin Honda 150's, complete with fuel data, propeller performance, instrument information etc. Impressive engines, and why.

**PAB-7.5**

*As we are such a small team, we are often tied up on the 'phone - but please don't waste the opportunity to communicate - leave a message on the phone system, or send us an email - and we'll get back to you ASAP.*

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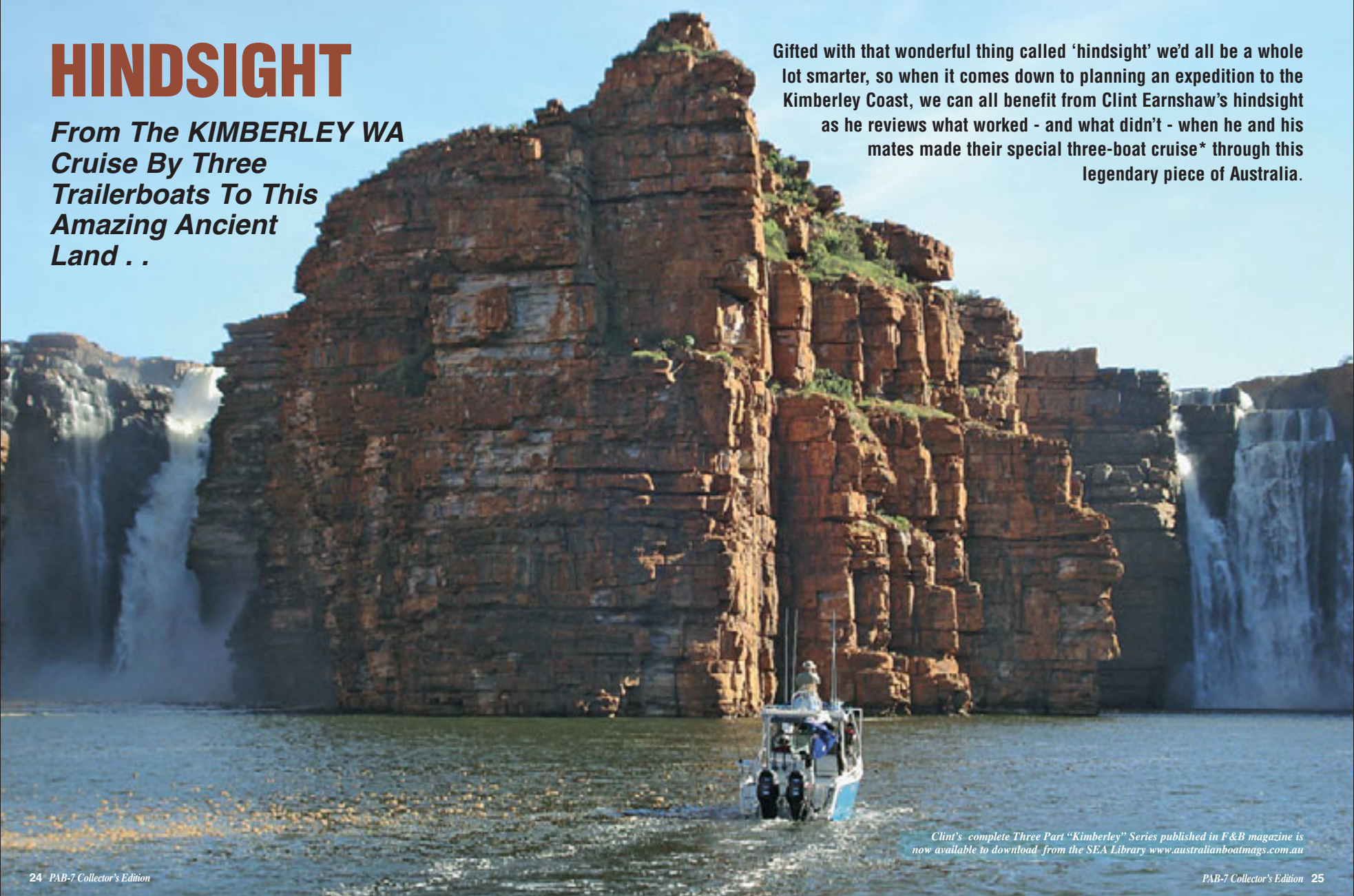
# Lessons From CRUISE-FISHING In A Platey

Is there a fisherman reading this publication who doesn't have the eternal dream ticking over in the back of his mind, that one day . . . soon . . . it will be his turn to get away and spend time fishing and exploring some of the exciting remote areas of Australia? For many it remains a dream, but for a growing number of determined boatowners, building a special platey is not only possible, but already off the drawing board. In this special report, Peter Webster and Ruth Cunningham share some of the key elements to make the escape a practical, working reality.

# HINDSIGHT

*From The KIMBERLEY WA  
Cruise By Three  
Trailerboats To This  
Amazing Ancient  
Land . .*

Gifted with that wonderful thing called 'hindsight' we'd all be a whole lot smarter, so when it comes down to planning an expedition to the Kimberley Coast, we can all benefit from Clint Earnshaw's hindsight as he reviews what worked - and what didn't - when he and his mates made their special three-boat cruise\* through this legendary piece of Australia.



*Clint's complete Three Part "Kimberley" Series published in F&B magazine is now available to download from the SEA Library [www.australianboatmags.com.au](http://www.australianboatmags.com.au)*

# Efficient, Easy To Maintain Engine Rooms Don't Just Happen: Careful Planning Is Everything

The days of crawling around a hot sweaty engine room, dodging fanbelts and pulleys, red hot exhaust manifolds and pipes, in a room shrieking with noise, are long gone.

In this very special report, **Marine Engineer Chris Wyeth\*** explains the methodology in setting up a efficient and practical engine room where regular maintenance is encouraged and facilitated by the ease of getting to everything that matters, easily and quickly.

Our thanks to Yanmar's Ray Harris and the national Yanmar dealer network for their help in sourcing the excellent pics in this section of such a wide range of commercial and fishing craft.

**P**ut simply, engineering a vessel concerns the design, selection and installation of all onboard equipment and associated systems.

In almost all cases, whether you are buying a 3.0m tinny or a 30m motor yacht, the bulk of the engineering is done by the manufacturer / builder. This is due to the fact that most boats in this size range are production boats

and as such, the bulk of the engineering has already been designed and finalised based around a 'standard' arrangement. Now while they work quite well, they have obviously been designed from a 'production and cost' point of view and not from an 'accessibility and service' or 'specific needs' point of view.

Think of the difference in

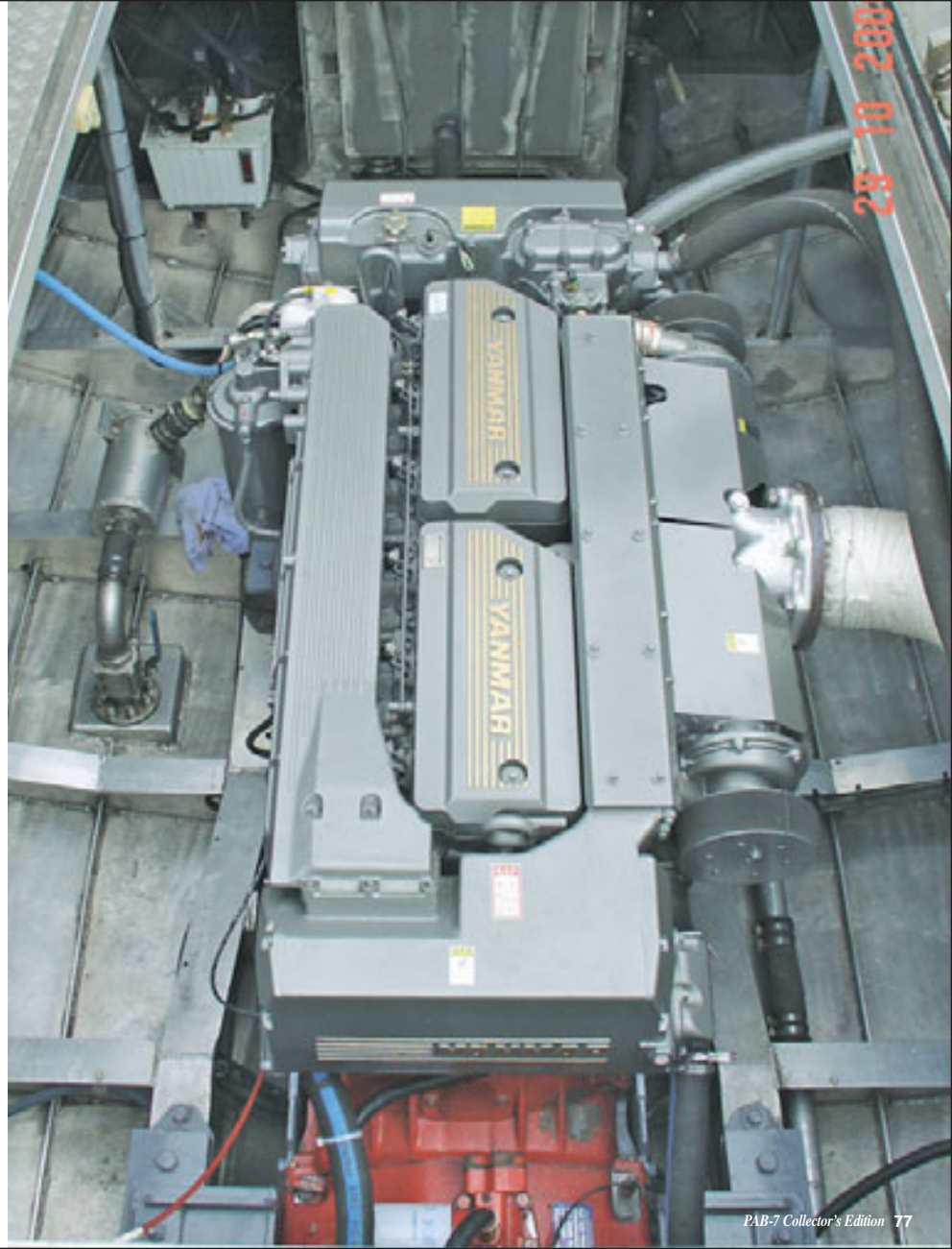
engineering between a 40' Riviera or Mustang, and a 40' fishing trawler. On the white boats, preference has been given to maximising living space and comfort, while on the working boat, preference has been given to functionality and serviceability.

The interesting thing is that the working boat will rack up many more 1000's of hours than the pleasure cruisers, and typically, in more adverse conditions for longer periods of time yet still function reliably and safely. For my mind, the ideal engineering arrangement for any sized vessel would be a combination of both.

Plate alloy boats by nature lend themselves very well to customisation, and as such, the level of owner input and engineering is greatly increased. In fact, I think most will agree that this is the main reason why many decide to go with a platey in the first place.

In the following pages we will look at some of the basic engineering principles that will concern vessels in the 9-15m size range. Rather than looking at the actual design of the hull and superstructure, we will be looking at the equipment and systems that will

*"Chris Wyeth, 36, is an exceptionally well qualified commercial ship's Chief Engineer (Class 1, AMSA & CEC) who spent 12 years in commercial shipping before joining Greg Norman's 230' "Aussie Rules" super yacht as Chief Engineer in 2002. Now back in Sydney with his wife Amanda, he's set up a new business called "Total Vessel Management" specialising in taking over where the builder(s) leave off - and making everything integrate and work as it should. Privately, Chris is a very keen sportfisherman who 'cut his teeth' on a 6.5m plate Sportfish which he has restored to its former glory. He has written in "F&B" monthly magazine about engineering and related issues.*



# ELECTRICAL PLANNING: DC-12v



Okay - you are doing well! With AC covered, now it's time to get right into the heart of just about every pleasure boat and commercial craft under 15m, with the guts on 12v DC creation, management and charging.

The second section of this very special two-part series written by top young Australian marine engineer Chris Wyeth\*\* exclusively for *Plate Alloy Boats of Australia*.

## Batteries and Battery Charging

As mentioned in the last chapter, all vessels, from tinnies to tankers will have a DC power system onboard. The part time AC and full time DC vessels that we are concentrating on with this publication will have very similar, in fact, almost identical DC systems. The DC systems on such vessels will power all essential equipment and as such will have to be reliable and robust. Simplicity is the key to trouble free operation but necessity sometimes dictates that the systems do end up a little more complicated than we would like.

### System Configuration

It is assumed that the vessels we are dealing with here will have at least two DC power systems. These are usually arranged into a starting system and a general service/house system.

We know each system has to have its own DC power supply, namely a battery or battery bank. A battery bank is a combination of batteries linked

together to form essentially what is one battery. Batteries are available in a range of voltages, the most common being 2, 6 and 12 volt. As almost all marine engines and DC powered equipment will operate off either 12 or 24 volts this is where we will concentrate. Whether your system is 12 or 24v, the calculation, principles and opinions to follow, apply equally to both.

The decision has to be made fairly early on in the design/construction phase of the vessel as to which DC voltage will be used. Larger vessels, typically over 40' are almost always 24 volt due to the larger equipment used and the lower current requirement of similar sized equipment. This is easily seen with our now familiar power formula  $\text{Power (P)} = \text{Amps (I)} \times \text{Volts (V)}$ . Let's say our cockpit flood lighting consists of two 100W flood lights resulting in a power requirement of 200W.

If we have a 24v system, the required amperage will be  $200 = I \times 24$  where  $I = 8.3\text{A}$ . If we have a 12V system, the required amperage will be  $200 = I \times 12$  where  $I = 16.6\text{A}$ . So, it is now plain to see that by doubling the

system voltage, we halve the amps required for a given power requirement. By reducing the current draw by half, the corresponding wire size can now be reduced. Over a large vessel, this is a major consideration both in weight saved and of course cost.

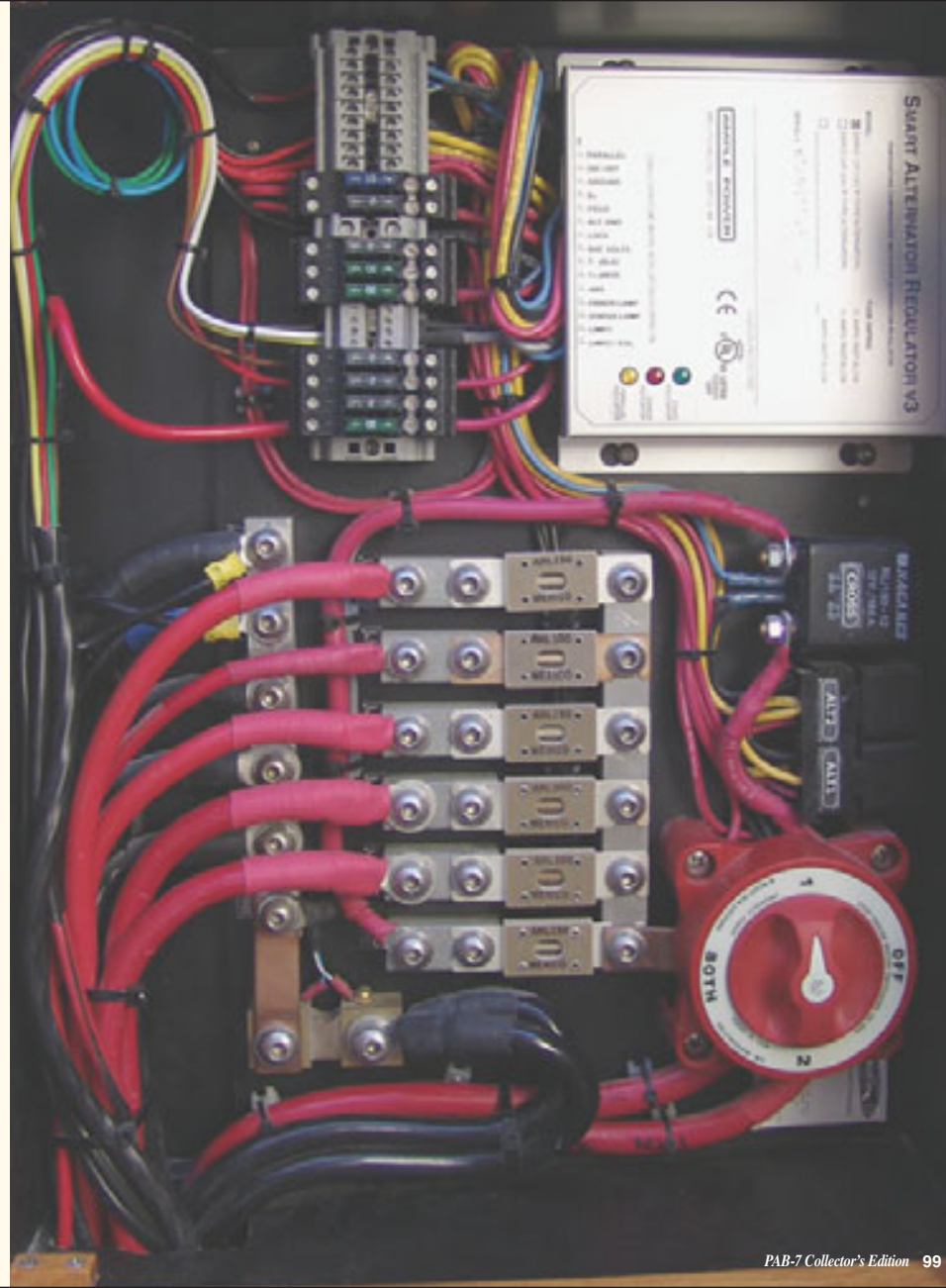
However, bear in mind that by doubling the system voltage, you will now require twice as many Batteries to give you the same capacity. Also, the range of equipment available in 24v is not nearly as large as 12v.

### Battery Sizing

The heart of any DC system is obviously the battery bank. This is where our DC power is stored, and much like a bank, we draw power when required and replace it when necessary.

A battery bank may consist of one or more batteries, and will typically be configured to give 12 or 24 volts DC. Once we have decided on our system configuration we need to concentrate on determining the size of the battery banks required and the batteries to be used.

Getting the sizing of your battery



Ever Wondered How  
You'd Go Building  
Your Own Boat?

Here's A Heck Of A  
Good Way To Find  
Out!

Check It Out Carefully  
- We Have Set It Up  
With YOU in Mind!

By John Pontifex at Plate Alloy Australia, Victoria

**F**or those few who have not read the 5.8m Runabout build article in PAB-4, it was that article which prompted PW to call the team at Plate Alloy in Melbourne and ask what vessel we were going to put forward for the build article in PAB-5.

The team at Sea Media get lots of calls and emails, as I am sure you can imagine, and the decision was quickly made for a smaller, crossover type side console vessel.

A vessel under 5 metres, with a casting deck, good for darting up creeks, lots of usable deck space and a stable, robust and good performing hull. This size is ideal on a single axle trailer, (just saved another thousand, I hear you say!), and light enough to be towed by a medium sized car.

So with that, we decided on the side console version of our 4.8m vessel, with full chine and self draining deck. This is a popular vessel, and built entirely from 4mm, is one tough little boat. For those interested, the vessel also comes in a centre console and a runabout version.

At 4.8m long with full height frames and intercostal stringers, this vessel is quick and easy to set up and should take the first time builder less than 70 hours to build.

*(Continued Over ...)*

# DIY 480 Side\* Console

*\*Also available in different configurations including a centre console, runabout and a small cuddy cabin.*



The full test report on this craft was published in F&B March 2010 #163, and is now available to download from the SEA Library [www.seamedia.com.au](http://www.seamedia.com.au)



There is no doubt Dusty Rover had a profound impact on recreational boating when it was launched in early 2001-2. Designed by Marcel Maujean, built by his Cairns Custom Craft, and fitted out on the Gold Coast by ADM Marine, it served prophetic notice on the fibreglass sector that they needed to lift their game. Plate alloy boats could be faster, more fuel efficient better handling and beautifully finished. And competitively priced. Dusty Rover was an extreme, high-end example of plate alloy building, but it consolidated the revolution that was launched with the Genesis Project in 1998-99.



Using the davit to lift the dory's Honda out of the Ford was a great idea - but the davit was poorly designed, and was ultimately re-worked half a dozen times to get it to work - and last - properly.



This is a lovely hull shape, with a finish closer to GRP than most alloy boats. The surface coating is 2-pack urethane from PRO-TEC finishes, originally applied by Pat Davey in Cairns. Several years later, it still buffs up beautifully. The anti-fouling (International's Interspeed 2000) has coped well with being taking in and out of the water, too.

## Dusty's Gear & Equipment Scorecard . .

Okay - so we are talking about serious towing when we get to 8.0m diesels, but with this magnificent alloy trailer, set-up on three 2.5 tonne AL-KO axles, huge 3 x 2 x 14" Trojan disc brakes, Sens-A-brake power booster and Dunlop Adventurer light truck radials, we're talking about a serious trailer, too! The Ford F-250 7.3 turbo loves it, hauling the rig so easily, we have to constantly use the cruise control to stopped being booked for speeding . . *awesome, truly awesome.*





# Salty 27

## Fitting Out

There's no gainsaying it - the Salty 27 shown on these pages is a very special and most unusual boat. It has been purpose built to take two people away for weeks (or months) on end to some of the most remote and isolated country in Australia. By trailer or by sea, this is a true expedition cruiser capable of reaching just about anywhere.

Words & Pics by Peter Webster and Ruth Cunningham



*Far-Away* has a superb wardrobe of covers, with front and rear tropic covers, a full compliment of road covers for her big windows out on the highway and for marina storage (see pic P.287) plus a set of internal window covers for privacy in a marina situation (P-287). Not only is she 100% waterproof - even in severe tropical downpours or a howling gale, she is extremely 'liveable' in these conditions, or in storage, or at home on her berth in the canal on the Gold Coast. Nearly four years later, she still smells fresh and new - without a hint of mould anywhere.



# It's All A Big Cover-up - Cruising, Despite The Bad Weather

Given the national impact of so many popular fishing areas being 'set aside' as green zones or 'no go' areas, many fishing crews are now opting to fish wider and deeper, and are forced to travel far greater distances than ever before. As a result, fishing crews are finding it is far more practical to go and stay 'out', maximising the cost and time of the trip, by staying on board at least for the weekend, and commonly for periods up to a week, or more . . . Few people have had more hands on experience than the F&B team when it comes to living aboard small, medium and large trailerboats. In this, special, 'hands-on' report, editor Peter Webster explores one of the fundamental issues: Weather Protection.

**I**t doesn't really matter whether you go cruising, fishing or general boating in a Whittleby Cruise-master, a big plate alloy boat or a 5.0-6.0m Signature or Quintrex cuddy.

But when it comes to staying aboard, be it for a night, a weekend or a week, the boat's effectiveness as an overnight cruiser will ultimately be judged not by what sort of stove is in the galley, or whether it's an outboard or a sterndrive, but how it handles the natural elements.

These are the factors that affect all craft - small, medium and large, aluminium or fibreglass. At some point, every boat is going to be subject to bad weather; heavy rain, summer heat, winter's cold - and of course, the insidious effects of air borne and sea borne corrosion. Every boat has to deal with these issues.

For people setting out to buy their first craft or their fifth, it doesn't matter. They too, are brought back to taws by the weather; the natural boating environment.

Over the years, the writer has worked, fished and cruised in areas right around Australia, in boats ranging in length from 3.0m-15.0m.

More recently, the F&B team has concentrated at the top end of the trailerboat market, or in the case of *Dusty Rover*, and more recently, *Far-Away*, the 'transportable' boat market.

Before we built *Dusty Rover* (F&B's principal Project Boat back in 2000-2002) we spent several years working with *Genesis*, a charismatic 7.0m JBS plate alloy cruiser. In many ways, the JBS still stands as an excellent, easily trailered outboard powered cruising boat, whereas *Dusty Rover*, a 7.6m diesel powered Cairns Custom Craft, is the better deep sea, multi-purpose vessel, and 8.2m *Far-Away* the best (and biggest) long range, live-aboard cruiser we can develop under the present rules for trailerboats.

Built back in 1998, *Genesis* proved you can build a very safe, economical 7.0m cruiser that can withstand just about anything nature throws at it, and do it very comfortably.

*Agnes Ellen*, featured previously in PAB #2, took the *Genesis* concept onto the next level, but stayed closely to the cruising genre.

*Dusty* was a marvellous, full-on offshore diesel gameboat with cruising application - but its success with the 'dory fishing' concept in Northern rivers and drains, led to the development of *Far-Away* - which really took us back full circle, to the original 'mothership' concept of *Genesis* nearly two decades before!

But let's take the issues one by one, and consider what we've learned along the way that you can apply to your own situation.

We learned a lot about cockpit cover designs from *Dusty* - here, we've dropped the main rear cover to shield the east facing craft from the blazing western sun - and 'hooked' the sides open for

ventilation. This was the inspiration for the rear tropic cover on *Far-Away* later on.

