

Building Bob's 8.4m DORY P-7

Words by Bob Davis, Photography by Han Jie Davis



Introducing the Seventh leg of perhaps the most unusual DIY series we've ever published in F&B. Written (and built!) by husband & wife team of Bob and Han Jie Davis, it describes how they set about building a comfortable, practical cruising fishing rig they can use in the Whitsundays, around their home state's Far South Coast - powered by a 60hp outboard - and towed by a normal 4WD. Bob is

determined to prove it can be done - all up - for less than \$50K - and he wants to share his methodology and thinking to inspire other readers to similar

projects. His theme? 'There has to be another way' - and we all agree that's a concept worth pursuing!
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Port companionway bin-lockers

Dory Diary Pre-Move Progress

Before heading west in late June 09, we actually managed to get a bit more work done on the boat.

Companionway Lockers

The final bits of 'furniture' were the companionway stowage lockers. To port, I opted for simple open bins. I decided I'd install a fire extinguisher on each side.

To starboard, the upper section of lockers is the electrical cabinet, with a hinged door. In the door, I installed two 6-switch/breaker panels. The main bus board is attached to the rear of the door. This works really well - I can sit on the berth, undo the screws that hold the door closed, swing it open, and very comfortably access all of the wiring, to do any maintenance work.

I installed a small grab rail on the cabinet door to serve two useful functions - it prevents the switches being accidentally brushed against, and aids getting upright from the loo!

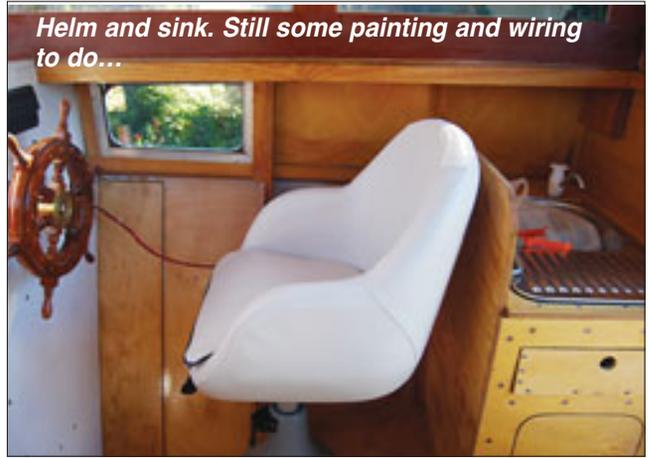
Sizing of the cabinet was partly dependent on space



Starboard companionway storage and electrical cabinet



Companionway lockers from the berth – love the timber glow!

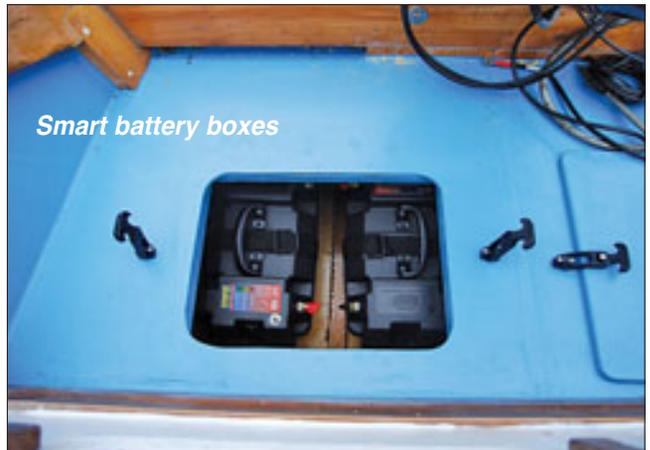


Helm and sink. Still some painting and wiring to do...

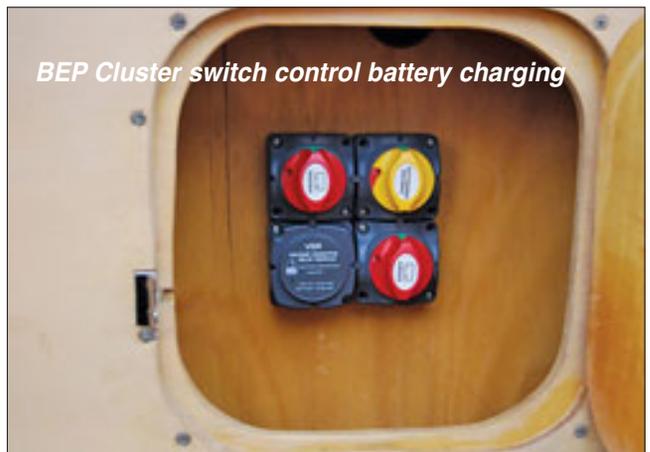
needed behind the helm for the hydraulic tubing for the steering. That made it pretty big – but it's a useful place to stow all electrical spares.

Primary Electrics

The electrics on the dory start with two 'smart' battery boxes from ARK, housed under the motor well, for a primary (starter) battery, and a house battery. These boxes have a battery condition test switch and display. I like that.



Smart battery boxes



BEP Cluster switch control battery charging

The two batteries connect to a clever battery distribution switch cluster that incorporates a voltage sensitive relay to control the charging. The primary battery is always maintained first, gets up to charge, before the house battery gets charged. The switch cluster allows selection or isolation of either or both batteries, isolates the batteries from each

other when the motor is switched off, and includes protection for onboard electronic gear against engine start spikes. This BEP Marine cluster unit is a clever bit of kit coming out of New Zealand.

From this battery management cluster switch, mains wires run forward to primary positive and negative bus boards installed in the electrical cabinet, set behind the cabin bulkhead, feeding multiple switch panels incorporating circuit-breaker type fuses for all switches and outlet plugs, for all onboard electronic and electric gear.

I set up 12V power circuits for each side of the boat, and on these I installed half a dozen cig-lighter plug units, strategically located in the pilothouse and cabin, but also with a waterproof one in a protected spot in the cockpit for appliances like spotlights and portable shower units.

When I started out, I figured that two 6-switch circuit breaker panels would be sufficient to cover all circuits that I wanted to (a) control and (b) protect with circuit breakers/fuses.

I quickly realised that I needed a third one because I had about 20 circuits to protect. I elected to install one switch panel at the helm position, for those things that the helmsman might need to control. The horn and the automatic bilge pump each have their own independent fused switches near the helm. The other two 6-switch panels are located on the opening face of the electrical cabinet, on the starboard side of the cabin companionway. They will have new switch labels.



Electrics cabinet

Switch Panel	Circuit/Purpose
Helm Station	<ol style="list-style-type: none"> 1. Bilge Blower. 2. Aft bilge pumps (2). 3. Side navigation lights. 4. All-round white light (Anchoring Light.) 5. Pilothouse dome light (red/white)*. 6. Bait Tank pump. 7. Horn [Independent button switch]. 8. Forward bilge pump [Automatic float switch, and independent 3-way switch with fuse for Test/Off/On-Auto.]
Cabin Electrical Cabinet Switch/Breaker Panel #1	<ol style="list-style-type: none"> 9. VHF transceiver* 10. 27MHz transceiver* 11. GPS* 12. Sounder/Fishfinder* 13. CD Player & AM/FM radio* 14. Pilothouse Fan*
Cabin Electrical Cabinet Switch/Breaker Panel #2	<ol style="list-style-type: none"> 15. Forward Cabin dome light 16. Cabin reading lights* 17. Cockpit lights 18. 12V power sockets – Port Internal 19. 12V power sockets – Stbd Internal 20. 12V power socket - C/pit
* Appliance/device also has on-item switch	

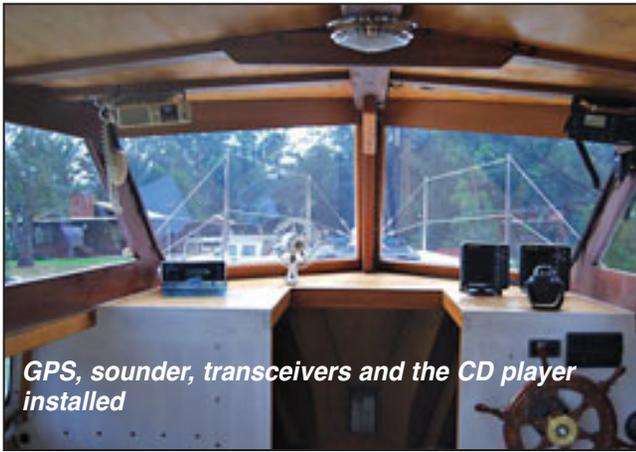
Electronics

The work to install the VHF and 27MHz transceivers, Fishfinder/Sounder, GPS and Stereo unit was non-trivial! With risk of antenna cables and wires everywhere, thought was needed on routing, and care in placement.

You need to keep some cables and wires separated, to avoid interference. For example, it's wise keeping the sounder transducer cable away from the primary electrical mains, and keeping GPS, transducer and radio antenna leads separated as far as is practicable. It's impossible to keep them separated entirely, because they merge when the devices are close together, but every little bit of separation helps. And of course CD player speakers (with magnets) need to be well away from the helm compass!

I elected to hang both of the radio transceivers from rafters, mounting the 27MHz transceiver above the passenger position, and the VHF above the helm position. I located the respective antennas on the pilothouse roof accordingly. This let me carefully loop the antenna leads and connect them to the forward edge of the rafters using cable ties and tie-holders screwed in place along the rafter edge. It's quite effective and minimises the problem of unsightly excess cable. For the transceiver power leads, I installed electrical conduit down the corner screen pillars, getting a fairly neat result.

I wanted the sounder and GPS on the flat shelf ahead of the helm. The satellite antenna for the GPS needed to be mounted on the pilothouse roof, centred and away from the two radio antennas (one mounted each side of the pilothouse roof), and routing its cable away from their cables and away from the transceiver electrical connection pillar leads. Running the GPS antenna cable down the central pillar of the front screen, and then along the inner base of the screen, seemed unavoidable. The challenge was to keep it neat and tidy,



GPS, sounder, transceivers and the CD player installed

while protecting the cable from chafing. Again, I used conduit, attached to the wooden pillar with screw-connected holders.

The sounder and GPS sit immediately above the electrical cabinet. A single hole in the shelf enabled ease in setting up their electrical connections. The same access point is utilised for the power lead for the VHF transceiver. On the port side, I installed the radio/CD unit on the shelf ahead of the passenger position. A single hole through the shelf is utilised for its power lead and speaker leads, and for the power lead for the 27MHz transceiver. Power lines for the port side devices are routed along the edges of rafters for the forward cabin top, around the companionway and across to the electrical cabinet.

From the photos you might note that I still need to install lip rails along the aft edge of the fore-cabin shelf, and around the companionway, to stop things sliding off. A couple of drink holders also need installing. Internal painting will have to wait until we get to Geraldton.

Stanchions & Cables – Versus Bow Rail

I like stanchions and cables. Why not use a metal tubing bow rail? Within the project budget, they're too expensive nowadays to get one custom made to fit, and too darned fiddley to make at home - in the time available! With anchor handling designed to be done in safety from the forward hatch, and with no plans for making the cabin top a sunbaking deck (!), any need to be outside up front is minimal. The stanchions and 316 stainless steel cables provide a simple and sensibly priced solution for safety on the rare occasions that anybody might need to be there. Besides, they suit a wooden boat built on an old dory hull design very nicely, in my humble opinion.



Stanchions and cables instead of a bow rail

Cockpit Shade

Sitting out in the sun on a hot day isn't smart, period. Nor is it comfortable for long hours of fishing. Shade for the cockpit was a mandatory requirement.

The trouble with folding canopies running aft from a cabin structure is that they effectively render a rocket launcher style rod storage rack inaccessible, if it's mounted on or near the pilothouse or cabin structure. But setting the rocket launcher aft of the cabin structure and combining its structure with that of the canopy is a workable solution.



Rocket launcher and canopy

Adding the Door

The pilothouse door is in two parts. The top half is mounted on quick-removal hinges, so it can be left at home when not desired/required.



Pilothouse door

...and the Fish Box!

I couldn't resist getting the fish box done before our long trip. It's a simple box with a solid lid (which may end up being cushioned) with hinges on the forward end. It is sized to take a standard commercial plastic fish box. At its aft end, the fish box lid is held closed by a simple cord and a cam cleat.



Fishbox with standard tub



Reversing the Dory back to the motor . . .



Reversing closer

Mounting the Motor

With assistance from Gordon from across the road and his offsider, we used the engine crane to lift the Mercury 90 off my old boat. On soft ground, we didn't dare attempt to move the crane so, after moving the old boat away, I reversed the dory back to the motor.

After a few goes at reversing, to get the dory properly in place, we bolted the engine to the transom. Installing its controls will wait until the dory reaches Geraldton.

She's now ready for the Nullarbor trek.

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Safely bolted to the transom!

