

NEWICK ECHO II TRIMARAN RELUCTANTLY FOR SAIL-It is ONE of a kind! Launched September 2019-Currently in Tasmania, Australia

Asking \$168,500 AUD to cost of materials/systems – labour free!

WHO IS RICHARD COOPER NEWICK (1926-2013) AND WHAT IS HIS DESIGN PHYLOSOPHY?



From the Designer: Newick plans are the result of over forty nine years of designing, building, and sailing all types of multihulls, starting with a catamaran and several trimarans in my Caribbean day charter business, one of which is still sailing. Fiberglass sheathed plywood with strip planking below the waterline was the usual construction then. Present designs can be built of fiberglass and epoxy with cedar or foam core, using Kevlar or carbon fiber as the budget allows.

Most of these designs are made one at a time by small shops or by their owners. Conventional wisdom says that mass production boats are the best value. Not necessarily! They are usually found in the middle of the quality scale. The best boats are still built one at a time by proud craftsmen with modest overhead budgets, (as it is ashore; large subdivision houses suit some people, but most of us prefer individually built homes).

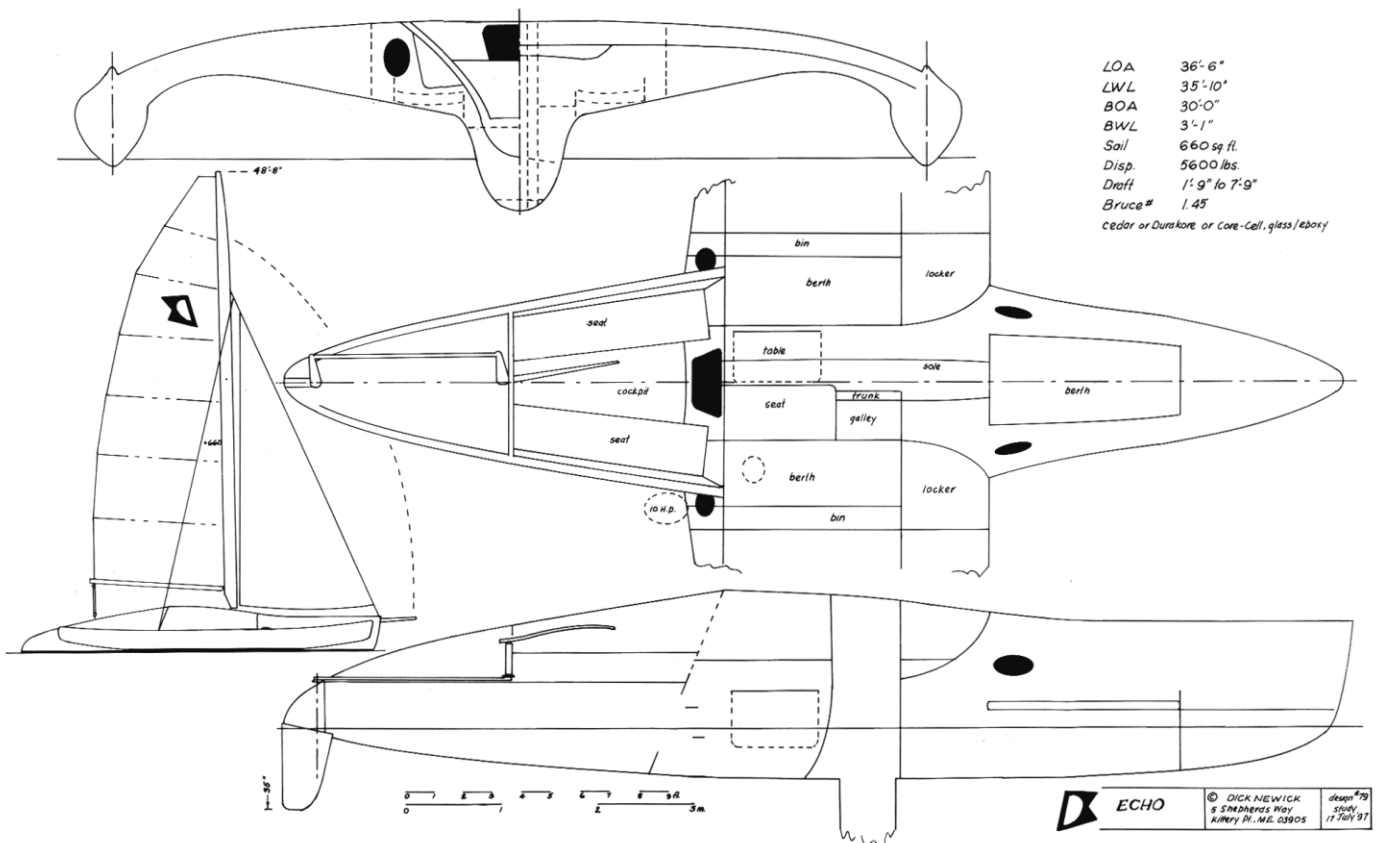
Safe, seagoing performance and good looks are Newick design priorities. No waterfront cottages! High performance is an overused and often purposely vague advertising term. As used by me, it means the ability to sail safely and comfortably, faster than winds up to about 14 knots and to achieve over 20 knots in ideal conditions with a minimum of effort. The primary reason to buy a Newick design is to SAIL!

We all want high performance with comfort and low cost. Since the three cannot be combined in one vessel, priorities must be established and compromises made. Seagoing comfort can be very different from what is comfortable in a marina. Too often comfort is defined merely as interior volume. I prefer to consider three factors: (1) easy motion in a seaway, (2) peace of mind, and (3) interior volume. Who can be comfortable with the environment and stomach jumping around while concerned about stability, slamming, or worse? Waterline beam is closely related to both speed and easy motion at sea. A beam to length ratio of about 1 to 11 has worked well on my designs. For wider cabin soles, we give up seagoing performance. Before making that decision, it is desirable to go to sea in a good boat to experience the trade-off. The same can be said for dagger boards vs. shallow keels. Windward ability is proportional to draft. Knowing the joy of going to windward at 10 knots comfortably can change your design priorities. Stock designs can often be economically modified for your exact requirements.

Cheers, Dick Newick 

"People sail for fun and no one has yet convinced me that it's more fun to go slow than it is to go fast."

Study Plan of the Newick Echo II Trimaran



LOA 36'-6"
 LWL 35'-10"
 BOA 30'-0"
 BWL 3'-1"
 Sail 660 sq ft.
 Disp. 5600 lbs.
 Draft 1'-9" to 7'-9"
 Bruce# 1.45
 cedar or Durakore or Core-Cell, glass/epoxy

Centreboard was moved ahead of the mast and sloped aft to compensate for the more convenient location. Below is Wingin'it on the sand in Coongul Creek, Fraser Island, QLD



History of the Vessel: The building of this particular Newick Echo II was commissioned by a QANTAS pilot over 20 years ago. He set out to build a fast, state of the art trimaran to sail around the world. Virtually, no expense was spared. Every detail was painstakingly researched and took advantage of the latest technology of the time. However, over a 20+ year timeframe technology changed and there were several re-do's. The re-do's together with life getting in the way, accounted for the long build time. Sadly, the individual died prior to completion of the boat in 2017. The boat was sold in a unfinished state in 2018 by the estate – rigging and interior systems yet to be completed. Enter me as the current owner.

Sailing Experience Logged on “Wingin’It”: The trimaran registered as “Wingin’It”, has been sailed extensively in Lake Macquarie where she was built and sail controls outfitted, then tweaked and tweaked. Sailing the Lake is fun, but not where this vessel shines. She likes the open water where she is free to stretch her long legs. Conditions have ranged from lovely to 30-40kts into wind. To date, she has been up and down the east coast of Australia from Lizard Is. to Tasmania, with many trips up and down the NSW coast while COVID restrictions were been in place. Offshore sailing includes a shakedown run from Newcastle, NSW to Norfolk Island and back. A circuit of approximately 2100nm sailed with an average speed of 9.2kts. Once the COVID restrictions were lifted, Wingin’It and I went to the South Pacific (Vanuatu, Kiribati {Gilbert Group}, Fiji and New Caledonia). It took a little time to become comfortable sailing a trimaran after sailing only monohulls...but I am a believer and can never go back. If you want plush interior comfort, then this is not the vessel for you. She is a wonderful sailing machine that captures everything Dick Newick set out to achieve with his creations...and then some!

General Build Techniques: The vessel has been sculpted using PVC foam (density was varied as required by application) which has been encapsulated in glass, Kevlar and carbon fibres (fibres were varied to best suit the structural load requirements) and epoxy resin. Wherever possible the fibre/resin mix was vacuum bagged to produce a well consolidated matrix that sought to achieve an optimum resin to fibre ratio – important for greatest strength to weight ratio. Once the hull structure was fully built and assembled, the entire vessel was post-cured inside the build shed. The outer surface of the vessel was faired and sanded over a period of 4 months, by a team of 3 people, before it was deemed acceptable to receive primer and linear polyurethane paint. The rotating wing mast was formed using clear cedar strips in two halves, glass/epoxy applied to the inside and then the two halves were assembled before applying glass/carbon/epoxy to the outside. Like the vessel hulls the mast was faired, well sanded and painted using linear polyurethane.

General Rigging and Systems: In keeping with the top-notch hulls/mast, I, as new owner, have sought to create a performance, cruising trimaran that is ready to be sailed, solo around the world. All lines either come back to the cockpit or the base of the mast to minimize crew exposure during unsettled conditions. Winches are numerous and sized accordingly to complete the intended task with minimal crew fatigue. The vessel electronics are virtually all Raymarine to ensure good communication between systems. Radar and AIS systems are in place to ensure passage making at night or in poor conditions can be done safely and will allow the crew to catch naps without fear of collision – the systems can be set to sound an alarm if another vessel or landmass gets too close. The autopilot system is robust and can guide the vessel to its destination using a heading, waypoint or angle to the wind. Solar panels keep the lithium house battery sufficiently charged to run all boat systems requiring power. The Spectra Cape Horn Extreme water maker is able to produce approximately 50 litres of water while consuming about 16A (at 12VDC). It is easy to use and does not rely on troublesome electronics to control the water making cycle. Finally, the fuel based vessel propulsion, which is rarely required during passage making, is produced using a reliable, efficient Suzuki four-stroke outboard at the stern of boat on a custom mount. The engine has electric start and power trim (with its own small start battery) for convenience and is steerable to aid in close quarters maneuvering. With the rudder/centreboard up the vessel draws approximately 700mm of water, so lovely shallow bays are accessible. The bottom of the centre hull was reinforced with high density foam to allow the vessel to dry out on a suitable, soft sea bottom. Another huge comfort/functional addition to the vessel was the hard dodger/cockpit cover arrangement. This boat goes to wind well and is capable of 9-10kts on about the same amount of wind. At this speed with narrow hulls, the cockpit receives a lot of water spray. The enclosure has made hard passages much less wet/cold to the point of being fun! The whole cockpit enclosure was built to be easily removable in sections should you wish to lighten the vessel for serious racing...but prepare to get wet if you leave flat water and want to go into wind!

Electrical System: Four 100W solar panels feed one programmable, MPPT solar charge controller. The controllers are programmed for the lithium battery to obtain maximum performance and battery life. There are five solar panels (total of 450W maximum) feeding two solar charge controllers – the 5th panel with its own charge controller tops up the engine start battery. The main solar system feeds a single 360Ah, 12VDC Lithium house battery. The battery feeds the vessel 12VDC power needs through a BlueSea power distribution panel with resettable circuit breakers. The battery also feeds two DC-to-AC inverters: one produces 240VAC and one produces 120VAC to cover off small appliance/tool needs anywhere in the world without the need of shore power. The battery health and usage can be easily checked using the Victron Energy Battery Management display. All boat wiring is more than sufficient gauge tinned wire to safely carry the current load and alleviate corrosion issues.

- 360Ah Lithium LiFePO4 Battery
- Victron Energy – Battery Management System. Programmed specifically for the lithium house battery.
- QTY 4 Solbian 100W Flexible Solar Panels
- QTY 1 Solbian 50W Flexible Solar Panels
- QTY 1 EPEVER Tracer 20A Programmable MPPT Solar Charge Controllers
- QTY 1 EPEVER Tracer 10A Programmable MPPT Solar Charge Controller
- Xantrex 1400W PROWatt 12VDC-to-240VAC Inverter (true sine wave)
- Xantrex 1700W xPower 12VDC-to-120VAC Inverter (semi-true sine wave)
- LED House and Navigational Lighting

Communication System: The marine communication system consists of a VHF (25 Watt) and a HF (150 Watt) radio, each with Digital Selective Calling (DSC) capabilities. Both radios are linked to GPS information and have a “HOLY SHIT BUTTON” for rapid distress transmissions. In addition to the radios, an AIS Transceiver tracks commercial ships and pleasure craft equipped with AIS and displays targets on the ship’s two MFD’s. The AIS unit shares an antenna with the VHF radio through an antenna signal splitter box.

- Raymarine Ray260 VHF Radio with DSC with two mic stations (currently only installed in the cockpit). Radio primary antenna is at the mast head and a backup 2m whip antenna is at the rear of the vessel.
- Raymarine AIS650 Class B Transceiver. AIS shares the VHF antenna through a Raymarine AIS Splitter 100.
- iCOM 802 HF Radio with DSC. The HF portion of the radio is connected to an iCOM AT140 Automatic Antenna Turner, which is connected in turn to a Moonraker 5m whip antenna (15SD). The DSC portion of the radio passes through a 50ohm Coax Moonraker Transformer then connects to another Moonraker 5m whip antenna (15SD).
- Pactor 3 Multimode Controller (Modem). This unit when turned on, controls the iCOM HF Radio and through SailMail Software (subscription required) makes weather data and email possible when offshore.

Electronic Systems: Virtually all of the vessel electronics are Raymarine. This decision was made to ensure good intercommunication between devices and ease of repair/replacement almost anywhere in the world. Individual devices were selected based on capability and power consumption.

- QTY 2 (Cockpit and Cabin) Raymarine eS75 Hybrid Touch Screen Multi-Function Display (MFD) units. 7 inch touch screen that is also controllable by buttons and dials (useful when the display or your hands get wet and the touch screen is not reliable).
- Raymarine Quantum 2 Doper Radar. This unit does not use a magnetron and therefore is a low power (24 nm range), instant-ON unit. It operates in either Harbour, Coastal, Offshore or Weather mode. It connects to the MFD either wirelessly or through a cable. The unit is mounted on a 2.5m SCANSTRUT Radar Mast at the back of the vessel and remains level despite vessel orientation thanks to a SCANSTRUT Dampened Swivel Mount System.
- Raymarine Evolution Auto Pilot System consisting of an ACU200 Controller, a p70 Control Head, a 9-Axis Sensor that adapts to the conditions and a Rudder Position Sensor. The ACU200 Controller is connected to and drives a powerful, quiet Jeffa Linear Drive Unit. The system will maintain a Vessel Heading, GOTO a Waypoint or keep the vessel at an angle to the True or Apparent Wind. There are three levels of performance for the system, namely Leisure, Cruising or Performance – Leisure uses the least power. The system is also controllable via a wireless Raymarine Remote Control Head from anywhere on the vessel. A redundant wired Remote is also available.
- QTY 2 Raymarine i70 Displays. These displays are colour screen LCD units that have multiple screen configurations that will output any information on the Raymarine Network.
- **Transducers:** Raymarine Wind Vane and Raymarine Tri-transducer (Vessel Speed in Water, Water Depth and Water Temperature) All transducers are fed to a Raymarine iTCS Unit that converts their signal and puts it on the SeaTalk network.
- **Raymarine HS5 Network Switch.** This unit connects the Radar and the two MFD’s to the SeaTalk network.

Safety Equipment: The safety equipment on board meets or exceeds all marine guidelines.

- Ocean Signal E100 EPIRB with ARH100 Automatic Release Housing
- QTY 2 Mustang SOLAS Keyhole Life Jackets
- Smoke and CO2 Detector in the Main Cabin
- QTY 3 1kg 1A:20B:E Fire Extinguishers (one in each compartment)
- EchoMax 230BR Radar Reflector mounted on mast
- Propane Detector in the Main Cabin
- Rule Automatic Low Profile Bilge Pump 1500GPH
- 600GPH Double-Action Manual Bilge Pump and sufficient semi-rigid hose to pump out or flood any part of the vessel
- Flares: QTY 3 PARA RED ROCKET, QTY 2 RED HANDHELD NIGHT USE, QTY 2 ORANGE SMOKE SIGNAL DAY USE and Orange V-Flag. Bottom of the Wings are Painted in Non-slip Solas Orange to help with rescue in the unlikely event of a capsized.
- Rechargeable High Output Torch
- QTY 2 High-Speed Plastic Drogues with 3m of 10mm galvanized chain.

Ground Tackle: Mooring lines, fenders, rode chain/line and anchors have been chosen for performance with consideration given to weight. Windlass and Anchor locker are mid-ship to avoid weight at the bow.

- Maxwell VW10 Windlass (1500kg) with AutoAnchor Wired Controller that displays the amount of rode released/recovered. Capable of a set amount of rode release/recovery.
- 34m 8mm spec. galvanized chain
- 100m of 8-strand nylon 14mm rope
- Sarca XL G4 (16kg) galvanized anchor
- QTY 1 Large and QTY1 Small Fortress Aluminium Sand Anchors
- QTY 4 Braided Nylon Mooring Lines – 3 long and 1 very long
- QTY 3 Medium Cylindrical Fenders
- QTY 2 Medium Ball Fenders

Water/Waste System: Tank sizing and water pumps/lines were set up to provide a reasonable supply of water without making the vessel too heavy.

- Spectra Cape Horn Extreme Water Maker with Z-Ion filter system. Capable of approximately 60 LPH using 16A (12VDC). At the time this was one of the most efficient water makers on the market. It is easy to use and does not employ a lot of electronics to control the water cycles.
- 160 Built-in Water Tank – located in the centre hull, mid-vessel.
- Shru-Flo Water Pump plus a spare unit pressurized fresh water delivery.
- Whale hand pump
- Stainless sink with drying tray and stainless tap set
- Fresh and Salt water brass taps in cockpit
- Rain catchment system built into cockpit cover and boom to easily capture rain water.
- Toilet – consideration is being given to a macerating toilet – the thru-hulls (skin fittings) are already in place.

Interior Appliances: Vessel has been outfitted to be functional/comfortable in all but extreme weather conditions. Gas system has been installed with a manual shutoff in the cockpit and a solenoid shutoff in the cabin opposite the stove on the main control panel. The propane detector is located at floor level in the main cabin, opposite to the stove.

- ENGEL 40L Combi Fridge/Freezer Unit
- Stainless steel sink/tap assembly with large integral drip tray
- ENO 2 Burner Gas Stainless Stove Unit
- QTY 2 Ragasco 7.5kg Composite Gas Bottles – lightweight and translucent.
- LED lighting to illuminate almost all parts of the vessel well. Red lighting is located in selected areas to protect night vision when travelling at night.

Engine/Fuel System: The vessel is outfitted with an outboard motor that swings down from aft cabin top. This style of motor was chosen for lightness and ease of maintenance. The fuel system consists of a day tank that feeds fuel through a filter/water separator system before being delivered to the engine. Realistically, engines will rarely be used as the vessel is capable of sailing on a whisper of wind and trimarans are not subject to sail flapping from wave action the same way monohulls are.

- SUZUKI 20HP EFI Four-stroke Long-shaft Outboard. Engine has electric start remote throttle/gear select unit and power trim. Power is supplied by a dedicated 100Ah Lead/Acid battery. This battery can be switched to feed the main power distribution panel should the house battery be depleted. The engine is steerable to help with low speed, tight quarter maneuvering and offers good control when the rudder is in the up position for shallow operation of the vessel. Engine comes with some routine maintenance spares and extra props.
- 40L Stainless Steel Day Tank. Located in the base of the main hull under the cockpit.
- QTY 2 Fuel Filter/Water Separator Units. QTY 2 Spare Filters are included.

Sails/Hardware/Rigging: All sails, hardware and rigging have been selected to give the vessel performance and longevity under harsh conditions. If hardware was required to make sailing solo possible, it has been added to the vessel...she is well equipped to sail in less than ideal conditions.

- QTY 1 PRO Warp Dacron Jib with sun protection and bolt-rope for use with a furler.
- QTY 1 Laminate Dimension Polyant DP CZ 30 Silver (Code 0). This sail is fabulous for light wind sailing. It allows the vessel to sail when everyone else is motoring. A stainless bow sprit was added to the initial design to take full advantage of this big sail.
- QTY 1 Main Sail. Newly made from a heavy-weight PRO Warp Dacron. Sail has three reef points and all have been rigged for use.
- ProFurl 420 Jib Furler. This unit was added for safety when coastal or offshore sailing.
- QTY 3 Setemar 2-Speed Winches. Winches allow line to be winched in or out for maximum control when required. These winches came with the vessel and they have their limitations. Therefore I have only used them to work non-critical lines. This is true of all the Setemar winches on the vessel.
- QTY 2 Setemar Single-Speed Winches. Utility uses only.
- QTY 2 Lewmar 14 Single-Speed Winches. Used at the base of the mast for halyards and topping lift.

- QTY 2 Pontos Compact 2-Speed Winches. Used for Screecher sheets or jib tweaker lines.
- QTY 4 Pontos Trimmer 40 4-Speed Winches. Used for jib sheets, main sheet and reef lines. The four speeds make all line retrieval effortless. In low gear the winch is working at 40:1.
- QTY 2 Setemar Ratcheting Winch Handles. As the Setemar winches are capable of reversing the line direction while under load, a ratcheting handle is required to work the winch in the correct direction. The handles work well with conventional winches too when you do not wish to complete a full revolution.
- QTY 3 Conventional Winch Handles of various sizes.
- Heaps of rope clutches, cam/clam cleats, mooring cleats and pad eyes. Hardware was added if it made a task easier or safer.



Going out over choppy bar at Laurieton-prior to cockpit cover being added to the boat.



In a lovely pool at Hill Inlet, QLD



Interior – Queen Bunk



Interior-Battery, Watermaker, Galley



Wingin'It with Dodger/Bimini – Front Quarter



Wingin'It with Dodger/Bimini – Front



Wingin' It with Dodger/Bimini – Rear Quarter (Outboard now at stern of vessel)



Outboard at stern of vessel for increased control and efficiency.