RIGGING BENCH
MARINE WIRING PLANS

RIGGING PLAN

2012 Sea Hunt Triton 240 center console, single Mercury Verado 300

ORDER	RB-SAMPLE-01
REV	A
ISSUED	November 17, 2026
SHEETS	8
SCALE	None
DRAWN FROM	Owner survey
CHECKED BY	ABYC and NMEA certified installer

Owner	Sample order
Plan ordered	Up to 5 components, $149
Boat	24 ft 2 in long, 8 ft 6 in beam, 120 gal fuel, rated to 300 hp. Single Mercury Verado 300 with SmartCraft gauges.
Use	Offshore fishing, saltwater, kept on a lift
Gear budget	$5,000 to $10,000, Garmin preferred
Installer	Owner. Can follow directions and use a crimper.

What we're building

- Remove both Raymarine E120W displays, their sonar module, network switch, GPS antenna, the old transducer and the old VHF.
- Install two Garmin GPSMAP 1243xsv 12-inch displays in a new black acrylic dash panel.
- Install one Airmar B175M 1 kW CHIRP thru-hull transducer for offshore bottom fishing.
- Install a Garmin VHF 115 radio that gets its GPS position from the displays, so the distress button works.
- Build a new NMEA 2000 network at the helm.

No photos were sent with this survey
Everything in this plan is based on your written answers only. We have not seen behind your dash or at your batteries. Sheet 6 lists what we expect to find on a boat with this history and Sheet 8 lists the photos and measurements we still need. Do not order the dash panel or the transducer until those are settled.

Design guidance built from the owner's survey answers. Not a marine survey or inspection. Verify every existing wire and every dimension on the boat before you cut, drill or connect. Manufacturer instructions take priority. riggingbench.com/terms

DRAWING INDEX

Every sheet in this set, with the drawing it carries.

Sheet	Drawing	Title	Rev
1	G-1	Where everything goes	A
2	N-1	Network	A
3	E-1	Power	A
4	M-1	Dash fit	A
5		Parts list	A
6		What shouldn't be there, and what to replace	A
7		Install notes	A
8		What we still need from you	A

Revisions

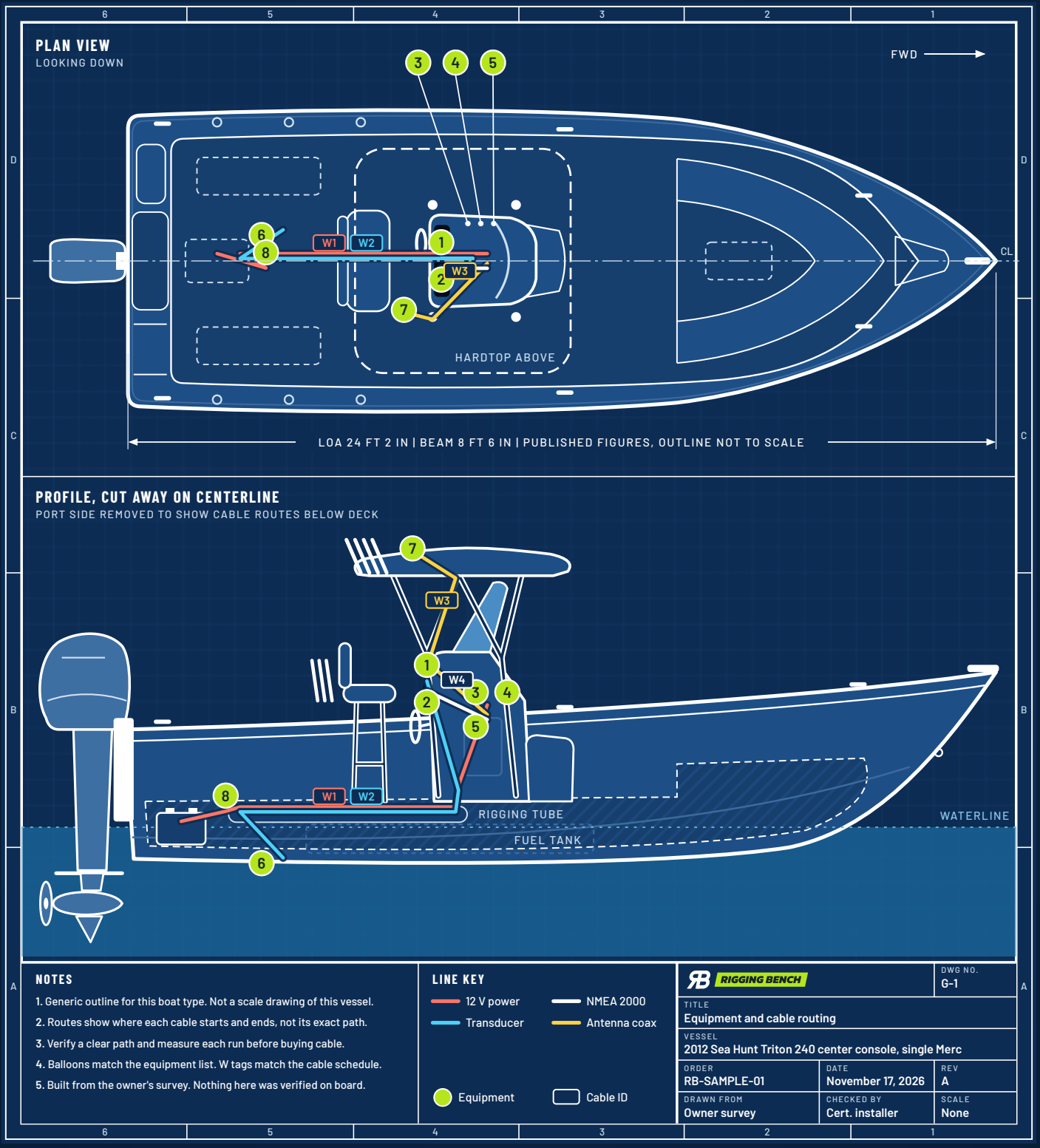
Rev	Date	What changed	Checked by
A	November 17, 2026	First issue. Drawn from the owner's survey.	Cert. installer

How to read this set

Mark	What it means
1	An equipment item. The same number means the same item on every sheet.
W1	A cable. The W number matches the cable schedule. Write it on a label at both ends of the cable as you pull it.
F1 S1	A fuse and a switch on the power drawing.
G N E M	Drawing series: general arrangement, network, electrical and mechanical.
Confirm before buying	A value we could not confirm from your survey. Check it against the maker's instructions or with us before you spend money.

SHEET 1 WHERE EVERYTHING GOES

Your equipment and cable runs on a center console of your size. Numbers match the list below.



A generic center console outline sized to the Triton 240's published length and beam. It is not a scale drawing of your boat. Routes show where each cable goes, not its exact path. Measure your own runs before you buy cable.

#	Equipment	Where it goes	Cable run
1	Display 1 (main), GPSMAP 1243xsv	Dash, port side of the new panel	Power and NMEA 2000 drop stay inside the console. The transducer plugs in here.
2	Display 2, GPSMAP 1243xsv	Dash, starboard side of the new panel	Power and drop inside the console. Garmin Marine Network cable to Display 1.
3	VHF 115 radio	Console, where the old radio was	Power and drop inside the console. Coax up to the antenna.
4	NMEA 2000 backbone	Inside the console, high and dry	Four tees joined directly. No backbone cable to run.
5	New fuse block, Blue Sea 5026	Inside the console, high and dry	Fed from the house side of the battery switch through the rigging tube.
6	B175M transducer	Thru-hull, aft, clear of strakes	Up into the bilge, forward through the rigging tube to Display 1. Do not cut or shorten it.
7	VHF antenna	On the T-top	Coax down a T-top leg into the console. Reuse it only if the cable and connector pass inspection.
8	Battery switch	Aft, at the batteries	Existing. The new fuse block feed starts here.

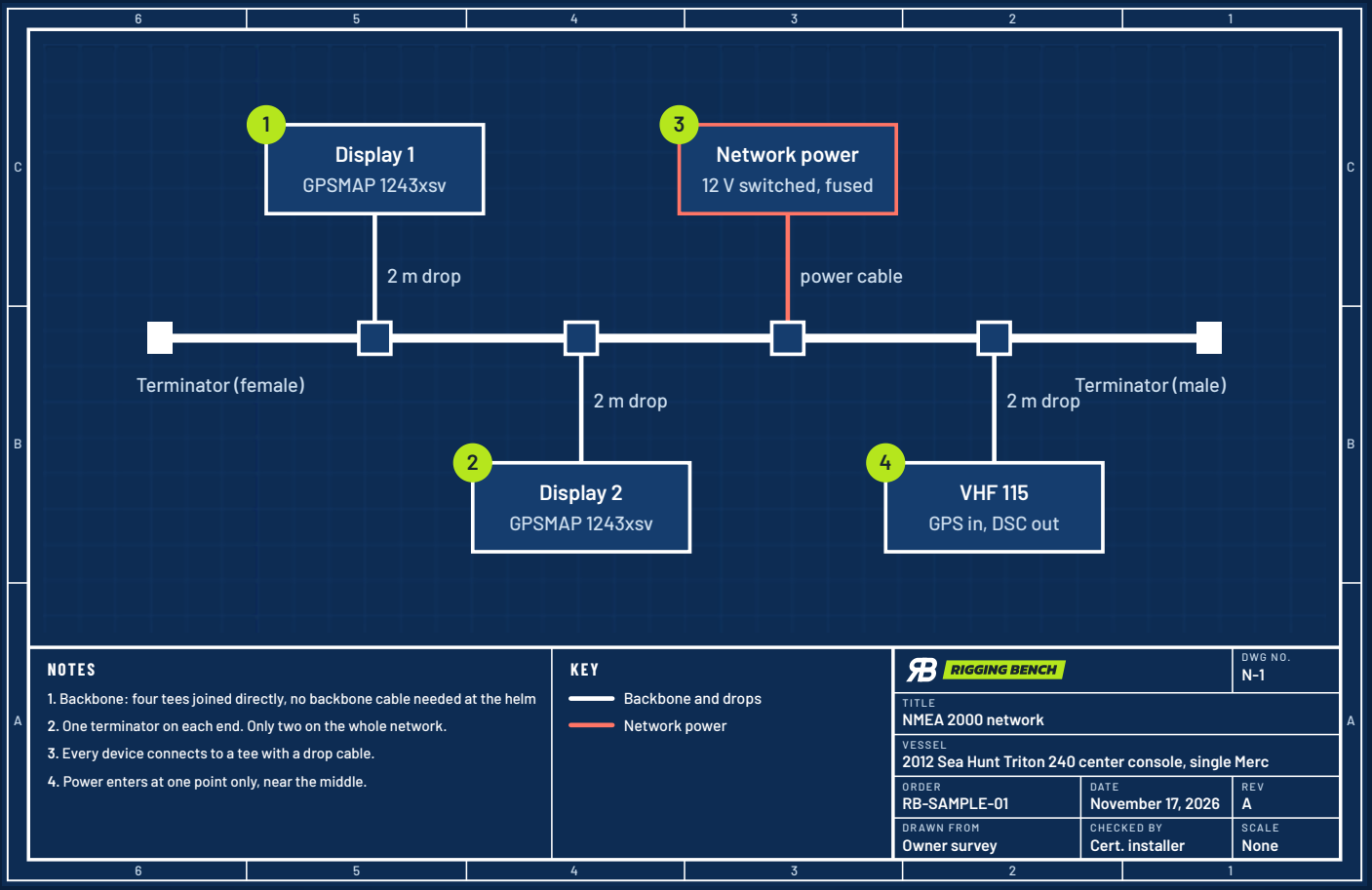
Cable schedule

ID	Cable	From	To	Notes
W1	12 V power, tinned marine wire	Battery switch, house side	Fuse block in the console	Size from the Power sheet. Fuse at the source.
W2	Transducer cable, as supplied	Thru-hull transducer	Display 1	Do not cut or shorten. Coil the extra in the console.
W3	VHF coax	Antenna on the T-top	VHF radio	Down a T-top leg. Replace if corroded or kinked.
W4	NMEA 2000 drops	Backbone	Each device	2 m drops, all inside the console.
W5 to W8	Device power leads	Fuse block	Each display, the radio and the network	Inside the console. Each one is listed on the Power sheet.
W9	Garmin Marine Network cable, 6 ft	Display 1	Display 2	Behind the dash. Garmin's own cable only.

This drawing is a guide to location, not a route map
Every boat's rigging tube, chases and access hatches are different, and yours has years of other people's work in it. Before pulling cable, open the hatches and confirm there is a clear path with room for the connector to pass.

SHEET 2 NETWORK

One short NMEA 2000 backbone behind the helm. Numbers match the table.



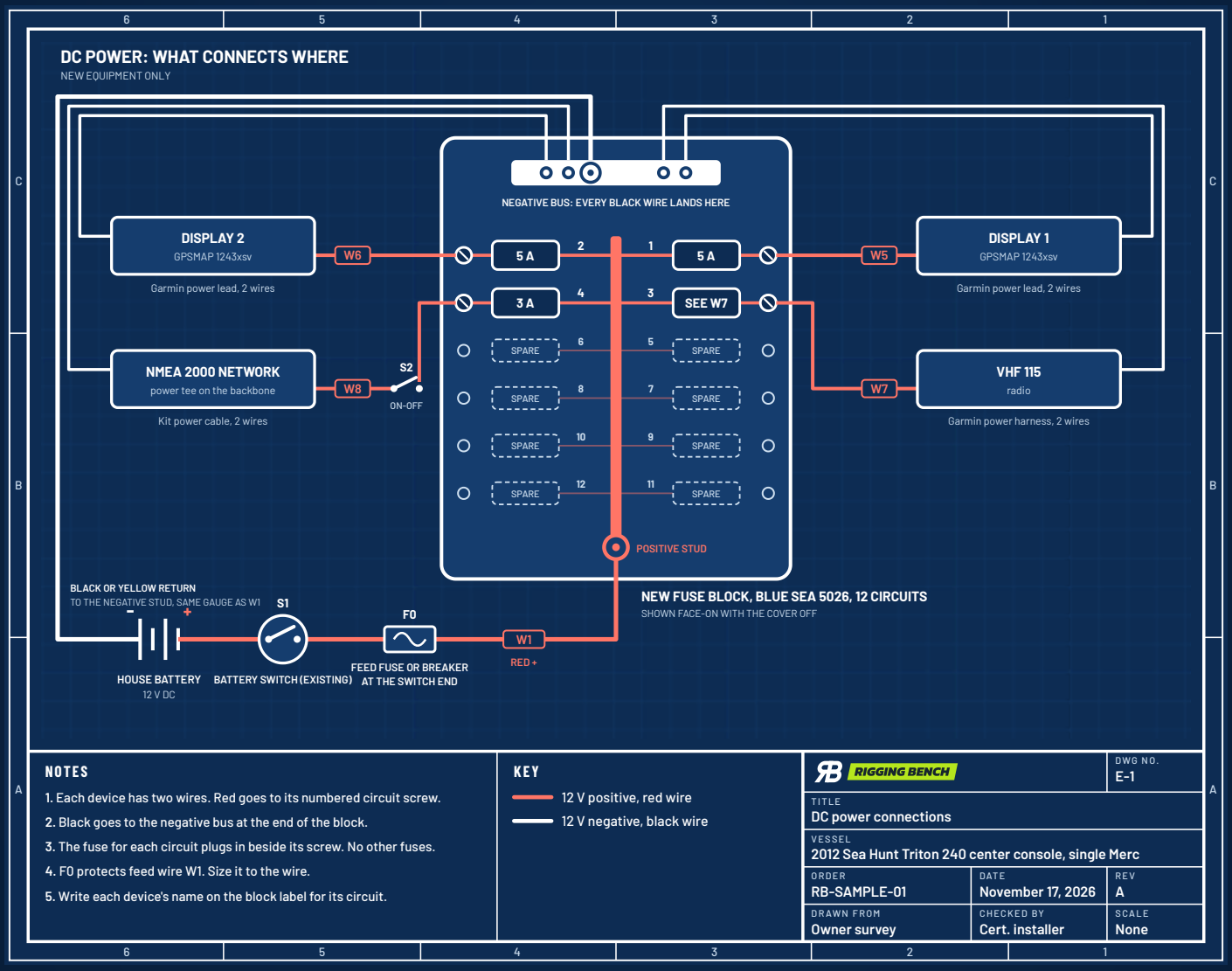
#	Device	What the connection does
1	Display 1 (main)	Sends GPS position to the VHF. The transducer plugs into this display.
2	Display 2	Shares the network. Sonar and charts reach it over a Garmin Marine Network cable from Display 1 (not through NMEA 2000).
3	Network power	The NMEA 2000 network needs its own 12 V feed. Use the power cable from the starter kit, fed from circuit 4 on the new fuse block through an on-off switch so the network can be shut off.
4	VHF 115	Gets GPS position from the displays over NMEA 2000 so the red DSC distress button works. Sends distress and position calls it receives from other boats to both screens.

SHEET 3 POWER

Each new device gets its own fused circuit. Nothing is powered from an old Raymarine feed until that feed is traced and checked.

Before you touch anything

Turn the battery switch off and disconnect the negative cables at both batteries. Flooded batteries vent hydrogen, so no sparks near them. Disconnect the charger's AC cord too. This plan does not cover the charger's AC side or any shore power wiring.



NOTES

1. Each device has two wires. Red goes to its numbered circuit screw.
2. Black goes to the negative bus at the end of the block.
3. The fuse for each circuit plugs in beside its screw. No other fuses.
4. F0 protects feed wire W1. Size it to the wire.
5. Write each device's name on the block label for its circuit.

KEY

- 12 V positive, red wire
- 12 V negative, black wire

RIGGING BENCH		DWG NO. E-1
TITLE: DC power connections		
VESSEL: 2012 Sea Hunt Triton 240 center console, single Merc		
ORDER: RB-SAMPLE-01	DATE: November 17, 2026	REV: A
DRAWN FROM: Owner survey	CHECKED BY: Cert. installer	SCALE: None

Conductor schedule

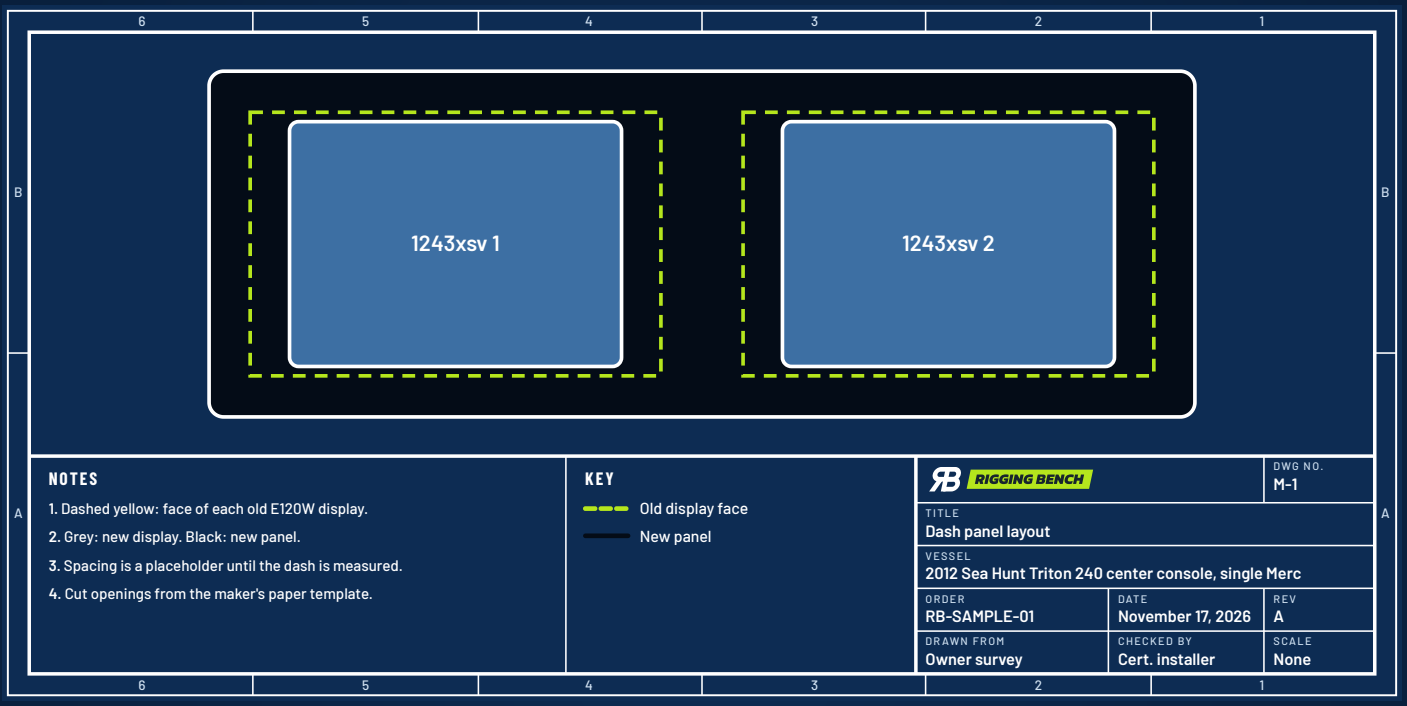
ID	Circuit	Fuse, in the block	Wire	Length	From and to
W1	Feed to the new fuse block	F0, a fuse or breaker at the battery switch end, sized to protect the wire	Tinned marine wire, red to the block's positive stud and black or yellow from its negative stud, on ring terminals for #10 studs. Gauge is set by the length of the run. A fused feed of the right size that already runs to the console can be reused once traced and checked. **Confirm before buying**	Measure the run there and back	Battery switch, house side, to the block
W5	Display 1	F1, circuit 1, 5 A blade. Garmin calls for 6 A. Blade fuses skip 6 A, so use the next size down. The display draws 3.56 A at most.	Garmin's power lead, red positive and black negative. Cut off its inline fuse holder and land it on the block. To extend it, Garmin calls for 10 AWG up to 15 ft, 8 AWG up to 23 ft, 6 AWG up to 36 ft.	As supplied	Block circuit 1 to Display 1
W6	Display 2	F2, circuit 2, 5 A blade	Same as W5	As supplied	Block circuit 2 to Display 2
W7	VHF 115	F3, circuit 3. Same rating as the fuse in Garmin's harness, which Garmin does not publish. The radio draws 6 A at most. **Confirm before buying**	Garmin's supplied power harness, red positive and black negative. Remove its inline fuse holder and land it on the block.	As supplied	Block circuit 3 to the radio
W8	NMEA 2000 network	F4, circuit 4, 3 A blade, the same rating as the fuse on the starter-kit power cable	Starter-kit power cable, red positive and black negative, through an on-off switch (S2) so the network can be shut off. Garmin requires a switch on this feed.	2 m	Block circuit 4, through switch S2, to the power tee
	Circuits 5 to 12	Spare. Leave the fuses out.			Room for future gear

How to wire it

- Mount the new Blue Sea 5026 block inside the console, high and dry, where you can reach it and read the labels. It has a clear cover. Write each circuit on the labels that come with it.
- Each device's red wire goes to its own circuit screw on the block and its black wire to the block's negative bus, on ring terminals for #8 screws. No grounds picked up behind the dash.
- Feed the block from the house side, not from the engine-start circuit. Screens that reboot when you crank the engine are almost always on a shared or undersized feed.
- You are not sure what fuse block is there now. Leave it serving what it serves today. The new electronics go on the new block so every new circuit is known, fused and labeled.
- Use tinned marine wire and heat-shrink crimp connectors. No wire nuts, no household wire, no taped crimps.

SHEET 4 DASH FIT

The new displays are narrower than the old ones, so they cannot fasten to the old holes. A new panel is required.



Yellow dashed: the face of each old E120W display, 15 x 9 5/8 in. Grey: new display, 12 1/8 x 8 15/16 in overall. Black: new panel. Spacing shown is a placeholder.

	Width	Height	Source
Raymarine E120W, face (each of two)	15 in	9 5/8 in	Raymarine installation manual (380 x 245 mm). Raymarine gave the cutout as a paper template only, not as numbers.
Your two existing holes	Not measured	Not measured	Left blank on your survey. Each hole is smaller than the face above.
GPSMAP 1243xsv, overall	12 1/8 in	8 15/16 in	Garmin installation instructions (depth 3 1/4 in, plus 3/4 in clearance behind)
Result	Old face is 2 7/8 in wider		A hole cut for a 15 in wide display leaves a 12 in display with nothing to fasten to at the sides. Plan on the panel, and measure the holes to confirm.

The panel

- One black acrylic panel that covers both old holes, as you asked for. It must overlap solid fiberglass by at least 1 1/2 in on every side of each old hole so the fasteners land in good material.
- Cut the two display openings from the paper template in each Garmin box. Garmin does not publish the cutout as numbers and warns that a hole cut too large leaves the display with nothing to grip. Do not cut from the overall dimensions above.
- Fasten the panel with stainless machine screws and backing washers or a backing plate behind the fiberglass, and bed it in marine sealant.
- Behind the panel you need the display's 3 1/4 in depth, Garmin's 3/4 in clearance, and room for the cable connectors to bend. Measure the depth you have.

- Garmin says not to flush mount this display in a flat, horizontal surface. A sloped or upright dash face is what it is made for.
- Garmin's compass-safe distance is 17.72 in for each display and 27.6 in for the radio. If your compass sits closer than that, expect to re-check it.
- The radio: Garmin supplies a paper template and gives no cutout numbers. The radio body is 6.7 in wide, 3.35 in high and 5.75 in deep, plus room behind for the connectors. Like the displays, it must not be flush mounted in a flat, horizontal surface. If the old radio's hole is bigger than the new radio's face, it needs a filler plate or a new spot.

We cannot dimension the panel yet
You left the flat dash width, flat dash height and depth behind the dash blank, and we do not know the size of your two holes, the gap between them or what else is on the dash. Send those (Sheet 8) and we will issue this sheet again with a fully dimensioned cut drawing for the panel. You chose 'not sure' for who cuts it: the drawing will work for a plastics shop, a sign shop with a CNC router, or a careful owner with a router and a template.

SHEET 5 PARTS LIST

Buy anywhere. Part numbers are the manufacturers' own. Prices are US list prices checked on the cover date and they change, so confirm before ordering.

Qty	Item	Part number	Notes
2	Garmin GPSMAP 1243xsv display	010-02367-61	About $3,100 each. In each box: power cable, one NMEA 2000 tee, one 2 m drop cable, 8-pin to 12-pin transducer adapter, bail and flush-mount kits, cover and template. Confirm the chart region you want when you order.
1	Airmar B175M 1 kW CHIRP thru-hull transducer, Garmin 8-pin	20 degree tilt: Garmin 010-11939-22, Airmar B175C-20-M-8G. Confirm before buying	About $1,300. Three tilt versions: 0 degree for 0 to 7 degrees of deadrise, 12 degree for 8 to 15, 20 degree for 16 to 24. The published transom deadrise for the Triton 240 is 18 degrees, which points to the 20 degree version, but the figure is not from the builder. Measure the hull where the transducer mounts before ordering. Needs a 3 3/4 in hole in solid fiberglass. A cored hull needs extra work around the hole.
1	Garmin VHF 115 radio	010-02096-00	$449.99 list, less at some dealers. Garmin's own store was out of stock when we checked, so confirm a dealer has it. 25 W, Class D DSC, NMEA 2000, built-in GPS, microphone attached. No AIS. In the box: radio, mounts, cover and power harness. No NMEA 2000 tee or drop cable.
1	Garmin NMEA 2000 starter kit	010-11442-00	About $100 to $115. Contains two tees, male and female terminators, one 2 m drop cable, one 2 m power cable and a 6 m backbone cable. You will not need the backbone cable at the helm; keep it as a spare.
1	Garmin Marine Network cable, 6 ft, large connectors	010-10550-00	About $40. Links the two displays so Display 2 shows sonar and shares charts. Longer versions: 20 ft is 010-10551-00. Garmin's newer small-plug network cables do not fit these displays, and Garmin says not to use ordinary computer network cable.
1	Black acrylic panel, cut to drawing	From the reissued Sheet 4	Do not order until the drawing is final.
1	Blue Sea Systems ST Blade fuse block, 12 circuits with negative bus and cover	5026	About $50 to $70. Rated 100 A for the block and 30 A per circuit, 32 V DC. Takes ATO and ATC blade fuses. Fuses are not included.
	ATO or ATC blade fuses	Blue Sea 5239 (5 A), 5237 (3 A)	Two 5 A for the displays, one 3 A for the network, one for the radio to match Garmin's harness fuse, plus spares of each.
1	On-off switch for the NMEA 2000 network feed (S2)	Your choice of marine brand	Any marine rocker or toggle switch rated for 12 V DC. Use an open switch position on the dash if you have one.
	Feed fuse or breaker for W1, with holder	Sized to the feed wire. Confirm before buying	Only if a suitable fused feed is not already there.
	Tinned marine wire, heat-shrink ring and butt connectors, adhesive heat-shrink, cable ties and mounts, marine sealant, wire labels		Quantities depend on what you find behind the dash.

Why this transducer runs straight from this display

Check	Transducer: Airmar B175M	Display: GPSMAP 1243xsv	Result
Power	1 kW	1 kW sounder built in	Match. No separate sonar module needed.
Sonar type	CHIRP, medium band, 85 to 135 kHz	Single-channel CHIRP: low, medium or high	Match. One band at a time is all this transducer has.
Plug	Garmin 8-pin	One 12-pin transducer port	Fits through an 8-pin to 12-pin adapter. One comes in the display box. Garmin's transducer chart names adapter 010-12122-10 for this pairing, so check the one in the box carries that number. **Confirm before buying**
Garmin's own chart	Listed	GPSMAP 12x3 series	Garmin's transducer guide shows the B175M as compatible with this display through the adapter.
Scanning sonar	None	ClearVu and SideVu built in	Not used. This display has one transducer port, so side or down imaging later means a different transducer plan. Ask us first.

Do not swap the transducer without checking
A plug that fits does not mean it works. Every transducer needs a sounder with the right power, the right frequency band and the right number of channels. Some run from the display. Some need a separate sonar module no matter which display you buy. This plan pairs the B175M with the 1243xsv on purpose. If you want a different transducer or a different display, send us the exact model numbers before you order either one.

Does it fit the budget

Yes, near the top. At list price the two displays, the transducer, the radio, the starter kit, the network cable and the fuse block come to about $8,200. The panel, wire, fuses and small parts come on top of that, and should still leave you under $10,000. Garmin had the displays on promotion at $200 off each when we checked.

To pull the total down, make Display 2 the GPSMAP 1243 without built-in sonar (010-02367-60, about $200 less). It shares Display 1's sonar over the network cable.

SHEET 6 WHAT SHOULDN'T BE THERE, AND WHAT TO REPLACE

Based on your answers: unlabeled wiring, work done by a mix of people, and no photos. Treat this as a checklist for your own inspection.

Expect to find and remove

Item	Why it is there	What to do
A Raymarine sonar module (DSM300 or DSM30), a black box about 11 x 7 x 2 1/2 in	The E120W has no sonar built in. If your displays showed a fishfinder, this box is somewhere in the console.	Remove it with its power feed, its network cable and the transducer cable. Its power feed may be a good candidate for reuse once checked.
A Raymarine SeaTalk hs network switch, a small box with network sockets	Two displays and a sonar module cannot share data without it.	Remove it with its power feed and all of its network cables.
Raymarine GPS antenna, usually a white mushroom on the T-top	The E120W needs an external GPS.	The Garmin displays and the new radio have GPS built in. Disconnect the old antenna's cable at the helm and remove it or cap it. Do not leave it powered.
SeaTalk, SeaTalk ng and NMEA 0183 wiring between the displays, the GPS antenna and the old VHF	The old system's data wiring. The old radio got its position through a pair of small NMEA 0183 wires.	All of it comes out. None of it is reused.
Two E120W power and data cables	One per display, each with a 7 A fuse in the cable.	Trace each to its source. Reuse the feed only if the wire is tinned, undamaged, correctly fused and long enough to reach without a splice behind the dash. Otherwise run new.
Old thru-hull transducer	The sonar module takes one transducer.	See the stop box below.
Old VHF power feed and antenna cable		Check the antenna cable and its connector for green corrosion and stiffness. Replace the connector or the cable if you find either. The antenna itself can stay if it is sound.

Red flags to look for while you are in there

- Any wire you cannot trace to a working device. Disconnect it at its source, not only at the dash. A cut wire that is still live is the most common hazard we see.
- Any positive wire that reaches the battery or battery switch with no fuse or breaker near that end.
- Wire nuts, household wire, lamp cord, or splices wrapped only in electrical tape.
- Green or white crust on terminals, or wire that is black inside when you strip it. Corroded wire gets replaced, not cleaned.
- Melted, brittle or discolored insulation. If you find this, stop and have a marine technician look before going further.
- A stack of ring terminals on one battery post. More than four on one stud should be moved to a bus bar.
- Label every wire you identify as you go. You said nothing is labeled now, and this is the cheapest fix on the boat.

The thru-hull transducer is below the waterline

Replacing it means the boat is out of the water and a hole in the hull is opened and resealed. The B175M needs a 3 3/4 in hole, which may not match the hole you have, and the correct tilt version depends on your hull's deadrise at that spot. If you have not bedded a below-waterline fitting before, hire this one step out. A mistake here sinks the boat.

SHEET 7 INSTALL NOTES

The order that saves the most rework.

1. Send the photos and measurements on Sheet 8. Wait for the reissued dash drawing before ordering the panel.
2. Batteries off and disconnected. Photograph the back of the dash before you remove anything.
3. Remove the old displays, sonar module, network switch, GPS antenna cable, VHF and all Raymarine data cabling. Label and trace every remaining wire. Deal with the red flags on Sheet 6 now, while the dash is open.
4. Mount the new fuse block and run or confirm its feed (W1). Fit the switch for the network feed.
5. Dry-fit the new panel. Cut the display openings from Garmin's templates. Mount the panel.
6. Build the NMEA 2000 backbone on the bench first: terminator, four tees, terminator. Mount it behind the dash where you can reach it, away from standing water.
7. Haul-out step: install the B175M and route its cable to the helm without cutting or shortening it. Coil the extra.
8. Mount the displays and the radio. Connect power, the drop cables, the transducer to Display 1 through the 8-pin to 12-pin adapter, and the Garmin Marine Network cable between the displays.
9. Reconnect the batteries. Power up the network first, then each device.

Settings once it powers on

- Update the software on both displays before anything else.
- On Display 1, open Settings, My Vessel, Transducers and use Auto Detect. Garmin warns that choosing a transducer by hand can damage it, so only do that if Auto Detect fails and Garmin support tells you which entry to pick.
- Check that both displays list each other and the radio under NMEA 2000 devices.
- Program your MMSI number into the radio. Without it the DSC distress button does nothing useful. BoatUS issues one free to members and for $25 to non-members. A BoatUS number is for US waters only. If you run to the Bahamas, Canada or Mexico you need an FCC ship station license, which comes with its own number.
- On the radio, set the data protocol to NMEA 2000 (Menu, Communications, Protocol). It cannot use NMEA 2000 and NMEA 0183 at the same time.
- Confirm the radio shows a GPS position, then do a radio check on a working channel.

Your stereo

You are keeping the Fusion stereo and amplifier. Some Fusion head units have an NMEA 2000 port (the MS-RA70N and MS-RA210, for example) and can be controlled from the Garmin screens. Tell us the model number and we will add it to the network sheet if it supports that.

SHEET 8 WHAT WE STILL NEED FROM YOU

Send these through riggingbench.com/contact and quote your order number.

Need	Why
Photo of the whole helm, straight on, with a tape measure in the shot	Panel size and what else is on the dash
Photo behind the dash	To spot the sonar module, the network switch, the fuse block and anything that shouldn't be there
Photo of the batteries, battery switch and charger	Fusing and wiring at the source
Flat dash width and height, and depth behind the dash	Final panel drawing
Width and height of each existing display hole, the distance between them, and from each hole to the dash edges	Final panel drawing
Width and height of the old radio's hole	Whether the new radio fits there
Hull deadrise where the thru-hull transducer sits, the diameter of the existing hole, and whether the hull is cored there	Which B175M version, and whether the hole needs enlarging
Fusion stereo model number	Whether it can join the network

What this plan is. Design guidance drawn from your survey answers and manufacturers' published information as of the date on the cover. Nobody from Rigging Bench has seen or tested your boat.

What it is not. It is not a marine survey, a safety inspection or a statement that your boat or its wiring is safe. Red-flag notes are what we expect or noticed, not a complete list. If something is not mentioned, that does not mean it is safe.

Your responsibilities. You are responsible for the installation. Measure before you cut. Check what is behind a surface before you drill. Disconnect the batteries before you work. Confirm every fuse size and wire gauge against the manufacturer's installation instructions for your actual cable lengths, and follow ABYC standards for boat electrical systems, including E-11. If this plan and a manufacturer's instructions disagree, follow the manufacturer and tell us.

Not covered. Shore power, chargers' AC connections, inverters and any other AC wiring; fuel systems; steering and engine controls; structural work. Electrical parts in spaces that can hold fuel vapor must be ignition protected.

Parts. Part numbers and compatibility come from published information that manufacturers change without notice. Items marked 'Confirm before buying' could not be fully verified. Rigging Bench is not affiliated with any manufacturer named here.

Full terms and safety notes: riggingbench.com/terms. Rigging Bench is a Viking E-Holdings LLC company.