



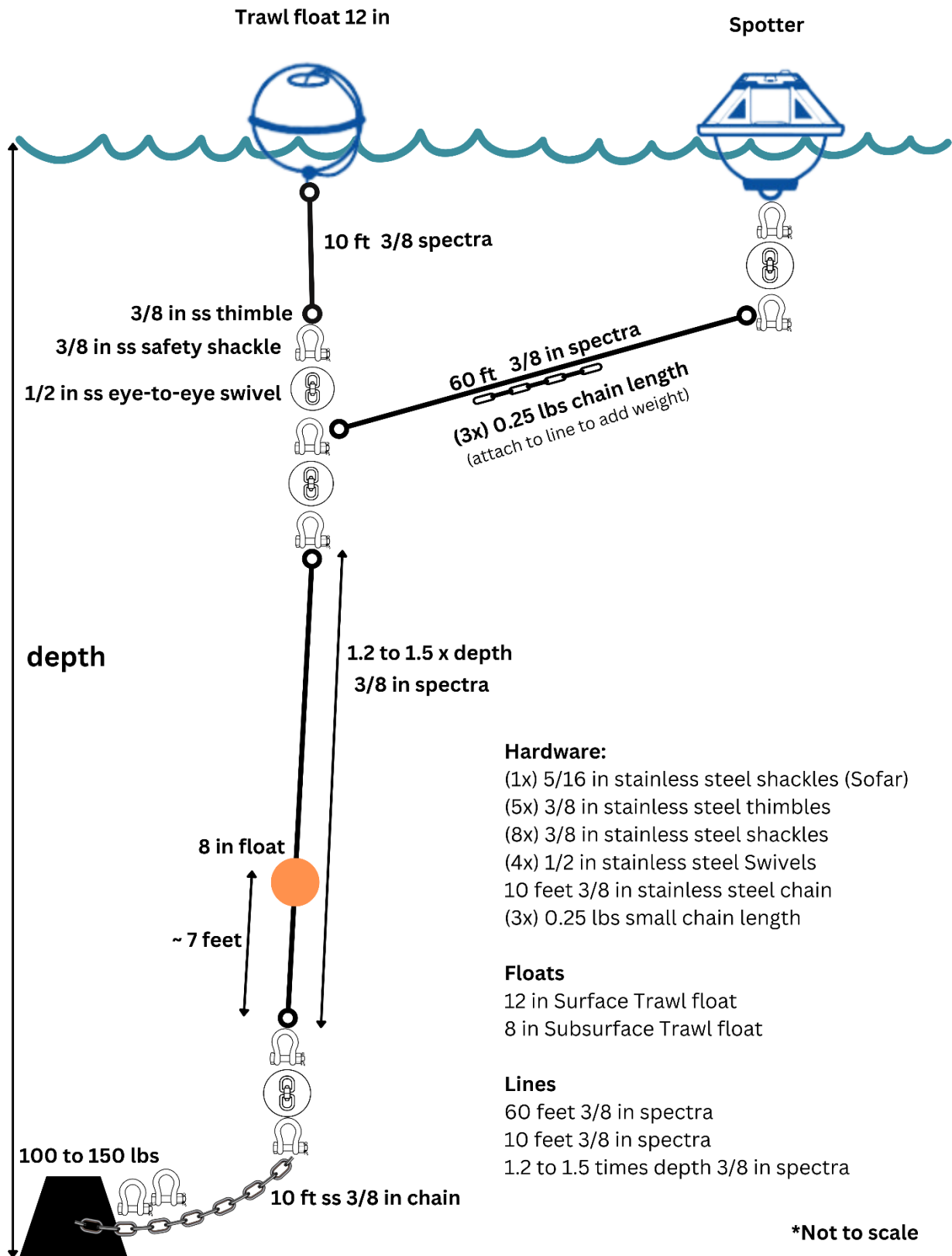
Pacific Islands Spotter and Smart Mooring Deployment Guidelines February 2025

Spotter Deployment

The deployment follows the sequence of spotter first, mooring line, surface float, anchor last. All mooring components should be connected and all equipment assembled. Make sure all lines are tangle free and all shackles tightened with cotter pins. Tie down the anchor until it is ready to go overboard.

Go to the anchor GPS coordinates. Stop the boat and check which way you are drifting. Drive or drift down wind/current to rough fully half the distance of your mooring length (e.g., if your mooring is 50 ft, drift down current about 25 ft from your GPS coordinates). Start the deployment (**steps 1-6**) while slowly motoring back up wind/current to the anchor GPS coordinates. If you think you will get to your anchor target coordinates and you still have mooring line to pay out, make S turns. If you are getting to the end of the line and still not at your anchor target point, cleat the line before you get to the anchor chain, and tow the system slowly until you are at the anchor target point. If the mooring is all stretched out when you push off the anchor, the anchor will swing towards the surface float while it is free falling to the bottom (pendulum effect). The anchor may be offset once it hits the bottom, but the distance should be irrelevant unless the depth is over 100 ft and your anchor target area is very small (top of a seamount).

1. Deploy the Spotter first, lowering it into the water then paying out the 60 ft of weighted line connected to the swivel junction.
2. Lower the swivel junction into the water until the ~10 ft of slack is taken up to the surface float (which is still on deck), keeping the surface float line and the main line separated.
3. Lower the surface float into the water.
4. Continue paying out the main line, keeping feet clear of any loops in the line.
5. Pay out the chain hand-over-hand until only the anchor remains on deck.
6. Make sure the Spotter and the surface float are streaming well away from the vessel and all line/chain is clear from the prop. When on target, push the anchor overboard.

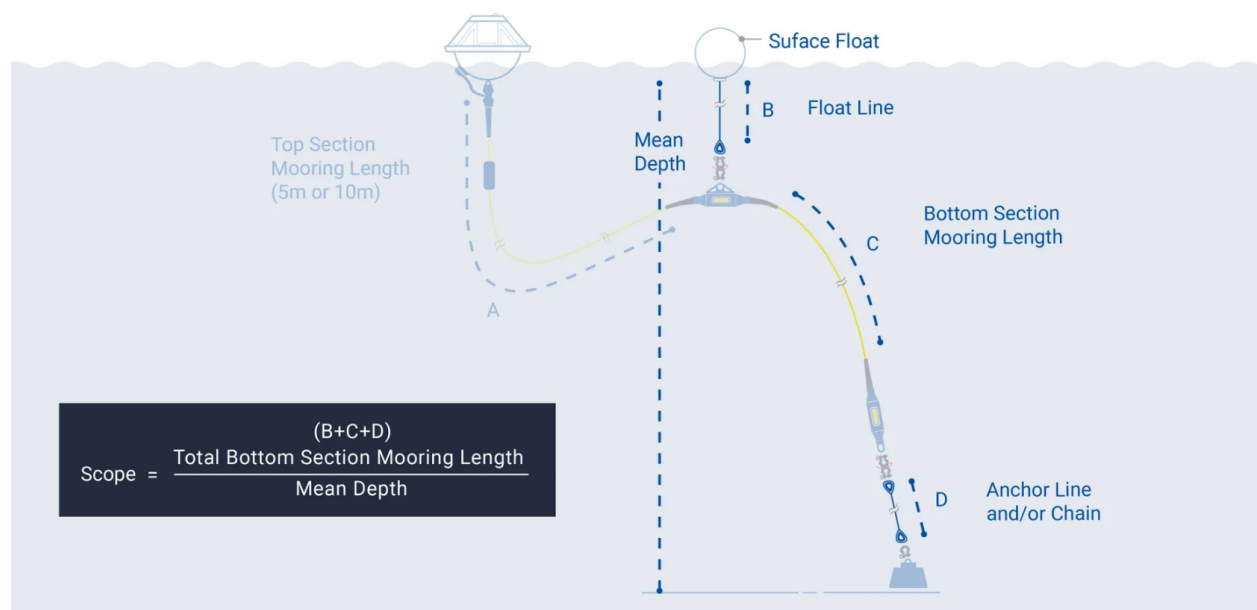


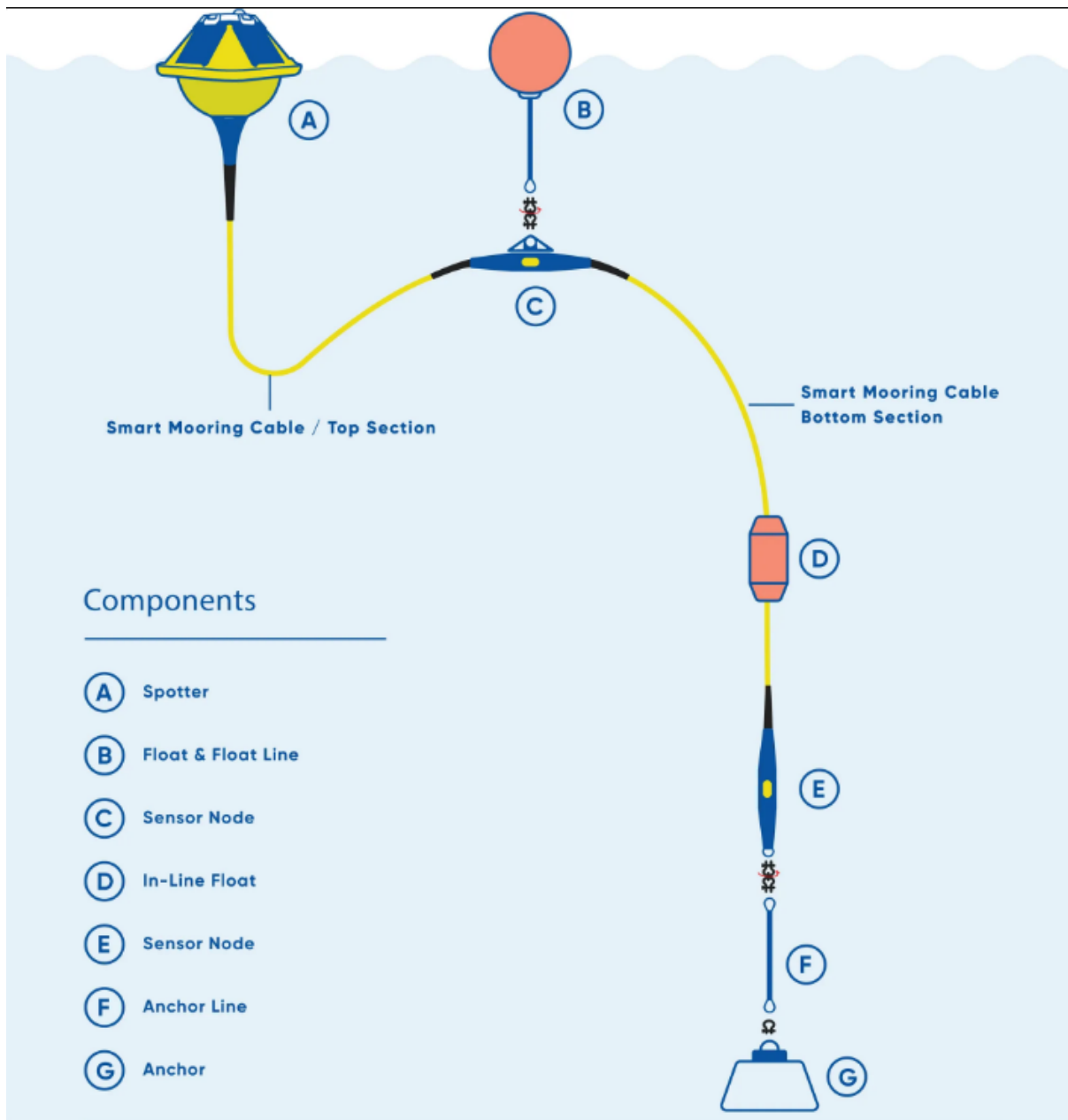
Spotter + Smart Mooring Deployment

Assemble and connect everything beforehand. The deployment follows the same sequence as the spotter only: spotter first, smart mooring to surface float (5 or 10m), surface float, first node, smart mooring main line, anchor last. The Smart Mooring itself can be used as a strength member in deployment and recovery. It has a **maximum working load of 2kN (~450 lb-f / ~200 kg-f)**.

The smart mooring can be deployed/recovered by connecting or disconnecting the final hardware connection between the smart mooring and the anchor by hand on SCUBA. That is the case when there is already a preset anchor or structure on the ocean floor. This also minimizes the stress on the smart mooring. But keep in mind that the smart mooring has buoyancy (each in-line float has 9 lbs buoyancy), therefore it is necessary to add easily removable weights until the mooring becomes neutral, and a diver can safely take the bottom node to the anchor on the ocean floor.

Sofar recommends a scope from 1.25 to 1.5 times the mean water depth **from anchor to surface float**. Scopes larger than 1.5 are recommended for locations with large tidal range and/or large wave heights and/or strong currents.





Hardware:

- (1x) 5/16 jaw-jaw swivel stainless steel (provided by Sofar)
- (1x) 1/2 in stainless steel eye-eye swivel
- (4x) 3/8 in stainless steel shackles
- 5 feet stainless steel 3/8 in chain. *A length of line might be necessary to achieve the desired scope. (F)

The first node (C) should have a surface float attached.

Position of in-line floats:

- There should be one in-line float 2m above every node other than the first.

- There should be an in-line float in the middle of longer (25m, 35m, 50m, and 65m) sections of cable to keep the cable from dragging on the bottom or contacting the anchor.

5m cable - **no** additional in-line flotation (already has one per node)

10m cable - **no** additional in-line flotation (already has one per node)

15m cable - **no** additional in-line flotation (already has one per node)

20m cable - **no** additional in-line flotation (already has one per node)

25m cable - **one** additional in-line float added in the middle of the cable section (12m from the bottom)

35m cable - **one** additional in-line float added in the middle of the cable section (15m from the bottom)

50m cable - **two** additional in-line floats added distributed along the cable (15m and 30m from the bottom)

65m cable - **two** additional in-line floats added distributed along the cable (15m and 30m from the bottom)