

Low-Profile Floating Dock

#### **General Guidelines:**

- \* **<u>Safety First!</u>** Always use caution while assembling the pier and while actively using the pier.
- \* Wear protective gloves and appropriate safety glasses when assembling the Patriot Dock.

DOCKS

- \* **<u>Caution!</u>** Be aware of pinch points between frames, around hinges and near piling sleeves.
- \* Please visit our FAQ section at <u>www.patriotdocks.com</u> for more information and details about floating docks.
- \* Due to the nature of floating docks, the pier may shift or fluctuate in moving water, be mindful of footing while walking on the deck surface.
- \* All dock surfaces can be slippery when wet. Please use caution when stepping or walking on any dock surface.
- \* Manufacturer recommends at least three 48x24x12" floats per 16' of dock frame (and one of said floats per 8' frame). The dock is designed to carry a maximum of 500 pounds over any 4 ft x 4 ft part of the deck. With the recommended minimum floats, the buoyancy rating is approximately 700 pounds per 16' of dock. Consider add-ing more floats to increase buoyancy load.
- \* Never push or pull the aluminum dock with a winch, ATV or vehicle.
- \* Always remove decking panels when moving the pier in or out of the water.
- \* It is common for floating docks to be left in frozen water. Warranties do not apply to damage caused by ice. Each situation should be considered carefully before leaving the pier in frozen water.
- \* Patriot docks are modular, allowing for the flexibility to add length or change the configuration as desired. Additional parts may be required for certain configurations.

Tools Required: 9/16" and 3/4" Wrenches or ratchet w/ sockets, phillips screw driver, mallet

**Recommended Tools:** Cordless Impact wrench / drill with above socket sizes and phillips driver, work gloves, safety glasses

# **General Locations for Floats, Pilings and Hinges**





#### Step 1: Frame Assembly

4'x8' Low-Pro Frames can be joined end-to-end or side-byside to create the desired configuration. Some of the assembly hardware used to join the frames may also fasten Float Brackets, Piling Sleeves and/or Handrail Brackets. **Fender washers are used in most locations where frames are being joined** (anywhere the bolt head or nut would contact the frame without an additional material thickness like Float Bracket or Piling Sleeve).

4'x8' Low-Pro Frames can be joined side-by-side using four M10x100mm bolt/nut.

Assemble 4'x8' Low-Pro Frames into 16' sections wherever possible by bolting two 4'x8' frames together end-to-end using four M10x100mm bolt/nut.

# Step 2: Installing Hardware

Rectangular Floats can be mounted at either end of the 4'x8' Low-Pro Frame using the PN10849 Float Bracket Set. The Short Brackets are used along the frames 4' dimension and the Long Brackets are used along the 8' sides. M10x60mm bolts/nylock nuts are used to fasten the bracket set and the float. A fender washer is used under the flange of the float.

Hinges can be mounted to the 4' face of the Low-Profile frame, or, there are mounting locations on either end of the 8' face of the frame (used for adding fingers to the dock configuration). The hinge brackets should be installed with the round tube orientated upward. Hinge brackets are fastened using M10x60mm bolts with nylock nuts. After mounting the Hinge brackets , bring the two hinged faces together, aligning the 1" I.D. tubes while inserting the 3/4" I.D. x 4' Hinge Pipe. Install M6x30mm bolts and nuts to secure the Hinge Pipe in place.

Patriots aluminum Piling Sleeve accepts a 1-1/2" schedule 40 piling pipe. Piling Straps are available for securing the floating pier to 8" piling posts (hole drilling required to install Piling Straps). There are multiple piling sleeve mounting locations on each Low-Profile frame. Generally, a pair of pilings are used near the very lake end of the pier as well as a pair of pilings at approximately the halfway point or nearer to shore. Add additional piling sleeves for increased stability and to anchor optional finger sections. DO NOT tighten any set screws on the piling sleeve when used to secure the pier in place, the sleeve should move freely along the piling pipe.

The optional handrail assemblies should also be installed at this time. The handrail assemblies use the same aluminum Pipe Sleeve for mounting to the Low-Profile frame. Install the aluminum Piling Sleeves at either the 4' or 8' increments depending on the handrail length. Insert the Vertical Handrail Supports into their respective piling sleeves, ensure the bottom of the Vertical Handrail Support is flush with the bottom of the Piling Sleeve then tighten the two set bolts. This will ensure a level handrail height. Next, insert the Handrail Pipe (either 4' or 8' nominal length) through the horizontal sleeves of the Vertical Handrail Support. Lastly, tighten set screws on horizontal sleeves of Vertical Handrail Supports.



### **Step 3: Mounting Handrails**

The optional Handrail system is available in 8' or 4' lengths. The handrails are attached to the frame using the same Piling Sleeve bracket. The Handrail Vertical is installed flush with the bottom of the Piling Sleeve bracket, tighten set screws to secure the Handrail Vertical. Next, the Horizontal Handrail Pipe is sleeved through the Handrail Verticals, tighten the set screws on the Handrail Vertical sleeves to secure the Horizontal Handrail Pipe in place.



## **Anchoring Details and Recommendations**

The manufacturer provides general guidelines to anchoring a floating dock. One should be aware of local regulatory restrictions. Due to the large degree of variation between floating dock applications and locations, carefully consider the details of your floating dock application when determining how to best anchor the pier. There are multiple ways to anchor a floating pier in place, each with its own pros and cons. Here we provide details and some general guidelines for each method.

**Sleeve and Piling:** This method of anchoring uses our available 1-1/2" Piling Sleeve to travel up and down on a 1-1/2" i.d. schedule 40 galvanized pipe. This is a ridged method of anchoring and is great for water depths up to around 4'. This method requires little maintenance as the sleeves should move freely along the pipes with fluctuating water levels. Longer pipe is available for deeper applications but one may consider using the following chain and deadman weight method or a combination of both. Pipe can be driven into place or auger bases are commonly used to allow the pilings to be turned into the lake bottom. Pilings should be driven at least 12" into the lake bottom and deeper if a boat is to be moored to the floating pier.

<u>Chain and Deadman Weights</u>: This style of anchoring is a great all around method, especially useful in deeper water. The 1-1/2" Piling Sleeve is also used as the tie off point for the anchor chain. It is recommended that 5/16" galvanized chain and galvanized shackles be used as leads for the deadman weights. Chain leads should have a length twice that of the water depth. Floating docks will require between 500lbs—1500lbs of anchor weight depending on dock size and water conditions. Anchors should be placed at least every 32' of dock length and at key perimeter points as needed.





#### **Decking Installation**

Lastly, after the dock has been assembled completely, installed in the water and leveled throughout, then the pier is ready for the decking to be installed. The most efficient way to set the decking in place is to start at the shore end of the dock and set each panel in place, working towards the lake end. Removal is the opposite of installation.



After Rubber Insulator is applied, the Aluminum Decking can be set in place.

Optional Deck Lockers can be installed on the panel to secure the decking to the frame.

When assembling the <u>poly decking</u>, lay out the 1'x4' poly deck boards parallel to each other creating the 4'x4' shape. Spacing of each 1'x4' poly deck board is approximately 5/8". Spacing is pre-determined by hole placement.

Place aluminum stringer onto the deck boards and line up holes in the stringer with the pre-drilled holes in the poly deck boards. Secure stringer with 1" long pan head screws



When installing Aluminum Deck Panels, first apply the adhesive backed Rubber Insulator to the aluminum frames. The Rubber Insulator is installed down the 8' lengths of the floating frame. **(Only used with aluminum decking)** 

The Rubber Insulator is not to be installed in the direction of the 4 ft. width, only lengthwise.





PN10867: Deck Locker

Use the optional Deck Locker to secure the 4x4' poly deck panel onto the dock frame.

1	Stringer	<b>↑</b> + 11-3/4"

<u>The Cedar Deck Panel</u> is simply set in place. The cedar panels are sold untreated and can be installed as is. To extend the service life of the cedar deck, a water repellant stain can be applied.

The Cedar Decking does not utilize a deck locker mechanism but it is recommended that the panels be secured to the frame in some capacity. (zip-ties are commonly

www.patriotdocks.com