Monster Tower 5714 U.S. Hwy 411 S. Maryville, TN 37801



# HS<sub>1</sub>

#### Installation Instructions and Owner's Manual

Your HS1 uses many common parts and design features that make it affordable, adjustable, and easy to install. There are four main components: Top section, right leg, left leg, and cast mounting bases. The top section has a larger inside diameter to allow the legs to slide inboard and outboard adjusting to different boat widths. An important part of the installation is drilling holes in the tower to lock the legs into a position custom fit to your boat. Quick Release Knobs allow you to fold the tower for storage. Following all the installation instructions will give you a professional look.





#### Important notes for installation, maintenance, and use of your new HS1!

- For a High Quality, Trouble Free Installation, read the entire Installation Manual before you begin.
- Monster Tower has documented forces on arches exceeding of 300 ft./lbs. under normal wakeboarding conditions. Dynamic forces can exceed 10 G on "double-ups". Towing forces are transferred into the deck of the boat. Monster Tower **REQUIRES** reinforcement to be installed under the deck by a qualified installer who can take your boat's individual mounting situation into account. Every boat, mounting location, and configuration is unique and needs to be assessed by a fiberglass professional to ensure the forces generated from towing do not cause damage to the deck and other areas of your boat.
- Monster Tower is not responsible for damages due to improper installation or reinforcement.
- Leave the protective plastic wrap around the legs to prevent damage during installation.
- Do not use power nut drivers to run bolts. Always turn by hand to prevent the bolts from heating up.
- After drilling the locking bolts in the top section the width is permanently set and cannot be moved to another boat unless the mounting width is the same. Be sure to measure twice before drilling!
- The tower is silent by design. If you hear any rattling or noise please check all hardware for tightness. Please call us at 877-778-6937 if rattling or noise persists.
- USE PROVIDED ANTI-SEIZE (IN FOIL PACKET) ON ALL BOLTS!
- If you are unfamiliar with these instructions please contact one of our many dealers listed under our dealer locator on our website.

# Step 1: To ensure you are not missing any hardware layout all pieces and verify you are not missing any hardware.



## **Supplied pieces**

- 1. Washer, 1/2 x 1 1/2 Fender (Qty 2) Between leg and base
- 2. Bolt, 1/2" x 4" BSCS (Qty 2) Cast base to leq
- 3. Washer, 1/2 ID X 1 OD X .062 Thick Nylon (Qty 2) <u>Black nylon, goes inside cast base, brass but tightens onto</u> this washer
- 4. Brass Nut, 1/2" Nylon Lock (Qty 6) 1/2" ID 3/4" OD
- 5. Knob Assembly (Qty 2)
- 6. Deck Mount, Female (Qty 4) 2" OD 5/8" ID Against cast base
- 7. Deck Mount, Male (Qty 4) 1 ¾" OD 1 "ID Against boat
- 8. Gasket (Qty 2)
- 9. Backing Plate 2 X 2 X ¼ (Qty 4) Between boat and brass nut
- 10. Cap, 1/2" Nut Black (Qty 2) Covers brass nut on base
- 11. Nav Light Assembly, Gloss Black (Qty 1) Top of tower
- 12. 3/8" x 3" Button Head Cap Screw (Qty 4) Top section locking bolts
- 13. Decorative Header nut (Qty 4) <u>Used with 3/8" x 3" Button Head Cap Screw</u>
- 14.8-32 x 3/16 Stainless Steel set screw (Qty 2) Used with Knob Assembly
- 15. Base template Starboard, Base template Port
- **16.** 10mm drill bit
- 17. 2mm allen wrench, 6 mm allen wrench, 8 mm allen wrench
- 18. Anti-seize Loctite

#### **Tools Needed**

- 1.) Ratcheting wrench
- 2.) ¾" socket.
- 3.) ¾" deep socket for nuts under boat.
- 4.) Tape measure
- 5.) Safety glasses
- 6.) 3/8" Marine grade plywood

- 7.) Masking tape
- 8.) 3M 5200 Adhesive
- 9.) 5/8" & 13/16" Drill bits
- 10.) Electric Drill

#### **Step 2: Mounting Location**

Determine where the tower will mount on your boat. The tower requires a 16x3 inch flat mounting surface on top of the boat. Once you determine where you will mount the bases reinforce the back side of the boat with the 3/8" marine grade plywood. 3M 5200 adhesive works well to hold the plywood in place.

Cut out the holes on the provided templates. The 5/8" diameter holes are where the studs will go through the boat. The 13/16" hole is for your navigation light, speaker wires, etc...

Once you have cut out the template, use masking tape to hold the template in place and line up the starboard template with the port.

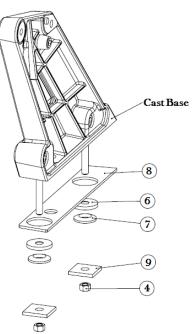
Use a 5/8" drill bit to drill out the two stud holes for each base. Be sure to drill in reverse to get through the gel coat, this will prevent spider cracks from forming. Once you are through the gel coat you can drill normally. Determine which side of the boat the navigation light needs to run to and drill the 13/16" hole according to the template.

## **Step 3: Base Installation**

Remove the paper templates and place the correct rubber gasket over the mounting area. Note that there is a port and starboard gasket. The male deck mount (pc.7) will go below the female deck mount (pc.6). Placing these over the holes then placing the gasket on top will make base installation much easier.

Slowly place the cast base on the boat. Be careful not to let the studs come in contact with the gelcoat. Once the base is sitting on the boat you can place the backing plates (pc.9) against your marine grade plywood and tighten them down with the brass nuts (pc.4).





#### **Step 4: Leg and Top Section Installation**

Start with the starboard side and install the  $\frac{1}{2}$ " x 4" bolt (pc.2) through the front hole on the leg section.

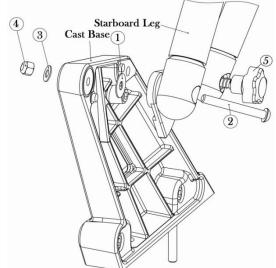
Note: The support bar faces the rear of the boat.

The head of the bolt will face inside the boat. Before putting the bolt through the case base place the 1 % fender washer (pc.1) against the leg so that it is between the cast base and the leg section. Before installing the brass nut (pc.4) place the 1" black nylon washer (pc.3) between the brass nut and cast base. Install the

decorative cap (pc.10) over the brass nut.

Insert the quick release knob (Pc.5) into the rear section of the leg and tighten all the way. Once the quick release knob is secure install the set screw (pc.14) into the brass insert. Tighten the set screw all the way to prevent the knob from coming out completely when lowering the tower.

Once the knob and set screws are installed you can insert the header section onto the leg section. Do not remove the protective wrap from the leg section until the install is complete.

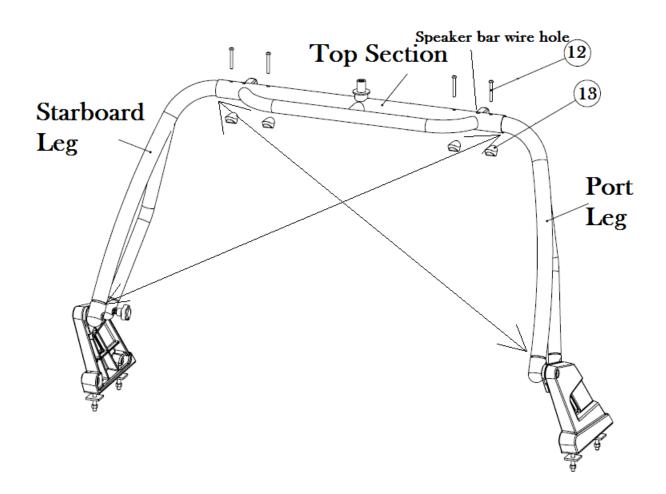


Insert the port leg completely into the header section and line it up with the port cast base. Install the  $\frac{1}{2}$ " x 4" bolt (pc.2), 1  $\frac{1}{2}$ " fender washer (pc.1), 1" black nylon washer (pc.3), brass nut (pc.4), quick release knob assembly (pc.5), and set screw (pc.14) identical to the installation on the starboard side.

#### **Step 5: Aligning the Top Section**

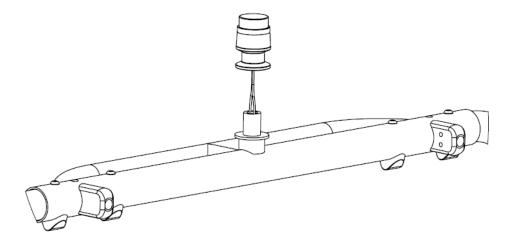
Now that everything is installed align the top section so the holes for the locking bolts (pc.12) can be drilled. Using an X pattern measure from the edge of the top section to a reference on the opposite side cast base. Use the same reference on both sides. Some easy references are the welds on the front of the leg or the bottom of the leg mounting plates.

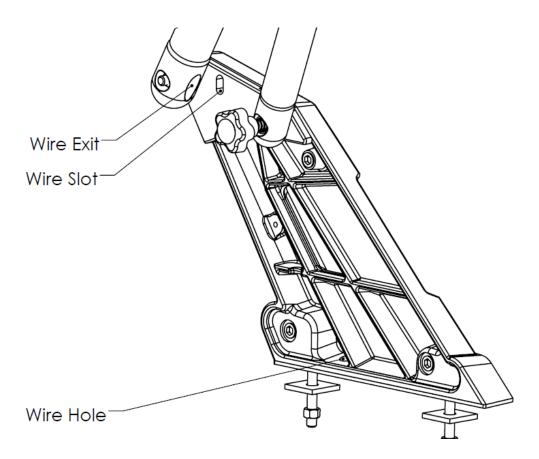
Once the top section is centered and level use the provided 10mm drill bit (pc.16) to drill through the top section into the leg sections. The center pilot holes on each side of the top section are for the sound bar wiring harness. If you do not plan on installing a sound bar do not drill this hole! Be sure to drill from the top down and the bottom up. This will prevent any misalignment with the bottom pilot hole thus preventing top section movement. Once the first hole is drilled install the 3/8" x 3" BHCS bolt (pc.12) and use the provided 8mm allen wrench to tighten the bolt into the decorative header nut (pc.13). The decorative header nut will sit flush against the top section. Continue this step for the remaining 3 bolts and install them accordingly.



**Step 6: Installing the LED Navigation Light** 

Use a wire fish to pull the wire through the tower to the side of the boat you drilled for the navigation light. At the end of the leg, pull out the wire and run it into the wire slot of the leg mounting plate. In most cases, the LED anchor light can be wired into the existing navigation light system.





Step 7: Installing the cover panels

Install the base cover panels as the last step of your installation. The pegs should align with the white insert holes on the cast base. Apply enough pressure so that the peg fits fully into the insert.

### Using your new HS1 Wakeboard Tower – Operating Instructions

The HS1 tower easily folds for storage. To fold the tower, remove the quick release knobs and slowly guide the tower to the folded position.

When the tower is folded, always use a vest or other cushion to protect your boat where the tower and boat touch.

**IMPORTANT** – The tower cannot be towed when folded. The tower must be in the upright position when being towed.

After towing and before every use, please check and tighten bolts and nuts when necessary.

The HS1 tower is silent by design. If you hear any rattling or noise from the tower, or see any movement in the tower, stop and check all hardware for tightness. Call us at 877-778-6937 if this does not correct the problem.

Always understand and follow the warnings on the tower label!