

HARBOR MODELS 12 VOLT LARGE SCALE SMOKER (HAR301-12)

SCALE SMOKERS ARE PROUDLY DESIGNED, ENGINEERED, TESTED, AND ASSEMBLED IN THE USA!

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The 12V Large Smoke Generator is a great way to add that extra touch of realism to your larger scale models. The unit features a brushless fan for efficient and quiet operation, low power consumption, extended run time, and a size of 4 1/4" L (5 1/4" L with mounting tabs) 3" W and 1 7/8" H with a weight of just 5.8 OZ when filled with fluid.

PREPARING FOR OPERATION:

- 1) **The unit requires air flow from the front (direction of travel) of the model, or directly above the Smoke Unit Fan, equal to a MINIMUM unobstructed area of 4 Square Inches through louvers, mesh, or vents.** Do NOT use LI-PO or LI-ION Batteries. **It is designed for a 12V NIMH, NiCad, or Sealed Lead Acid Battery with at least 4 AMPS, and Maximum of 12 AMPS.** The unit has a 5/8" O.D. brass fitting that is designed for Clear 5/8" I.D. plastic tubing (soak in hot water first) to be slid over the fitting to connect up to the stack. **DO NOT FORCE THE TUBE ONTO THE FITTING.. Ensure that there aren't any reducers, kinks or obstructions in the hose or tube, to prevent splashing from the fan area.** A 5/8" I.D. "WYE" Fitting should be used for Dual Stacks.
- 2) The reservoir holds a Maximum of 2 OZ of Smoke Fluid that is included with the unit. Use the included dipstick to check your level, the top of the 1/4" black line indicates the Maximum capacity of 2 OZ. This unit only requires 2 Hours of priming prior to operation, filled through the brass fitting. After the 2 Hour priming period, check the level again with the dipstick, and carefully top off as necessary. **DO NOT OVERFILL, DO NOT LET THE FAN GET WET, OR LET THE UNIT RUN DRY.**
- 3) Do not use anything other than Small and Large Scale Smoker Fluid or JT's Mega Steam. An eye dropper can be used to remove excess fluid, or it can be tilted so it pours out the brass fitting. Black smoke is an indicator of combustion and is not possible to recreate with the Scale Smoker.
- 4) The 2 smaller diameter wires operate the fan. Polarity must be correct. Red is Positive, Black is Negative **THESE LEADS ARE TO BE HOOKED DIRECTLY TO THE BATTERY, terminal strip, or Harbor Models Power Distribution Box, or LED Voltage Regulator with** an inline toggle or relay switch should be installed. **so that the Fan receives a constant 12V and is always running while the model is operating, regardless of fixed or proportional set up.**
- 5) So that the amount of smoke will be proportional with the amount of power going from the ESC to the motor, the 2 larger diameter wires for the heating element should be soldered to the motor tabs for best results. The leads can also be hooked directly to the battery for the same amount of smoke regardless of engine speed. An inline toggle or relay switch should be installed, as well as a **LED Voltage Regulator if there is a chance that 12V will be exceeded at any time.**
- 6) The unit should be mounted with Stainless Steel screws as low as practical to the keel to keep the center of gravity down, and to minimize rolling of the unit. A minimum of 4" of clearance must be maintained above the entire Smoke Unit, in order to allow proper air flow through the fan. Velcro or double sided tape can be used when screws are not possible.

OPERATION:

- 1) The unit consumes around 2.5 AMPS of power at full speed. The Harbor Models Large Scale Smoke Generator should provide approximately 3 hours of combined run time at full speed, depending on your model. This time will be extended under normal operation when maximum turns are not used. The unit should be closely monitored and the smoke fluid should be checked with the dipstick before every use at regular intervals to ensure that it doesn't run dry.

NOTICE:

There is NO warranty on any version of our Smoke Generators. All Smoke Units are individually assembled by hand, and thoroughly tested for proper operation before they are shipped. If you do experience an issue, Please Contact scalesmokers@gmail.com before returning. Ensure units are completely drained and in a sealed plastic bag. Maximum shipping box size is 5" H x 5" W x 10" L. Once the request is approved, all units are sent directly to Scale Smokers at this address: Scale Smokers, PO Box 3206 Huntington Beach, CA 92605. Include a note with the issue you are having, email address, return address and phone number. You will be contacted with a quote for repairs (Parts and Labor) and return shipping.

With proper use, this Harbor Models Large Scale Generator should provide safe and reliable operation. The manufacturer shall have no liability for any death, personal and/or bodily injury and/or damage to property of other loss whether direct, indirect, incidental, consequential, or otherwise based on a claim that the product failed to function. However, if the manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this Limited Warranty or otherwise, regardless of cause or origin, the manufacturer's maximum liability shall not in any case exceed the Purchase Price of the product, which shall be fixed as liquidated damages, and not as a penalty, and shall be the complete and exclusive remedy against the manufacturer.