

# Lil' Stanker™ MK-IV

# Holding Tank Deodorizer Fan

040913

**GENERAL INFORMATION** — Lil' Stanker™ MK-IV Holding Tank Deodorizer Fans are designed to create a slight vacuum inside your holding tanks that helps prevent odors from seeping into living areas. This gentle, continuous air suction draws sewage gas outdoors, providing effective control of both black and greywater tank odors. The 2-speed fan motor minimizes noise and battery drain while stationary, yet ensures maximum performance while out on the road. The rugged, stainless-steel enclosure shrugs off hail and sunlight damage, while continuing to look great year after year. An innovative direct-mount design allows the fan to attach directly to the roof, thereby allowing it to fit any diameter of vent pipe — no pipe fittings or adapters required. The MK-IV kit includes all materials required for a typical installation (except for roof sealant/adhesive, which is locally available at most hardware and discount stores). The 2-speed switch can be mounted in the included switch enclosure, or on your own front panel (a drill template and front-panel label are included for this purpose).

## STEP-BY-STEP INSTALLATION INSTRUCTIONS

(NOTE: Please Read Entire Instructions Before Starting)

**STEP 1:** First, test the fan, by temporarily connecting a 12-volt battery or other DC power source to the fan's wires (**GREEN** fan wire to **POSITIVE, WHITE** wire to **NEGATIVE**). The fan should start immediately.

# 1

Next, determine your wire routing method, giving special consideration to (A.) any nearby DC power sources, and (B.) an appropriate place to mount the switch nearby. Any of several different wire-routing techniques may be used:

- DOWN THE OUTSIDE OF THE VENT PIPE** — A good choice if the vent pipe is accessible as it passes through the interior ceiling.
- DOWN THE INSIDE OF THE VENT PIPE** — A good choice if the pipe is only accessible a considerable distance from the roof.
- THROUGH A HOLE DRILLED IN THE ROOF** — A good choice if the pipe is inaccessible from within or under the RV.

**TIP:** The fan can often be connected to a closet light fixture or other DC power wiring in the vicinity.

- ACROSS THE OUTSIDE OF THE ROOF** — Frequently, a convenient source of DC power is present at a nearby 12-volt ceiling vent fan, or within the fridge vent compartment. Adhesive-backed aluminum tape or a bead of sealant can be used to protect the fan's wires against damage from weathering and direct sunlight.



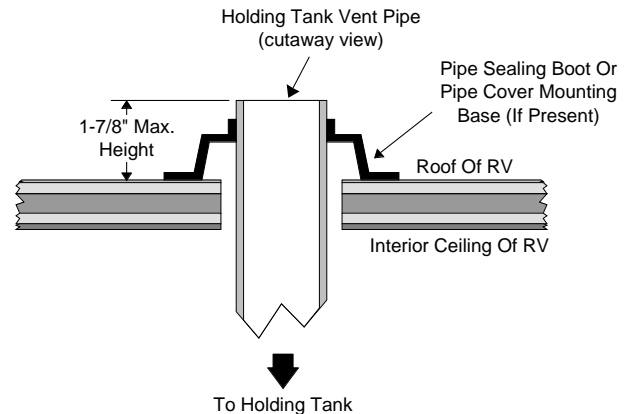
### CAUTION!

USE CARE IN DRILLING HOLES NOT TO CONTACT ANY ELECTRICAL WIRING — HAZARD OF SHOCK, BURNS!

**STEP 2:** Next, remove any existing cap or cover from the tip of the holding tank vent pipe, and confirm that the tip of this pipe is no more than 1-7/8 inches (48MM) above the roof's surface. (Any greater height will interfere with the fan's mounting). If necessary, shorten the vent pipe with a hacksaw, and remove any sealing boot or cover mounting base pieces that would otherwise interfere with the fan's fit.

# 2

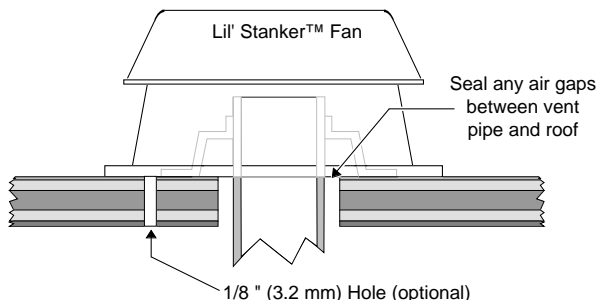
Temporarily set the fan over the vent pipe, until its mounting base rests on the roof. Confirm that nothing prevents the fan from resting solidly on the roof's surface.



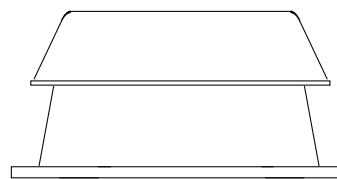
**STEP 3:** Use sealant/adhesive\* to fill-in any air gaps where the vent pipe passes through the roof. (If the fan wires are to be routed along the outside of pipe, leave a small gap in the sealant where the wires will pass through). The goal is to minimize air leakage between the outside of the pipe and the roof hole it passes through.

# 3

Next, if the fan wires are to be routed through a hole in the roof, drill this 1/8" hole now. Pick a hole location that will be sheltered underneath the fan after final attachment.

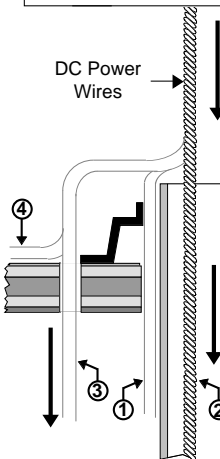


\***RECOMMENDED SEALANT:** GE® Silicone II RTV (or equivalent) for metal or fiberglass roofs, or Dico® Lap Sealant #501-LSW for rubber roofs.



# 4

**STEP 4:** Route the fan's DC power wires either ① down the outside of the vent pipe, ② down the inside of the vent pipe (see Tip below), ③ through the previously-drilled 1/8" roof hole, or ④ under the bottom edge of the fan. If the fan is to be attached with the 4 mounting screws (included in kit), use the fan to mark the locations of the mounting screws on the roof, and drill 1/8" (3.2 mm) holes approx. 1/4" deep into the roof at these points.

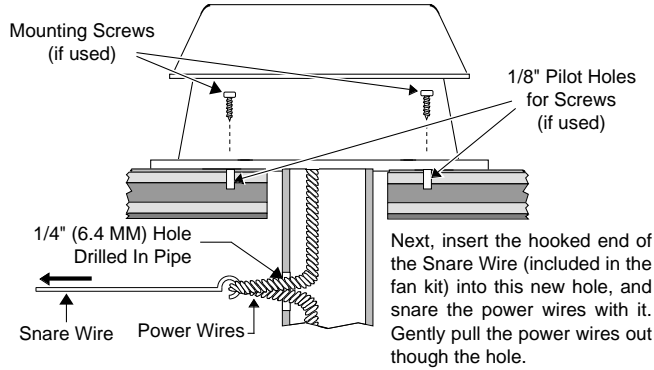


**TIP:** A plumber's snake is often helpful for routing the fan wires down the inside of the vent pipe: After securing the wire to the snake with a rubber band, the combination is inserted down the pipe. The wire is then snared and pulled out through the 1/4" hole, leaving the snake to be withdrawn back up the pipe. (Strap-steel snakes are available for several dollars at most discount stores).

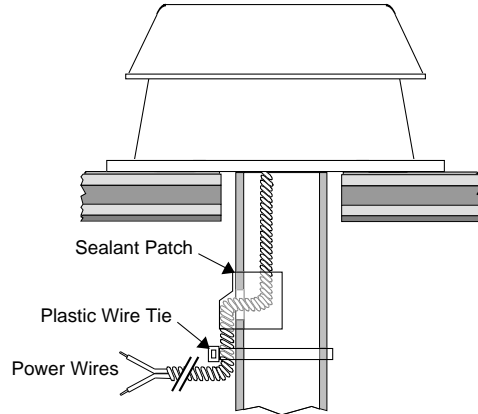
**STEP 5:** Next, thoroughly clean the roof's surface where the fan will be mounted, and apply a bead of sealant/adhesive all the way around the bottom of the fan's mounting base (and inside the 1/8" roof wire-routing hole, if used). Set the fan in place, securing it with the mounting screws (if used). Apply sealant to the tops of the screws (if used).



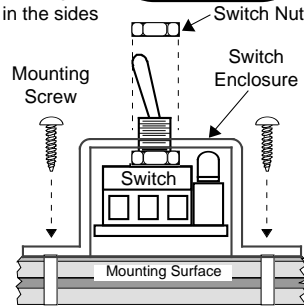
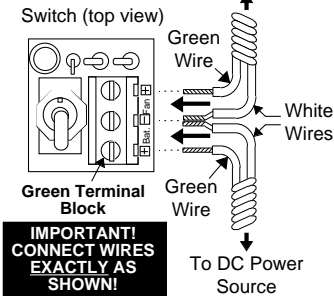
If the fan's DC power wires are not being routed down the inside of the vent pipe, go on to **STEP 7**. Otherwise, proceed as follows: Locate a convenient point somewhere along the vent pipe, near a source of DC power. Drill a 1/4" hole in the pipe at this point.



**STEP 6:** At the point where they exit the hole in the vent pipe, bend the power wires flush with the pipe's surface. (Make sure that most of the slack wire has been pulled out of the hole, in order to prevent any chance of accidental wire contact with the fan blades). Secure the wire in place several inches below the hole with the Plastic Wire Tie (included in the kit). Next, tightly apply the Sealant Patch (included in the kit) around the hole and wires until an air-tight seal is formed.



**STEP 7:** Select a convenient, non-metallic mounting surface for the fan shutoff switch inside a closet, cabinet or other compartment, near the fan's power wires. (**NOTE:** If desired, more than one fan may be connected to the same switch). Cut the fan's wires next to this mounting location. Strip approx. 1/4" (6MM) of insulation off both cut ends of both wires, twisting any frayed wire strands back together again. Insert these bare wire ends into the holes in the sides of the green terminal block on the switch as shown below, and tighten each of the 3 screws on the top of the terminal block with a small screwdriver. Note that both **WHITE** wires go to the same **CENTER** hole in the terminal block.

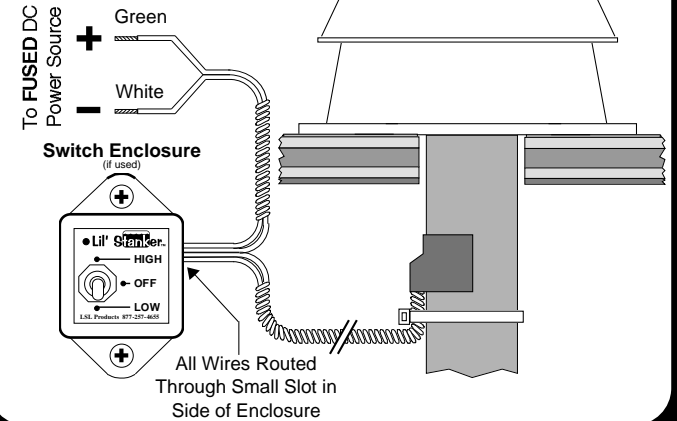


Next, mount the switch in the switch enclosure (or your own panel), securing it with one switch nut. Use the two mounting screws to attach the enclosure (if used) to a flat mounting surface, after routing all wires out the small slot on the side.

**STEP 8:** Strip the ends of the power wires and connect them to a **FUSED** source of 12 volt DC electrical power (**GREEN** fan power wire to **POSITIVE**, and **WHITE** fan wire to **NEGATIVE**). **IMPORTANT: MAKE CONNECTIONS EXACTLY AS SHOWN. FAN WILL NOT WORK IF WIRING OR BATTERY CONNECTIONS ARE INCORRECT.**



The recommended fuse size is 0.25 amps (for 1 fan) or 0.5 amps (for 2 fans). This completes the installation.



**OPERATING INSTRUCTIONS:** To turn the fan on, flip the switch to either the LOW or HIGH positions (LOW is recommended for most conditions). The green indicator light on the switch will illuminate whenever the fan is running. The fan may be left on whenever the RV is occupied, but should be shut off before putting the RV into long-term storage. The fan uses a brushless, long-life ball-bearing motor, and requires no maintenance. Replacement motors are available from the factory.

**TROUBLESHOOTING — WHAT TO DO IF THE FAN DOESN'T WORK:**

- FAN AND GREEN INDICATOR LIGHT ARE BOTH DEAD:** Check to see that the switch is connected to a "live" DC power source (e.g. fuse is not blown), and is wired with proper polarity (Green wire connected to + side of power source and to "Bat +" terminal of switch).
- INDICATOR LIGHTS UP, BUT FAN DOESN'T SPIN:** Check that Green wire from fan is connected to "Fan +" terminal on switch. If so, temporarily bypass the switch, applying 12 volts directly to the fan motor wires. If the motor now spins, either the switch is wired incorrectly or is defective. If not, remove the metal top cover on the fan and check for DC power directly at the wires where they enter the fan motor. If DC power and polarity are good (Green wire is +, White is -), the fan motor is defective. If not, look for a bad connection somewhere between the fan motor and the switch.

**WARRANTY:** LSL Products warrants this fan for a period of **ONE YEAR** from the date of purchase against defects in materials and workmanship. Please save your receipt as proof of warranty coverage. LSL Products will, at its option, repair or replace any defective components, at no charge to the owner. Please contact us prior to returning the fan. This warranty does not cover damage due to improper installation or unreasonable use of the product. In no event shall LSL Products nor any of its representatives be responsible for incidental or consequential damages. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

**SPECIFICATIONS**

|                    |                                 |
|--------------------|---------------------------------|
| Size:              | 6.75" Dia. x 4" H               |
| Weight:            | 18 oz.                          |
| Supply Voltage:    | 11.0 - 14.5 VDC                 |
| Supply Current*:   | 100 mA (LOW)<br>200 mA (HIGH)   |
| Max. Air Flow*:    | 30 CFM (Free-Air)               |
| Max. Noise Level*: | 27 dB - A                       |
| Motor Type:        | DC Brushless<br>Stall Protected |
| Duty Cycle:        | Continuous                      |

\*Measured with filtered 12.0 VDC supply