

INSTALLATION MANUAL



MOSQUITO CONTROL SYSTEMS

INNOVATORS IN AUTOMATED OUTDOOR INSECT CONTROL SYSTEMS

ESTABLISHED 2003 LOCALLY OWNED AND OPERATED MADE IN AUSTIN, TEXAS

WWW.MOSQUITOCONTROLSYSTEMS.COM



512-844-8498

YOUR MOSQUITO CONTROL SYSTEM WILL INCLUDE:

- .55 gallon reservoir
- Pump/motor/manifold assembly
- Water resistant control box
- 3/8" suction line with filter (inside tank)
- Weather resistant cover
- Remote control
- Nozzles (straight, 45 degree, or copper riser nozzles depending on order)
- Tubing (usually 1/4" nylon available in several different colors)
- Assorted fittings (unions, union tees, plugs, etc.)

TOOLS NORMALLY REQUIRED FOR INSTALLATION:

- Cordless drill
- 1/4" magnetic hex head drill bit
- Nylon tube cutters
- Ladder
- Pick or shovel for trenching
- Screws and fasteners
- Adjustable wrench (for gauge)



IMPORTANT SAFETY & GROUNDING INSTRUCTIONS

ATTENTION:

Read all safety rules carefully before operating. Retain this guide for future reference.

DANGER:

Never operate this unit when flammable materials or vapors are present. Electrical devices can produce arcs or sparks that can cause a fire.

WARNING:

- Check system on a regular basis to ensure proper working condition.
- Do not expose to rain.
- Always unplug unit from the wall outlet before removing lid.
- Keep children and pets away from system.
- Do not use with a damaged cord. Contact manufacturer for replacement.
- Do not unplug cord by pulling on cord. To unplug, grasp the plug not the cord.
- Do not operate when people food or pets are present.
- Do not use remote in windy conditions.
- The system should be installed so that the spray does not drift off the property on which it is installed. Do not install nozzles where spray can drift on to neighboring properties.
- Direct nozzles to spray towards the target area and away from swimming pools, bodies of water, and eating or cooking areas.
- Do not use these systems as a cooling system.
- Keep the reservoir locked.
- Keep the systems contents label inside the plastic waterproof envelope attached to the reservoir.
- Use only approved insecticides in accordance of label instructions.
- Do not use unapproved products in your system. This will void the warranty and clog the nozzles.
- The timer should be set to operate only at times when people and pets are not likely to be in the area.
- Inspect all nozzles, tubing, connections, and fittings on a regular basis, replace any leaky or worn parts before next use.
- Visually inspect all areas that are serviced by the system, pay attention to the condition of foliage and surfaces or any structure or any other item within or near the area serviced by the system. If signs of plant burn or staining exist, adjust or relocate the nozzle.
- Emergency shut off: Select "OFF" in Application Mode Screen.
- This system must be grounded. This will reduce the risk of electric shock. The plug must be inserted into an outlet that is properly grounded and in accordance with all local codes and ordinances.
- If you are in doubt as to whether the outlet is in proper condition, have the outlet inspected by a licensed electrician.



YOUR SYSTEM IS SHIPPED PRE-ASSEMBLED. FOLLOW THESE EASY ASSEMBLY INSTRUCTIONS.

- Remove and discard cardboard box.
- Loosen and remove metal ring on outside of tank.
- Remove waterproof cover. Set-aside for now.
- Remove the lid, any nozzles, and parts from inside the reservoir.
- Remove any other packing materials, including padding or parts that may be located inside reservoir.
- Place lid on top of tank making sure suction line and relief line are hanging in a vertical position.
- Push down on lid to ensure tight fit.
- Replace metal ring and tighten, push down metal collar to lock lid in place.
- Your system is now ready for set-up



PRE-ASSEMBLY INSTRUCTIONS & REMINDERS

CAUTION:

BEFORE USING ANY CHEMICAL OR PESTICIDE, READ THE LABEL FIRST.

USE ONLY APPROVED PRODUCTS ACCORDING TO THE LABEL. USE PROPER EYE AND SKIN PROTECTION, ACCORDING TO THE LABEL, WHEN FILLING RESERVOIR.

ALWAYS UNPLUG SYSTEM WHEN FILLING THE RESERVOIR.

USE ONLY A PROPERLY GROUNDED OUTLET FOR SUPPLYING POWER TO THE SYSTEM.

READ THE INSTALLATION MANUAL COMPLETELY BEFORE ATTEMPTING TO INSTALL OR OPERATE SYSTEM.

DO NOT ACTIVATE THE SYSTEM WHEN PEOPLE, FOOD, OR PETS ARE PRESENT.

USE OF UNAPPROVED PRODUCTS WILL VOID THE WARRANTY AND WILL CLOG NOZZLES. AGAIN, FILL THE RESERVOIR APPROXIMATELY 2 INCHES FROM THE TOP.

DO NOT SET TIMER TO OPERATE AT TIMES WHEN PEOPLE OR PETS ARE LIKELY TO BE PRESENT. USE THE REMOTE FOR THESE TIMES. WE RECOMMEND TWO SETTINGS FOR 30 SECONDS (12:00 AM AND 5:00 AM ARE COMMON SETTINGS) USE REMOTE FOR DAYTIME SPRAYS.

ALTHOUGH THE AVAILABLE PRODUCTS ARE CONSIDERED LOW IN TOXICITY, DO NOT ACTIVATE THE SYSTEM WHEN PEOPLE, FOOD OR PETS ARE PRESENT.

REMOTE CONTROL USE SHOULD BE DONE FROM INSIDE THE PROPERTY, AND IN AN AREA NOT EXPOSED TO THE MIST. AFTER USING THE REMOTE WAIT AT LEAST 5 MINUTES BEFORE RE-ENTRY OR UNTIL ANY RESIDUAL MOISTURE HAS DRIED.



SYSTEM SET-UP

Set reservoir and control assembly in desired location. Standard locations are near HV/AC or pool equipment. A 110 volt grounded outlet is needed for proper operation. **DO NOT PLUG IN THE SYSTEM YET.**

A 24" x 24" cement pat or other type of pad may be needed if ground is not stable.

Remove lid from inside tank.

The suction line with filter is pre-attached to the bottom of the pump. This will hang approximately 1" from the bottom of the reservoir.

Your system is now ready for installation of the tubing and nozzles.



SYSTEM DESIGN

IT IS VERY IMPORTANT TO DEVELOP A DESIGN BEFORE STARTING YOUR INSTALLATION WHERE AND HOW YOU WILL INSTALL YOUR NYLON TUBING AND SPRAY NOZZLES.

- Take into account how you use your home or facility and what areas you want covered. We recommend, when possible, to create a perimeter of nozzles every 10-12 feet. Make sure you have adequate coverage around patios, decks, outdoor living areas, and the places that you are likely to spend most of your outdoor time.
- When possible, try to include a loop in your design. Looped systems will spray quicker and generally have better pressure.
- When possible, place nozzles and tubing out of reach of children and animals.
- Do not place nozzles to spray directly onto light fixtures or other electrical equipment.
- Consider location of patio furniture grills and plants before placing nozzles. Do not spray directly on furniture.
- Consider the prevailing wind direction. Try to minimize drift when possible and use it to your advantage.
- Do not place nozzles higher than 12-13 feet.
- Nozzles should be placed approximately every 10-12 feet around the perimeter of the desired area to be covered. Consider placing nozzles in the center of the covered area if it is a wide area (more than 50-60 feet).
- Do not install more than 50 nozzles per system. If more are needed consider a second system.
- Mosquitoes love areas that stay shady and moist longer than other areas and usually do not live in grassy areas.
- When attaching to a fence, use the lower or middle-supporting rail to keep the spray down low. Avoid drift onto adjoining properties.
- Most mosquitoes are low flyers; consider using copper riser nozzles in landscaped beds.
- Do not place nozzle that will spray directly on plants. Some plants are sensitive to the products offered for misting systems and burning can occur.

See website for typical design and examples.
www.mosquitoandcoolingsystems.com



NOZZLE INSTALLATION

There are several different types of nozzles depending on your application. The most common are Eave Mounted Nozzles, Fence Mounted Nozzles, Copper Riser Nozzles, and Tree Mounted Nozzles. Here are a few tips for each.

EAVE MOUNTED NOZZLES

Eave mounted nozzles are great to provide aerial coverage above a patio, deck or arbor. Nozzles, in most cases should be attached to the soffit where it meets the backside of the fascia.

Use the gutter downspouts and zip ties to go from the ground to the eave. Hide your tubing behind the downspout, and transition to the point where the bottom of the soffit meets the backside of the fascia. Use proper push to connect fittings to keep your installation neat. Use either straight nozzle adapters, or 45-degree adapters to keep the spray pointing down.

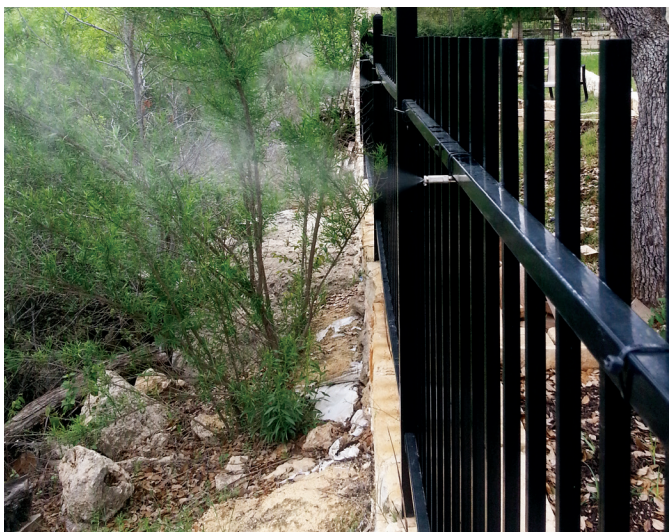
If you have cement-board, aluminum, vinyl siding, or wood exterior use #8 x 3/4" hex head sheet metal screws with 1/4" cable clamps every 15" or so to attach the nylon tubing to the eaves. Place one cable clamp on each side of the nozzle to prevent sagging.

If you are attaching to brick, use the same #8 x 3/4" hex head screws into plastic anchors.



FENCE MOUNTED NOZZLES

- There are a number of ways to attach nozzles to fences depending on the type of fence.
- Use only black tubing on fences since there is potential exposure to the sun. Leave slack in tubing when it fits around a corner or obstacle. Use proper push to connect fittings as needed.
- When attaching to a cedar fence with planks facing inward, drill a 7/8" hole for the nozzle and attach the nylon tubing on the backside of the plank. Run tubing along supporting 2 x 4 for support.
- If planks are facing inward and have trim cap, you can run the nylon tubing under or above the 2x4 trim cap on the inside of the fence.
- Many fences have a treated bottom rail to attach to in some cases.
- When attaching to a cedar fence with planks facing outward, attach the nylon tubing to the bottom of a cross member and drill through or go around supporting posts.
- When attaching to a fence with supporting rails facing in, attach to middle or lower rail, to keep spray on your property.
- When attaching to wrought iron fences, use zip ties to connect to a cross member.
- On wrought iron fences make sure spray will not cross property lines onto neighboring properties.



COPPER RISER NOZZLES

In modern designs, copper risers have become the most common type of nozzle you will use. Many effective systems can be installed with only copper risers. They keep the spray down low where most mosquitoes live and breed. In many instances, there is a need to use ground nozzles when there is nothing else to attach to or in order to avoid certain plants or other obstacles. Copper Riser nozzles are just as effective as nozzles placed on an eave or fence.

- We recommend that they be placed a little closer together every 8-10 feet.
- It is important to place nozzles so that spray will not settle on the leaves of a few plants.
- Azaleas, Boxwoods, Oleanders, Ferns and most annual flowers can be damaged by direct spray.
- While most plants are not affected by pyrethrum, or permethrin, we recommend placing nozzles to avoid direct contact to save from making a later adjustment.
- After installation monitor and adjust as needed.



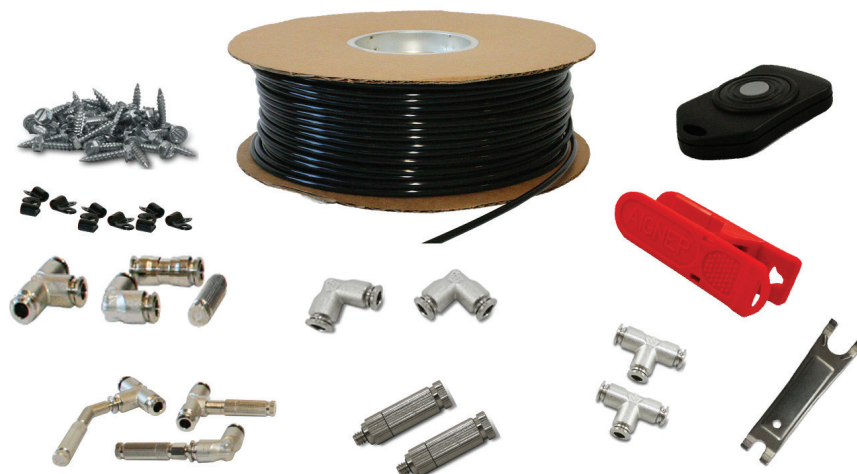
TREE MOUNTED NOZZLES

- Trees can be useful when there is no fencing or other structure to attach nozzles to.
- The optimal height for a tree mounted nozzle is 4'-6' above the ground.
- Consider using a straight nozzle with a 90-degree elbow fitting.
- Use protective conduit to protect the tubing from string trimmers and other lawn equipment.
- Tree mounted nozzles should be spaced approximated 10 foot apart.



NOZZLE INSTALLATION NOTES

- When placing nylon tubing across an unprotected traffic area, such as under a gate or through a lawn, run tubing in plastic or PVC conduit for added protection from lawn or other equipment.
- When setting riser nozzles, dig a small trench 3-4 inches deep.
- Set the nylon tubing in the trench and partially backfill to secure.
- Cut tubing at each desired interval to place a riser nozzle, and connect to the attached union tee at the base of the riser. Push into the soil 1-2" to set the riser nozzle.
- Riser nozzles spray two ways: at a 45-degree angle (usually against the base of the house or fence), or straight up (in the center of a landscaped bed). The desired nozzle depends on the particular application.
- Each 45-degree riser nozzle is designed to turn 360 degrees for easy adjustment of desired spray direction.
- Do not bury any tee connection at the base of risers until you have ran the system and checked for leaks. It is very difficult to identify leaks, after the connection is buried.
- Do not install more than 50 nozzles per system, if more than 50 nozzles are needed, you will need to purchase another system.
- Connect your main feed line to the output line on the system. Use ¼ tubing and the 1/4" push to connect 90 degree elbow fitting located on the bottom of the manifold cross.
- You are now ready to test your system.



SYSTEM TESTING AND STARTUP

- After you have completed your nozzle installation and design, fill the reservoir about half way with water.
- Always unplug system when filling with water to prevent risk of electric shock.
- Make sure and use clean water, use filter if necessary. Clean water is very important to ensure proper nozzle function.
- Plug the power cord into a properly grounded 110-volt outlet.
- It is now time to start your system.
- Your system should come with the time and date preset.
- Cycle through the settings using the dial and push down to select values.

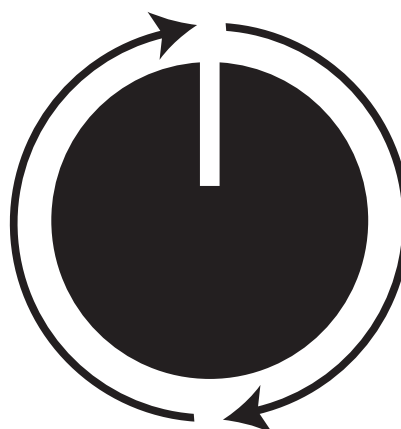
Set reservoir and control assembly in desired location. Standard locations are near HV/AC or pool equipment. A 110 volt grounded outlet is needed for proper operation. **DO NOT PLUG IN THE SYSTEM YET.**

A 24" x 24" cement pat or other type of pad may be needed if ground is not stable.

Remove lid from inside tank.

The suction line with filter is pre-attached to the bottom of the pump. This will hang approximately 1" from the bottom of the reservoir.

Your system is now ready for installation of the tubing and nozzles.



STATUS: AUTO 100%
0 1:23PM 20 19/08/08



REMOTE CONTROL OPERATION

DO NOT SET TIMER TO OPERATE AT TIMES WHEN PEOPLE OR PETS ARE LIKELY TO BE PRESENT. USE THE REMOTE FOR THESE TIMES. WE RECOMMEND TWO SETTINGS FOR 30 SECONDS (12:00 AM and 5:00 AM) USE REMOTE FOR DAYTIME SPRAYS.

- The remote control can be operated while the system is in **AUTO** or **REMOTE ONLY** mode.
- Depressing the button on the remote transmitter can operate the remote control.
- The system will run as long as the duration control is set and will automatically stop after the interval timer has completed its timed cycle. Pushing the remote button a second time will stop the remote spray cycle.

ALTHOUGH THE AVAILABLE PRODUCTS ARE CONSIDERED LOW IN TOXICITY, DO NOT ACTIVATE THE SYSTEM WHEN PEOPLE, FOOD, OR PETS ARE PRESENT.

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TROUBLESHOOTING GUIDE

If you have any problems with your system refer to this guide. Most problems are easily resolved. Remember you can always contact us via email for a quick answer to any questions you may have.

PROBLEM	PROBLEM CAUSE	REMEDY
System will not start	No power from outlet	Test outlet to make repairs
System only sprays for 5 seconds	Flow meter	Reset flow meter
Low pressure	<ul style="list-style-type: none"> ■ Leak in connection ■ Cut line ■ Clogged intake filter 	<ul style="list-style-type: none"> ■ Check all connections ■ Run system look for wet spots & repair damaged line ■ Clean/replace filter
Nozzle not spraying	Clogged Nozzle	Replace/Clean nozzle
Nozzle leaking	Bad nozzle	Replace/Repair nozzle
Blank screen	System needs reset	Unplug system for 30 seconds
Black screen	System needs reset	Unplug system for 30 seconds
No pressure	<ul style="list-style-type: none"> ■ Bad or damaged pump ■ Bad or damaged Motor ■ Clogged suction filter 	<ul style="list-style-type: none"> ■ Repair/Replace pump ■ Repair/Replace motor ■ Repair/Clean motor
Remote not working	Low or bad batteries	Replace batteries



REFILLS & WINTERIZATION

REFILLING THE SYSTEM:

- Your system is equipped with a flow meter and will need to be reset after each refill.
- After refilling your tank enter **TECH MODE**. Proceed to **BARREL LEVEL** and reset the value to 100%.
- When your system is empty it will make 4 attempts to spray.
- After 4 **NO FLOW** alarms, your system will shut itself off to prevent damage to the pump.
- When your system is empty contact your installer or us and order your choice of refill product.

APPROXIMATE REFILL FREQUENCIES

30 Nozzles / 2 Cycles per day 55 gallon tank will last approximately 70 days

40 Nozzles / 2 Cycles per day 55 gallon tank will last approximately 60 days

50 Nozzles / 2 Cycles per day 55 gallon tank will last approximately 50 days

WINTERIZATION:

In areas subject to freezing temperatures your system will need to be made ready for winter. Follow these instructions to protect your system from freezing conditions.

- Do not use system when temperatures are expected to drop below freezing.
- Try to time it so that your tank will run empty just before the average first freeze date for your area. This date can be identified by a simple internet search. Most average systems with 40 nozzles, spraying 2 times per day will last approximately 60 days between refills.
- If necessary, drain any excess water in lines by removing last nozzle and using an air compressor to blow any excess fluid out of the lines.
- Remove lid, remove suction filter, and insert suction line into bottle of environmentally friendly anti-freeze.
- Lift float switch to upright position.
- Turn system control switch to "On".
- Run system for approximately 45-60 seconds to fill line with anti-freeze product.
- Turn system control switch to "Off" position.
- Unplug system and replace cover.
- Your system is now ready for winter.
- For areas with extended winter months it is best to drain system and move to protected area.



TECHNICAL SUPPORT & REPLACEMENT PARTS

If you have any problem or questions feel free to contact our customer service department. You can also check our website for more information and order parts at:

mosquitoandcoolingsystems.com

MosquitoandCoolingSystems@gmail.com

Mosquito and Cooling Systems, LLC
13200 Pond Springs Rd Suite A-106
Austin, TX 78729



SYSTEM WARRANTY

MOSQUITO AND COOLING SYSTEMS LLC ONE-YEAR WARRANTY

Thank you for purchasing this high quality system. Your system was hand made one at a time using the best parts and materials available. Regardless of our high standards, we understand that there could be issues with the parts or pieces of this system. We stand behind our products and offer a 1-year limited warranty. This warranty covers any defects in materials or workmanship of the enclosed product.

Mosquito and Cooling Systems, LLC will repair or replace any defective materials due to craftsmanship of the product. This warranty does not cover any problems caused by misuse, abuse, accidents or acts of God, such as floods or hurricanes.

Water damage is not covered by this warranty.

Pump damage due to running pump without fluid is not covered.

Consequential and incidental damages are not covered.

Mosquito and Cooling Systems Warranty are limited to the cost of system replacement. Coverage terminates if you sell or otherwise transfer ownership.

If you feel you have a defective product please submit a copy of your receipt to the address below and send an email to the address below for instructions.

Email us PRIOR to returning this item to the store or sending it back. A return number is required before any returns will be accepted. Many warranty items can be fixed without returning the entire system.

We will inspect the product and contact you within 72 hours to give you the results of our inspection. We reserve the right to repair the product at our discretion. However we may replace the product with one of similar but not exact features.

This warranty gives you specific legal rights and you may have other rights that vary from state to state.



PRODUCT REGISTRATION

TO REGISTER YOUR SYSTEM, FILL OUT THE FORM BELOW AND MAIL IT TO:

Mosquito and Cooling Systems, LLC
13200 Pond Springs Rd Suite A-106
Austin, TX 78729

NAME _____

ADDRESS _____

CITY _____

STATE _____

ZIP _____

PHONE _____

EMAIL _____

PRODUCT SERIAL NUMBER _____

PURCHASE DATE _____





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**THE ONLY PERMANENT LONG TERM
SOLUTION FOR MOSQUITO CONTROL**

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13200 POND SPRINGS ROAD, SUITE A-106
AUSTIN, TEXAS 78729

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