

### #13 - Summer Settings (default: not enabled)

Use this setting to change spray times to 6 AM, 6 PM, 8 PM and 11 PM (Monday-Sunday).

Press the MENU button, then the DOWN arrow button until menu item #13 is displayed. Press ENTER. The following screen appears.

\* Summer Settings \*  
Press CLEAR  
to Enable

**NOTE:** Nozzle count, spray durations, chemical class, etc. all stay as previously programmed. This is a convenience setting for quickly changing between Winter Settings and Summer Settings.

### #14 - Winter Settings (default: not enabled)

Use this setting to change spray times to 9 AM and 3 PM (Monday-Friday) and 6 AM and 11 PM (Saturday-Sunday).

Press the MENU button, then the DOWN arrow button until menu item #14 is displayed. Press ENTER. The following screen appears.

\* Winter Settings \*  
Press CLEAR  
to Enable

**NOTE:** Nozzle count, spray durations, chemical class, etc. all stay as previously programmed. This is a convenience setting for quickly changing between Summer Settings and Winter Settings.

### #15 - Button Test

This selection allows you to verify that your remote control is paired to the control board.

Press the MENU button, then the DOWN arrow button until menu item #15 is displayed. Press ENTER. The following screen appears:

Button Test  
Button

- Press any button on the remote control. The screen should indicate which button you pressed.
- Press MENU to return to the RUN screen.

### #16 - Learn Mode

Use this selection to pair your remote control to the control board.

Press the MENU button, then the DOWN arrow button until menu item #16 is displayed. Press ENTER. The following screen appears:

\*\*\*\* Learn Mode \*\*\*\*  
----- 15 Seconds -----

The remote is now paired. To verify pairing, go to menu item #15 - Button Test.

### #17 - Water Test

Use this setting to troubleshoot low water situations, nozzle clogs or other suspected leaks. Only water is sprayed in this setting.

Press the MENU button, then the DOWN arrow button until menu item #17 is displayed. Press ENTER. The following screen appears.

\*\*\* Water Test \*\*\*  
Press CLEAR to Quit  
00:00:10  
Water OK: Pump On

**NOTE:** Water will run continuously until stopped by operator. If the machine shuts off during this cycle, it indicates that the water is flowing out of the mixing tank faster than it is coming in. When enough water has re-entered the tank the system will begin spraying again. Find and repair leak(s) while system is running.

### Spraying manually from the control panel

Use this command to enable the spray cycle on demand.

Press the SPRAY button. The following screen appears:

SPRAY NOW  
Press SPRAY Button  
< CLEAR to exit >  
COUNTDOWN - 19

- Upon pressing the SPRAY button once, a 19 second countdown will appear and the system will begin beeping.
- If you wish to enable a spray cycle, press the SPRAY button once again. The system will begin spraying immediately for the programmed duration.

The countdown function is for protection against accidentally pressing the SPRAY button. If the SPRAY button is not pressed a second time before the end of the countdown, the system will return to the main menu screen and the system will not spray.

## Remote Control Operation

Your MosquitoMax Misting System is supplied with a remote control for convenient operation during non-programmed spray times. The remote device is RF (radio frequency), similar to a garage door opener.



**Button 1** Spray on demand. A spray cycle activates for the length of the programmed spray duration (**pressing button 1 again during the spray cycle will end the current spray cycle immediately**). The system reverts back to pre-programmed settings after each spray.

**Button 2** Suspends automatic cycles for 24 hours. When the system receives the signal, the indicator light flashes briefly and the system will beep. The following screen appears:

SPRAY SUSPEND  
24 HRS  
RESUME  
(displays time 24 hrs from now)

Press Button 1 to cancel "Spray Suspend mode." This activates a chemical spray cycle and returns the system to all previously pre-programmed settings.

**Button 3** Provides a "monster spray" of two minutes (chemical spray).

**Button 4** Designed for use in warm weather climates during winter months (where temperature is not lower than 32°) or for prolonged periods where mosquito control is not necessary. This feature helps prevent nozzles from becoming clogged during long periods of system inactivity.

Disables chemical valve and enables the system to only spray water one time per week while on this setting.

12-25-2014 08:46:17  
54 F THURSDAY  
\* NEXT WATER SPRAY \*  
SUNDAY 22:00

Press any button to cancel.

Buttons 5, 6, 7 & 8 are non-functioning

# MosquitoMax<sup>®</sup>

misting systems

Automated Insect Control



## Operators Manual

2100 & 2140 – Also for tank systems

Purchase Date: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Software Version: \_\_\_\_\_

Installed by: \_\_\_\_\_

Authorized Dealer

*Do not activate this system when people, pets, food or feed are present. Nozzles must be directed to spray towards the target area and away from eating or cooking areas, and any water bodies including swimming pools and fish ponds. This device should be locked and must never be used for cooling. Some insecticides may cause phytotoxicity (plant burn) in some varieties. Always follow chemical label instructions and never use an insecticide that states "not for use in outdoor residential misting systems."*

## Settings at Installation

Your MosquitoMax installer will initially set up your system based on your unique installation. Variables include the time of year the system is installed, the type of chemical used and the number of nozzles in your design. It is recommended that timing and spray duration adjustments be made based on insect activity.

Your MosquitoMax installer will suggest individual settings based on your lifestyle and objectives for utilizing outdoor living areas.

A remote control is provided to activate a spray cycle on demand for special occasions and times with heavy pest activity.

## Your initial settings are...

Times are in military time to match the controller.

Chemical Class (see definitions):      One    Two    Three    Four

Spray days:    Mon    Tue    Wed    Thu    Fri    Sat    Sun

Daily Spray Times \_\_\_\_\_

Spray Duration \_\_\_\_\_ seconds

**Special Note:** All programming options and features are *not available* for tank systems, Ex: Water Only, Water Test and Leak Detection.

## Programming Your System

### The MosquitoMax Electronic Control Panel

The electronic control panel is easy to use and understand. There is an LED screen and six function buttons that include: up arrow, down arrow, menu, enter, clear and spray.



Spray times can be set at :00, :15, :30 and :45 minutes during each hour.

Spray duration increments (length of spray cycle) are in 15 second intervals from 0:15 to 120 seconds.

The system can be programmed to spray seven days week (Sun-Sat) and up to 96 times per day.

The enable spray days menu allows you to disable one or more spray days without having to delete the spray times.

**Factory settings** are for 30 nozzles, Chemical Class 2, spray every day (Sun-Sat) with spray times at 0:00, 6:00, 18:00, 20:00, duration 45 seconds. Regardless of how the spray times have been altered, you can always return to these factory default settings by scrolling to menu item #8 - "Factory Defaults" and pressing CLEAR.

The Run Screen must be displayed for your automatic settings to work and will be displayed initially when you plug in your unit. The Run Screen can be accessed by pressing menu one or more times.

## The Run Screen

The "Run Screen" for your system looks similar to this:

12-25-2014 54 F	08:46:17 THURSDAY
Next Spray	22:00:00

Today's date and current time are followed by the outside temperature, day of the week and when the next spray will occur (in military time). *The Run Screen must be showing for your automatic settings to work.*

### Menu Options (and Factory Defaults)

The following menu options are available by pressing the Menu button and the down arrow key:

<u>Menu Options</u>	<u>Factory Default</u>
1 - Enable Spray Days	All days enabled to spray
2 - Spray Hour/Day Set	0:00, 6:00, 18:00, 20:00, every day
3 - # of Nozzles	30
4 - Clock Set	Central Time
5 - Chemical Class	2
6 - Spray Duration	45 seconds
7 - Spray Day Grid	(displays current settings)
8 - Factory Defaults	(reset to factory defaults)
9 - Clear Days/Hours	(clears all spray times)
10 - Software Version	(displays current software version)
11 - Winterize System	(process for seasonal shutdown)
12 - System Leak Control	(enabled)
13 - Summer Settings	(set to default summer settings)
14 - Winter Settings	(set to default winter settings)
15 - Button Test	(verifies remote control)
16 - Learn Mode	(learn remote control)
17 - Water Test	(used for servicing nozzles)

### #1 - Enable Spray Days (default: all days enabled)

Use this menu option to select which days the system can be set to spray.

Press the MENU button, then the ENTER button. The following screen appears:

Enable Spray Days
----- VALVE 1 -----
(UP/DN) (SPRAY BTN)
SUN SPRAY

- Use the UP and DOWN arrow keys to select the day.
- Press the SPRAY button to toggle between SPRAY and NOSPRAY.
- Once complete, press the MENU button twice to return to the Run Screen.

### #2 - Spray Hour/Day Set (default: 0:00, 06:00, 18:00, 20:00)

Use this menu option to set individual spray times for desired spray days. In many cases, it may be easier to clear all spray times prior to setting new ones. See step #9 to clear days/hours.

Press the MENU button, then the DOWN arrow button until menu item #2 is displayed. Press ENTER. The following screen appears:

Set Spray Hours/Days
----- VALVE 1 -----
ENT SPRAY BTN UP/DN
SUN SPRAY 0:00

- Use the ENTER key to select the day.
- Press the UP/DOWN arrow keys to display the time of day you would like your system to spray. Keeping the buttons depressed will quickly scroll through the time of day.
- When the desired time is displayed, press the SPRAY button to toggle between SPRAY and NOSPRAY.
- If you choose to spray at this time every day, press the ENTER key to advance the days, followed immediately by the SPRAY key to set the spray cycle.
- Continue using the UP/DOWN arrow keys to set other spray times.
- Once complete, press the MENU button twice to return to the Run Screen.

### #3 - Number of Nozzles (default: 30 nozzles)

The number of nozzles is set by your installer and should not be changed. If you are doing a self-install, follow these instructions.

Press the MENU button, then the DOWN arrow button until menu item #3 is displayed. Press ENTER. The following screen appears:

Set Nozzle Count
-----
COUNT (UP/DN)-> 30

- Use the UP/DOWN arrow keys to select the number of nozzles installed.
- Once complete, press the ENTER button, then the MENU button to return to the Run Screen.

### #4 - Clock Set (default: Central time zone)

This setting is used to set the real system time, including the hour, minute, day of month, month and year. In the event of a power failure, the controller remembers the time and all programming up to five years. The time of day must be adjusted to allow for Daylight Savings Time.

Press the MENU button, then the DOWN arrow button until menu item #4 is displayed. Press ENTER. The following screen appears:

Set Real Time Clock
-----
HOUR (UP/DN)-> 9

(current time will display)

- Use the UP/DOWN arrow keys to select the hour of day (in military time).
- Once complete, press ENTER. The MINUTE will now be displayed. Press the UP/DOWN arrow keys to select the minute of the hour.
- Once complete, press ENTER. The DAY of the month will be displayed. Use the UP/DOWN arrow keys to select today's date.
- Once complete, press ENTER. The MONTH will be displayed. Use the UP/DOWN arrow keys to select the current month.
- Once complete, press ENTER. The YEAR will be displayed. Use the UP/DOWN arrow keys to select the year.
- Once complete, press the MENU button twice to return to the Run Screen.

### #5 - Chemical Class (default: Chemical Class 2)

The MosquitoMax misting system can spray multiple chemical types. The class is set by your installer and should not be changed unless the type of chemical is changed. If you are doing a self-install, follow these instructions. Refer to the following chart before setting the unit.

Chemical Class 1 = (not currently used)
Chemical Class 2 = Riptide, Sector and Eco MC (do not use emulsifier)
Chemical Class 3 = NoTox and Eco Exempt IC <sup>2</sup>
Chemical Class 4 = Pyronyl 303 or Vampyre

Press the MENU button, then the DOWN arrow button until menu item #5 is displayed. Press ENTER. The following screen appears:

Chemical Class
-----
(UP/DN)-> 2

- Use the UP/DOWN arrow keys to select the proper chemical class based on the chart above.
- Once complete, press ENTER and then MENU to return to the Run Screen.

### #6 - Spray Duration (default: 45 seconds)

Use this screen to set spray duration (15 to 120 seconds).

Press the MENU button, then the DOWN arrow button until menu item #6 is displayed. Press ENTER. The following screen appears:

SET SPRAY DURATION
-----
Seconds (UP/DN) -> 45

Press the UP and DN arrow keys to set desired duration of each spray cycle from 0:15 to 120 seconds.

- Once complete, press ENTER and then press MENU to return to the Run Screen.

### #7 - Spray Day Grid

Use this screen for a quick and convenient referral to determine which days of the week the system is set to spray. It also displays the current spray duration.

Press the MENU button, then the DOWN arrow button until menu item #7 is displayed. Press ENTER. The following screen appears:

ACTIVE SPRAY DAYS
Duration 45
Day S M T W T F S
4 4 4 4 4 4 4

This example shows that four sprays of 45 seconds each are programmed for every day of the week.

- Once complete, press MENU twice to return to the Run Screen.

### #8 - Factory Defaults

This setting restores all factory defaults.

Press the MENU button, then the DOWN arrow button until menu item #8 is displayed. Press ENTER. The following screen appears:

Factory Default
Press CLEAR to reset

- Upon pressing the CLEAR button the words FACTORY RESET DONE will appear. The system is now reprogrammed to factory defaults.
- When the CLEAR button is pressed, the system automatically returns to the Run Screen after a few seconds.

### #9 - Clear Days/Hours

This setting removes all spray times. Because no spray times are set, the system will not spray.

Press the MENU button, then the DOWN arrow button until menu item #9 is displayed. Press ENTER. The following screen appears:

Clear Hours/Days
Press CLEAR

- Upon pressing the CLEAR button the words ALL CLEAR DONE will appear. All spray days and times are now cleared.
- When the CLEAR button is pressed, the system automatically returns to the Run Screen after a few seconds.

### #10 - Software Version

This selection shows the current software version of the MosquitoMax controller. You might be asked for this if you call the factory for service or advice.

Press the MENU button, then the DOWN arrow button until menu item #10 is displayed. Press ENTER. The following screen appears:

* Software Version *
-----
MOSQUITOMAX (version)

- The system automatically returns to the run screen after a few seconds.

### #11 - Winterize System

To winterize the system you will need a small cup of fresh water and one-half gallon of antifreeze.

Press the MENU button, then the DOWN arrow button until menu item #11 is displayed. Press ENTER. The following screen appears:

WINTERIZE
MODE
Press Spray To Begin

- Remove the chemical suction tube from the chemical concentrate reservoir. Orient the suction end so that it remains upright. This prevents chemical fluid from dripping out.
- Press SPRAY. In a few seconds, all of the remaining chemical will be pulled through. While the machine is running, insert the suction end of the tube into the fresh water. The water will fill the tube rapidly. After the tube is filled with water, remove the tube and let the water pull through, clearing the tube. Repeat two or three times.
- While machine is still running, set the suction tube aside, turn water off at source (hose bib). In a few seconds, the water will be pumped out of the mixing tank. The system will automatically stop and display "LOW WATER HALTED."
- Remove mixing tank lid and fill the mixing tank with antifreeze until just below the vent hole. Insert chemical suction tube directly into the mixing tank and press SPRAY. This will pull antifreeze through the system until the motor stops due to low fluid level. The system displays "LOW WATER HALTED" as before.
- Install a tube cap (supplied) or use plastic wrap and a rubber band to cover the open end of the chemical suction tube to keep insects and debris out. Insert plug (supplied) or place tape on the chemical concentrate reservoir tube opening to keep insects out. Return lid to mixing tank and unplug system. Winterizing is complete.

### De-winterize

You will need a small cup of fresh water.

- Unscrew water supply fitting from the water supply. Turn on water supply to flush all debris from the line. Turn water off and reconnect water supply to the fitting.
- Remove plugs or coverings from the chemical suction tube and reservoir.
- Plug in unit. Water will begin filling the mixing tank.
- Press the MENU button and the down arrow button to option #11 "Winterize System", press ENTER, then SPRAY. The machine will run, clearing the chemical suction tube. After the antifreeze has cleared, insert the tube in the fresh water. The water will fill the tube rapidly. After the tube is filled, remove the tube from the water and repeat two or three times until the tube is clean.
- Press the SPRAY button again to stop the pump. Press the MENU button twice until the RUN screen appears.
- Check the chemical reservoir. If the reservoir was empty or near empty prior to winterization, rinse it out with water, removing any gummy chemical residue that could clog the system.
- Fill the clean chemical container with new chemical and re-insert the chemical suction tube until it hits the bottom.
- Run your system in Water Test Mode to check the system for leaks and clogged nozzles. See Menu item #17 for water test.
- After water test is complete, press CLEAR to stop the water test cycle. Press the MENU button and RUN screen will appear. Press the SPRAY button twice to begin a spray cycle.

All pre-programmed settings from the prior year remain. De-winterizing is now complete.

### #12 - System Leak Control

If you see this screen, you have a possible leak. Press CLEAR to reset to the RUN screen. Press MENU and scroll down to #17, "Water Test." Press ENTER. System will begin running continuously using water only. This allows physical inspection of the system including nozzles and tubing.

- Once complete, press CLEAR to quit and return to the Run Screen.

12-25-2014 54 F	12:57:40 THURSDAY
WATER LEVEL HOLD	

## Built-in Efficiencies

Because mosquitoes are much less active during colder weather, your MosquitoMax system is equipped with a temperature sensor that shuts off the system when the temperature is below 50° F. This feature reduces chemical expense and is environmentally friendly. This also protects your pump during an unexpected drop in temperature. If you anticipate a prolonged period of freezing conditions, proper winterization precautions should be taken. See #11 Winterize System.

## Indicator Light

**Solid** indicates system has power and is functioning properly.

**Slow flash** indicates the system has been disabled due to low water level.

**Rapid flash** indicates a possible leak.

## Troubleshooting

Please call your authorized dealer or MosquitoMax® customer service, toll free, if you need help operating your machine.

Machine will not spray	
1	<p>Check water supply. If the water supply to your machine has been shut off, the display screen will display "Water Level Low." If you turn the water supply back on, your machine will revert back to the previously programmed settings.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>12-25-2014      08:46:17 54 F              THURDAY WATER LEVEL LOW</p> </div> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>08-10-2014      02:14:19 95 F              SUNDAY WATER LEVEL HOLD</p> </div> <p>If you see this screen, you have a possible leak. See #12-Leak Control. Display indicates day and time problem occurred.</p>
2	Check power outlet.
The pump sounds louder than normal	
1	Check for loose fittings on the intake side of the pump.
2	Check intake filter for obstruction.
Some nozzles are not spraying or there is weak spray	
1	If adjacent nozzles are spraying correctly, replace clogged nozzle.
2	If nozzles are spraying weakly, or the nozzles nearest the machine are spraying and nozzles farther away are not, check for leaks in the tubing.
Remote control operates another appliance or garage door	
1	Remote must be reprogrammed. Call dealer or factory.
I still have mosquito problems	
1	Check to make sure the system is operational.
2	Check to make sure there is chemical in the reservoir.
3	Increase spray days, spray times or spray duration.
4	Change to another type of chemical.

## IMPORTANT NOTE:

Desired operating pressure is between 200-240 psi. Use the pressure regulator adjustment hex head screw located in front of the pressure gauge to increase (turn to right) or decrease pressure (turn to left). Desired operating pressure is between 200 and 240 psi.

DO NOT pressurize pump to more than 240 psi or you will damage the pump.

**MosquitoMax®**  
*misting systems*  
**Automated Insect Control**