

MosquitoMax[®]

misting systems

Automated Insect Control



Operators Manual

For tankless systems; models 2100 & 2140

Authorized Dealer

Purchase Date: _____

Serial Number: _____

Software Version: _____

Installed by: _____

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

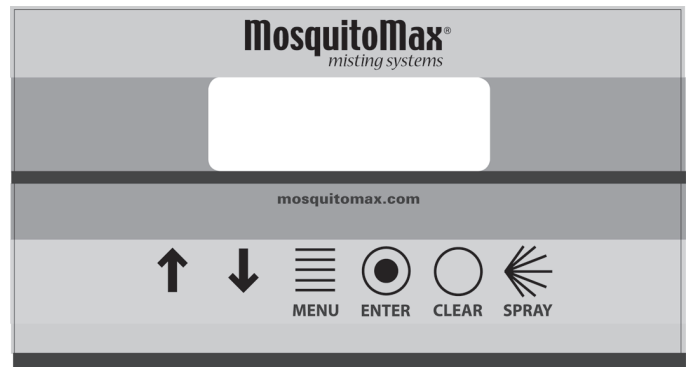
Daily Spray Times _____

Spray Duration _____ seconds

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 #9 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:

12-25-2008	08:46:17
82 F	TUESDAY
Next spray	18:00:00

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 - Alarm ON/OFF	OFF
5 - Clock Set	Central Time
6 - Chemical Class	2
7 - Spray Duration	45 seconds
8 - Spray Day Grid	(displays current settings)
9 - Factory Defaults	(reset to factory defaults)
10 - Clear Days/Hours	(clears all spray times)
11 - Software Version	
12 - Winterize System	
13 - Leak Detection	Enabled

#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 #10 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 - Alarm ON/OFF (default: OFF)

The Alarm mode provides a beep just prior to a spray cycle and also provides an audible alert when pressing active remote control buttons. This setting toggles the alarm on or off.

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

Set Alarm Status		

ALARM	(UP/DN)->	OFF

- Use the UP/DOWN arrow keys to select ON or OFF.
- Once complete, press the ENTER button, then the MENU button to return to the Run Screen.

#5 - 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 #5 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.

#6 - 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 ²
Chemical Class 4 = Hydro-Py ULD300, Pyronyl 303 or Cedar based repellent

Press the MENU button, then the DOWN arrow button until menu item #6 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.

#7 - 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 #7 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.

#8 - 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 #8 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.

#9 - Factory Defaults

This setting restores all factory defaults.

Press the MENU button, then the DOWN arrow button until menu item #9 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.

#10 - 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 #10 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.

#11 - 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 #11 is displayed. Press ENTER. The following screen appears:

```

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

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

#12 - Winterize System

Press the MENU button, then the DOWN arrow button until menu item #12 is displayed. Press ENTER. The following screen appears:

```

WINTERIZE
MODE
Press Spray To Begin
  
```

- Remove the dip tube from the chemical reservoir and orient the open end so that it remains upright. This prevents fluid from dripping out.
- Press SPRAY. The system will run for 120 seconds clearing the line.
- Turn water off at source (hose bib), press SPRAY to continue the winterizing cycle. The system will automatically stop and display "Low Water Halted."
- Pour one quart of antifreeze into the mixing tank and insert dip tube directly into the mixing tank.
- Press SPRAY to continue the winterizing cycle. The system will run for 120 seconds or stop due to low fluid level and display "Low Water Halted."
- Disconnect the water supply tube from the water source and the water inlet check valve. Let tube drain, then re-insert tube into water inlet check valve and install a tube cap (supplied) on the open end to keep insects and debris out. Insert plug in chemical reservoir and disconnect power. Winterizing is complete.

De-winterize

- Plug unit in, press MENU, scroll to option 12 "Winterize System", press ENTER.
- Pour one quart of vinegar directly into mixing tank, remove tube cap from dip tube and insert into mixing tank. Turn on water and flush out any debris in line, remove tube cap from water line, connect to hose bib adapter and turn water on. (save tube caps for re-use). Press SPRAY. The system will run for 120 seconds purging anti-freeze from your nozzle circuit and dip tube.
- Remove the dip tube from the mixing tank and press the SPRAY button, this will activate a 120 second cycle to clear the injection line.
- When the cycle ends, insert the dip tube into the chemical reservoir until it hits bottom.
- Press MENU and the "Run Screen" appears.

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

#13 - Leak Detection (default: enabled)

Use this screen to enable or disable leak detection.

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

```

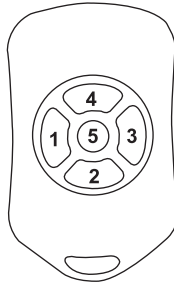
LEAK CONTROL
ENABLED
  
```

Press ENTER to toggle between Enable and Disable. Press MENU to return to the run screen.

If a leak is detected the system will automatically shut down and the screen will display "low water hold." The date and time of the shut down will also be displayed. The indicator light will blink rapidly and the system will not run until it is reset. To reset the system after the leak has been repaired, press CLEAR. The run screen will be displayed and the system will revert to all previously programmed settings.

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. Always press and hold the button for one second to assure the controller receives the signal.



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 Non-functioning

Button 4 *Designed for use in warm weather climates during winter months 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 during regularly scheduled spray times. When the system receives the signal, the indicator light will flash briefly and the system will beep. The following screen appears:

```

12-25-2008    08:46:17
  82 F        TUESDAY
* WATER ONLY MODE *
    
```

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

Button 5 Non-functioning

Automatic Settings

Because mosquitoes are much less active during colder weather, your MosquitoMax system is equipped with a temperature sensor that keeps the chemical valve closed when the temperature is below 50° F. This feature reduces chemical expense and is environmentally friendly.

When the temperature is 35° F or below, the system will not run. This 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 #13 Winterize System.

If a leak is detected, the system will automatically shut down and not run again until it has been reset.

Regular Maintenance

- #1 Check the intake filter in your mixing tank at each refill.
- #2 Loosen the 1/2" plastic nut closest to the mixing tank (do not remove completely).
- #3 Pull the intake tube assembly through the mixing tank and remove.
- #4 Rinse with water, reinstall and hand tighten the 1/2" nut.

Indicator Light

- Solid** indicates system has power and is functioning properly.
- Slow flash** indicates the system has been disabled due to no water supply.
- Rapid flash** indicates the system has been disabled due to a leak.
- Feedback flash** indicates a command has been received from the remote.

Troubleshooting

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

Machine will not spray	
1	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. <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <pre> 12-25-2008 08:46:17 82 F TUESDAY WATER LEVEL LOW </pre> </div>
2	Check power outlet.
3	Major leak in tubing.
The pump sounds louder than normal	
1	Check for loose fittings on the intake side of the pump.
2	Check intake filter in mixing tank 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.