

## OPERATING MANUAL

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# Coastal Mister

## System Operating Manual



### Section 1 The CoastalMister™ Automated Insect Misting System

The **CoastalMister™** Automated Insect Misting System is an insecticide and insect repellent delivery system that converts a liquid product into a fine mist that is then dispensed through a network of precision misting nozzles. As it sprays, the **CoastalMister™** Insect Misting System kills or repels mosquitoes and other flying insects within certain protection zones such as areas around swimming pools, outdoor kitchens, patios, decks, porches - even entire yards.

The capacity of the system is dependent on the configuration of the nozzle circuit. A practical field maximum is around 65-70 nozzles, but can be expanded to 130-140 nozzles. The unit may be programmed to mist up to 12 times daily at a duration preset by the user. A typical program would consist of 2 to 3 mist cycles per day, each with a 30 - 45 second duration. The unit will also mist in response to a signal from a handheld remote transmitter for a duration programmed by the user.

#### Components and Functionality

- **Controller** - accepts user input, displays unit operating mode and status, controls electromechanical components.
- **Pump & Motor** - atomizes drum contents through nozzle circuit. Pump pressure typically set to 200 PSI.
- **1/2" Intake Line and Filter** - Pump intake positioned near bottom of drum. Filter ensures debris is not drawn into pump and nozzle circuit.
- **3/8" Return Line with Return Valve** - ensures rapid increase in nozzle circuit pressure on pump startup and rapid decrease on shutdown.
- **Remote Transmitter** - 3-button remote enables the user to turn system on, off or mist now.
- **Cover** - Weather cover provides protection of the unit from the elements.

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### Section 2 Master Unit Inspection and Assembly

Coastal Mosquito assembles and tests each **CoastalMister™** master unit prior to shipment. Every effort is taken to protect the unit from damages during the shipping process. The following steps are suggested to inspect and assemble a master unit after shipment.

#### Inspection

Contains the master unit lid assembly (fully assembled):

- Pump, manifold & motor
- Controller with Remote Transmitter
- Pressure Gauge

Contains the chemical rated poly-drum with a blank flat lid and lock ring, inside (unassembled):

- 1/2" Pickup Tube with Filter
- 3/8" Return Tube with Return Valve
- Weather Cover

#### Assembly

- All tubing should be cut squarely to insure that a water tight connection is made when inserting the tubing into the fittings.
- Confirm that all connections are securely made and do not leak.
- Feed the end of the 1/2" tube, opposite of the filter, upward through the drum lid from below and connect to the intake fitting. The intake fitting is a swivel elbow that is connected directly to the pump housing.
- Feed the open end of the 3/8" return tube upward through the drum lid from below and attach to the return fitting.
- Place assembled unit on drum and secure lock ring.

#### Initial System Filling

When filling a system, water quality needs to be considered. Poor water quality can affect the systems performance. A simple hexa-phosphate filter can eliminate a large portion of water impurities.

Make sure the systems electrical cord is unplugged from its outlet, next fill the reservoir 1/2 full with filtered water, then add the insecticide concentrate (slowly), continue to add filtered water until the liquid reaches a point about 5 inches from the top of the reservoir.

#### Pressurizing the System

- The recommended operating pressure of the **CoastalMister™** is 200 PSI.
- To adjust the pressure, use the needle valve on the pump manifold assembly.
- Loosen the lock nut and turn the needle clockwise to increase pressure and counter-clockwise to decrease pressure.
- It is normal for the system to pressure quickly to ~90 PSI and then slowly accelerate to operating pressure. This is due to each nozzle having an internal valve that opens and closes at ~90 PSI.
- 

**It is a violation of Federal Law to use insecticides in a manner inconsistent with their labeling. As with an insecticide, always wear goggles, face shield or safety glasses. You should also wash thoroughly with soap and water after handling and remove any contaminated clothing and wash before reuse. Always store and dispose of any pesticide container by the approved State and Local procedures in your area.**

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## Section 3 Operating Instructions

### Programming Instructions for the Digital Timer

There are 2 different Digital Timer models and instructions. Look where the antenna attaches to the control box. If you see a washer the size of a quarter, you have Digital Controller version 1. If you only see a small hex nut, you have Digital Controller version 2.

#### Instructions for Digital Controller Version 1 (Large Quarter-size Washer) **Year models 2008-14, 2017)**

- 1. Turn Power Switch ON.** The display will settle at the Home Screen. To turn unit OFF/ON press Change/Set. Press Menu to advance to Time/Date.
- 2. Current Date/Time:** To adjust, press Change/Set. Use the ▲ and ▼ keys to adjust values. Menu key advances thru all options and changes are saved automatically. Press Menu to advance to Spray Cycles.
- 3. Spray Cycles:** Use ▲ and ▼ keys to adjust number of daily mists. Press Menu to advance to Mist Duration.
- 4. Mist Duration:** Use ▲ and ▼ to select the desired duration. Press Menu to continue to Spray Time.
- 5. Spray Time 1:** Use the ▲ key to advance minute and ▼ key to advance hour. Press Change/Set to deactivate individual mist cycles. Press Menu to advance to Spray Time 2, 3, 4...
- 6. Periodic mode:** (Periodic is only recommended for commercial applications) Press Change/Set to activate "periodic" mode and Menu to ignore and advance to Service Mode.  
System will go to Home Screen. Menu advances to time and date. Press Menu to advance to Start Time.
  - A. Start time:** Use ▲ and ▼ to select time unit will start spraying periodically. Press Menu to advance to Stop Time.
  - B. Stop Time:** Use ▲ and ▼ to select time unit will stop spraying periodically. Press Menu to advance to Mist Every.
  - C. Mist Every:** Use ▲ and ▼ to select how often the unit will mist. Press Menu to advance to Mist For.
  - D. Mist For:** Use ▲ and ▼ to select how long the unit will spray each time. Press Menu to advance to Home Screen.
- 7. Service Mode:** (Service Mode is only intended for service technicians) Press Change/Set for "Yes" and press Menu to advance to Service Mode, Test Cycle. "No" and press Menu will cycle to Home Screen.
  - A. Test Cycle:** Press Change/Set for "Yes" and press Menu to initiate 10 minute run cycle. Pressing any button cancels test spray. Press Change/Set key for "No" and Menu to proceed to Last Service.
  - B. Last service:** Shows the date the unit was previously serviced. Press Menu to scroll through Auto, Remote and Manual Cycles. LS = Last Service T = Total. Menu advances to Service Complete.
  - C. Service Complete:** Press Change/Set to "Yes" to record a service. This resets the counters. Press Menu to lock in choice and proceed to Exit Service Screen.
  - D. Exit:** Press Change/Set to "Yes" to exit to Home Screen. Leave "no" to repeat Service Screen. Press Menu to advance.

#### Instructions for Digital Controller Version 2 (Small Hex Nut) **Year models 2015-16, 2018)**

- 1. Turn unit ON.** The display will settle at the Home Screen. To turn unit OFF/ON press Change/Set. Press Menu to advance to Time/Date.
- 2. Current Date/Time:** To adjust, press Change/Set. Use the ▲ and ▼ keys to adjust values. Menu key advances thru all options and changes are saved automatically. Press Menu to advance to Spray Cycles.
- 3. Spray Cycles:** Use ▲ and ▼ keys to adjust number of daily mists. Press Menu to advance to Mist Duration.
- 4. Mist Duration:** Use ▲ and ▼ to select the desired duration. Press Menu to continue to Spray Time.
- 5. Spray Time 1:** Use the ▲ key to advance minute and ▼ key to advance hour. Press Change/Set to deactivate individual mist cycles. Press Menu to advance to Spray Time 2, 3, 4...
- 6. Periodic mode:** (Periodic is only recommended for commercial applications) Press Change/Set to activate "periodic" mode and Menu to ignore and advance to Service Mode.  
System will go to Home Screen. Menu advances to time and date. Press Menu to advance to Start Time.
  - A. Start time:** Use ▲ and ▼ to select time unit will start spraying periodically. Press Menu to advance to Stop Time.
  - B. Stop Time:** Use ▲ and ▼ to select time unit will stop spraying periodically. Press Menu to advance to Mist Every.
  - C. Mist Every:** Use ▲ and ▼ to select how often the unit will mist. Press Menu to advance to Mist For.
  - D. Mist For:** Use ▲ and ▼ to select how long the unit will spray each time. Press Menu to advance to Home Screen.
- 7. Service Mode.** (Service Mode is only intended for service technicians) Press Change/Set for "Yes" and press Menu to advance to Service Mode, Test Cycle. "No" and press Menu will cycle to Home Screen.
  - A. Test Cycle.** Press Change/Set for "Yes" and press Menu to initiate 10 minute run cycle. Pressing any button cancels test spray. Press Change/Set key for "No" and Menu to proceed to Last Service.
  - B. Last service:** Shows the date the unit was previously serviced. Press Menu to scroll through Auto, Remote and Manual Cycles. LS = Last Service T = Total. Menu advances to Service Complete.
  - C. Service Complete:** Press Change/Set to "Yes" to record a service. This resets the counters. Press Menu to lock in choice and proceed to Exit Service Screen.
  - D. Exit.** Press Change/Set to "Yes" to exit to Home Screen. Leave "no" to repeat Service Screen. Press Menu to advance

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### Section 3 Operating Instructions (cont.)

#### Programming Instructions for the Hybrid Analog Timer

- **COASTAL HYBRID ANALOG SYSTEM** includes the Hybrid Analog controller, aluminum mounting rack, ½ HP motor, 140 GPH pump, pump manifold with check valve, ½" intake line with filter, 3/8" return line with blowback valve and a 55 gallon black poly drum with vinyl seamless cover. Dimensions 44"x24"x24"
- **TO SET THE CURRENT TIME, ROTATE THE OUTER DIAL OF THE CLOCK TO GET CLOSE.**  
The white triangle at the "two o'clock position" is the current time
- **THEN USE THE HANDS IN THE MIDDLE TO SET EXACT TIME.**  
Turn the minute hand clockwise until the time of day on the outer dial is aligned with the triangle marker on the inner dial (two o'clock position).
- **PROGRAMMING**  
The 24-Hour dial has quarter-hour divisions and AM/PM indications. The time switch is programmed by pushing the captive trippers to the outer ring position for the entire period that the load is to be turned "ON", i.e., fifteen minutes for each tripper on the 24-Hour dial. When the tripper is pushed to the inside, the switch is in the "OFF" position. **NOTE: Do not set 2 trippers consecutively.**
- **DURATION KNOB**  
By rotating the Duration knob, you can set the number of seconds the system will spray for when the system is running.  
  
When the system is switched to the "OFF" position, nothing will run including the remote feature.
- **POWER LIGHT** will illuminate when there is power coming into the control box from the electrical outlet.
- **PUMP ON LIGHT** will illuminate when there is power going to the motor and pump.
- **OFF LIGHT** will illuminate when the system has been turned off either by the DURATION KNOB or the REMOTE. The system can be turned back on by rotating the DURATION KNOB to the OFF position and back to the chosen duration.

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### Section 3 Operating Instructions (cont)

#### Programming Instructions for the CoastalMister™ Millennium 3 Controller

- Turn ON/OFF switch to ON. Controller now has power and the Timer ON/OFF screen will appear. This indicates that the Timer is either in the ON or OFF mode. If OFF, press the ▲ and ▼ keys at the same time to turn the Timer ON.
- Press NEXT SCREEN. The screen should read Current Time (hour value flashes with a black shadow). If time is correct, press NEXT SCREEN. To adjust the time, press OK (shadow disappears) Now--use the ▲ and ▼ keys to adjust the hour value. Next--Press OK, and use the ▲ and ▼ keys to adjust the minute value. When complete with correct time Press OK (shadow reappears).
- Press NEXT SCREEN. The screen should read Mist Duration (seconds value flashes with a black shadow). To adjust the duration, press OK. (shadow disappears), and use the ▲ and ▼ keys to adjust the second value. Press OK (shadow reappears).
- Press NEXT SCREEN. The screen should read Number of Daily Mists (number value flashes with a black shadow). To adjust the number of cycles, press OK (shadow disappears), and use the ▲ and ▼ keys to select the desired number of cycles (maximum 8). Press OK, (shadow reappears).
- Press NEXT SCREEN. The screen should read Mist Time: 01 (hour value flashes with a black shadow). To adjust the hour value, press OK (shadow disappears), and use the ▲ and ▼ keys to adjust the hour value. Press OK. (Shadow Reappears) Use the ▲ or ▼ keys to navigate to the minute value. Press OK, (shadow disappears). Use the ▲ and ▼ to adjust the minute value. Press OK. Shadow Reappears. Press Next Screen for Mist Time: 2
- Press NEXT SCREEN to switch to the next mist time and repeat the directions in Step 5 for each mist time.
- After all the mist times have been set, press NEXT SCREEN to return to the Timer screen. Controller is now set.
- Securely close controller door. Place antenna in upright position. Confirm metal lock ring is locked in place. Secure vinyl cover over outside lip of drum lid.

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### Section 4 Important Safety Instructions

#### Using the System

- Do not allow the system to operate when people, pets or food is present.
- System must be configured, installed and operated so that any insecticide application complies with all label directions.
- The system reservoir and controller should be secured with a cable tie or lock.
- If a leak or siphon in nozzle circuit is suspected, disconnect nozzle circuit from reservoir and discontinue use of unit until it is repaired.
- Unit should never be used for cooling.

#### Permitted Insecticides and Handling

- Use only insecticides that are labeled for use in automated misting systems, and use only as described in the label.
- Insecticides that state "Not for use in outdoor residential misting systems" may not be used under any circumstances.
- Once insecticide has been introduced into the reservoir, ensure adequate air gap (6") between hose and drum opening is maintained when filling with water.
- Insecticide label and dilution statement should be securely attached to the unit reservoir in a weather resistant pouch.
- Strictly follow label instructions regarding storage and disposal of insecticide and container.

#### Protect Against Fire or Electric Shock

- Position the system where it is free from flooding or exposure to irrigation system spray.
- Unit must be plugged into electrical outlet with ground fault interrupt protection. (GFI/GFCI)
- Except during refill or maintenance, assembly should be covered at all times with supplied weather cover.
- Disconnect unit from power source if replacing components
- Replace fuses only with those of equivalent value.

#### General Safety

- Unplug system when removing faceplate or working on pump/motor.
- Always wear Safety glasses when working on the system.

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## Section 5 How To Service A System

### Analyze the System “As-Found” (Do this regardless of the nature of the service call):

- Take off cover. Note overall condition of system on work order.
- Immediately check settings and record on work order (time of day, timer duration etc...).
- Check CURRENT time on the controller. If clock is way off, record, then adjust.
- Check the level in tank to the nearest ¼ inch. Record to work order.
- Check work order to see when the last fill was done, or the level at the last visit.

### Test Controller

- Check that MIST NOW turns on the system immediately.
- Check that pressure is in the normal range (180 – 230 PSI) and the system comes up to pressure very quickly.
- Check holding pressure of the blowback valve at 10 – 30 PSI by plugging system outlet.
- Make sure system runs for programmed duration
- Check that timer activates system (analog)
- Turn clock to one cycle and slowly rotate to be sure the clock activates a cycle
- Set the clock 1 minute before a timed cycle and clock will rotate and activate a cycle
- Check that timer activates system (digital)

### Prepare for Refill / Flushing / Cleaning

- Clean tank out only if empty or close to empty.
- Clean filter inside and out with water.
- Fill half way with water after running the garden hose for 30 seconds into the yard
- Turn pressure to minimum (@75 PSI).
- Remove last nozzle in each run and let system run for 2 minutes to flush. Reinstall nozzles.
- Perform a test cycle and physically check nozzles and note system layout
- Replace all faulty nozzles, fittings, unions, tubing.
- Record all parts used to work order

### Test for Leaks (With the leak down tester or Coastal system with blowback valve)

- Attach the leak down tester gauge. Turn on system for one test cycle.
- Turn system off and watch pressure gauge on leak tester
- Gauge should drop to 30 PSI fairly quickly as nozzles relieve pressure until valves close
- Fix all leaks until system holds adequate pressure. Utilize leak tester in different locations.
- Record final holding pressure on work order

### Complete Fill

- Fill with chemical slowly to avoid spills
- Add remaining water to fill tank until filled 1 inch below top of tank
- Run system for 60 - 120 seconds to mix the tank and send chemical to all nozzles

### Record “As-Left” Conditions

- Tank level
- Timer settings, duration, time of day
- System holding pressure
- All parts replaced

**Check out with homeowner as needed. Confirm details of service call and work done.**



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### Section 6 Troubleshooting

**Problem: The system clock shows odd numbers.**

- Potential Cause: The clock has not been set.
- Action: On brand new systems, the clock must always be set when it is powered for the first time. Refer to Section 3 Operating Instructions to set time.

**Problem: The remote won't work.**

- Potential Cause: System Mode set to OFF or remote antenna not installed.
- Action: Verify System Mode is ON. Verify rubberized black antenna is attached to the antenna connector inside housing.

**Problem: The system will not turn on manually.**

- Potential Cause: System Mode is set to OFF.
- Action: Set System Mode to On.

**Problem: The system will not turn on automatically.**

- Potential Cause: System Mode set to OFF or No preset mist cycles defined.
- Action: Set System Mode to On and define mist cycles in Menu.

**Problem: The system runs but will not mist.**

- Potential Cause: Insecticide level is too low.
- Action: Refill insecticide reservoir or contact your Authorized Coastal Dealer.

**Problem: The system operates at normal pressure, but nozzles do not spray.**

- Potential Cause: Nozzle tips may be plugged with debris.
- Action: Clean or replace nozzle tips. Note: Remember to make sure filtered water is used to minimize clogging problems.

**Problem: The system operates, but has low or no pressure.**

- Potential Cause: Pump may be defective. Needle valve on pump is in an outward position. Pump intake filter is plugged with debris. Air leak on a fitting in the system. Tubing may be damaged.
- Action: Replace pump. Turn needle valve in until pressure returns to 200 PSI. Remove pump intake filter, clean or replace. Check for damaged or leaking tubing.

**Problem: The pump/motor surges on - off, on - off.**

- Potential Cause: Needle valve on pump assembly may be tightened inward all the way.
- Action: Turn needle valve outward all the way and restart the system. Turn needle valve in until pressure returns to 200 PSI.

If a problem cannot be found or fixed, contact a representative for more information.

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### Section 7 Warranties and Limitation of Liability

Coastal Mosquito Control, LLC. (CMC) warrants this Product - the CoastalMister™ insect misting system - to be free from defects in material and workmanship as follows:

For a period of two (2) years from the date of original purchase, CMC will repair or replace defective parts, with new or refurbished parts, at its option, at no charge. This warranty does not include labor or other costs incurred for diagnosing, removing, installing, shipping, servicing or handling of either defective parts or replacement parts.

This warranty applies solely to equipment supplied by CMC and is in lieu of all other warranties, expressed or implied. No person, agent, dealer, or distributor is authorized or empowered to give any other warranty or to assume any other liability on behalf of CMC

#### Warranty Conditions:

- This warranty is extended only to the original Purchaser and is not transferable.
- A purchase receipt or other proof of date of original purchase will be required before warranty service is rendered.
- Installation, use, care and maintenance must be normal and in accordance with instructions contained in the operating manual and CMC's service information. Failure to do so shall void this warranty.
- All claims for failure to conform to specifications or defects in material or workmanship under this warranty must be made promptly after discovery and, in any event, must be received by CMC not more than two years after the original purchase date.
- CMC reserves the right to inspect the equipment prior to any decision involving a warranty claim.
- CMC reserves the right to make warranted repairs at either the installed site or at CMC's location in Houston, TX. If CMC opts for repair at its own location, the Purchaser is responsible for shipping the item to CMC's Houston location at its expense.

#### Manufacturer's obligation under the warranty shall not apply to:

- Any equipment, which has been damaged by negligence, misuse, abuse, neglect and/or improper adjustment, accident, vandalism, acts of God, acts of war, whether declared or undeclared, improper application, or any other contingency beyond the control of CMC
- Cosmetic damage
- Damage in transit
- Failures caused by products not supplied by CMC
- Failures which result from faulty installation, set-up adjustments, improper operation, power line surge, improper voltage supply or damage from lightning
- Any equipment that has been repaired or altered without authorization from CMC or in a manner inconsistent with such authorization
- Any unit that has not been maintained in accordance with the Operations Manual
- Lost items

The foregoing is CMC's only obligation and Purchaser's exclusive remedy for breach of warranty. Purchaser's failure to submit a claim as provided above shall specifically waive all claims for damages or other relief, including but not limited to claims based on latent defects. In no event shall Purchaser be entitled to special, direct, indirect, incidental, exemplary or consequential damages, expenses, injury, lost profits, lost savings, business interruption, loss of business information, or any other pecuniary loss arising out of the use of or inability to use the equipment. In any case, CMC's entire liability shall be limited to the amount Purchaser actually paid for the item.

Except as modified in writing signed by both parties, this warranty is and shall remain the complete and exclusive agreement between the parties with respect to warranties, superseding all prior agreements, oral or written, and all other communications between the parties relating to the subject matter of this agreement.