



Gen II Tankless Misting System

Operating Manual



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snap

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The MistAway™ Gen II Tankless Misting System

INSTALLATION GUIDE

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WARNING

**DO NOT ACTIVATE SYSTEM WHEN
PEOPLE, PETS, FOOD OR FEED ARE
PRESENT!**

⚠ WARNING



**ELECTRICAL
SHOCK HAZARD**

Disconnect all power sources before servicing. Failure to do so could result in serious injury or death.

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The MistAway™ Gen II Tankless Misting System

This Installation Guide details the 16 steps needed to successfully install the MistAway™ Gen II Tankless Misting System.

During the installation process you will need to frequently navigate the Gen II's digital controller.

To access the controller menu, simply press the gray "MENU" button on the controller. The cursor, a small triangle, will start flashing on the left side of the controller window. Turn the SELECT knob to align the cursor with the appropriate menu path and then push the SELECT knob to enter that menu path.

Pressing "MENU" or the red "STOP" button will exit the menu path and return to the main screen.

1

Position the Gen II Unit

- A. Select a suitable flat area for the MistAway™ Misting System. The location should be:
 - In an area free from any localized flooding, and out of the spray arc of any sprinkler heads.
 - Within 12 feet of an electrical outlet with GFI protection
 - Within 25 feet of a hose bib or other water source.
 - The unit may be located greater than 25 feet from a water source; however, additional tubing must be purchased.
 - Care should be taken to avoid excessive water pressure drop over an extended length of the tubing.
- B. Remove the Gen II from the box, open the enclosure lid, and verify all components present.
- C. The MistAway™ Gen II Tankless Misting System Kit includes the following components:
 - Gen II Tankless Misting Unit
 - Remote Transmitter
 - Screw-on Remote Antenna
 - Hose Bib Adapter
 - 25' of Black 3/8" Nylon Tubing
 - Two keys to the enclosure lid lock
- D. Mount the unit on cement pavers or other solid, flat surfaces that provide a firm, level surface to support the unit.

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Install the Water Supply Line

- Securely attach the supplied hose bib adapter to the nearest hose bib.
 - ☑ Ensure that the rubber washer inside the hose bib adapter did not separate from the adapter during shipping.
- Connect the supplied 25 ft of 3/8" black nylon tubing to the push-to-connect fitting on the hose bib.
- Run the 3/8" nylon tubing to the Gen II unit. It is recommended to bury the line inside of a PVC pipe in order to prevent the line from being accidentally cut during yard maintenance.
 - ☑ Verify that the water flow rate *at the Gen II unit* is such that a 1 gallon jug can be filled in 45 seconds or less. A water flow less than 1 gallon per 45 seconds may cause inaccuracies in the internal flow meter.
- Attach the 3/8" black nylon tubing line to the 3/8" push-to-connect fitting on the bulkhead connections panel of the Gen II unit.
- Turn the water on at the hose bib and inspect the fittings and nylon tubing for leaks.

3

Connect to the Nozzle Circuit

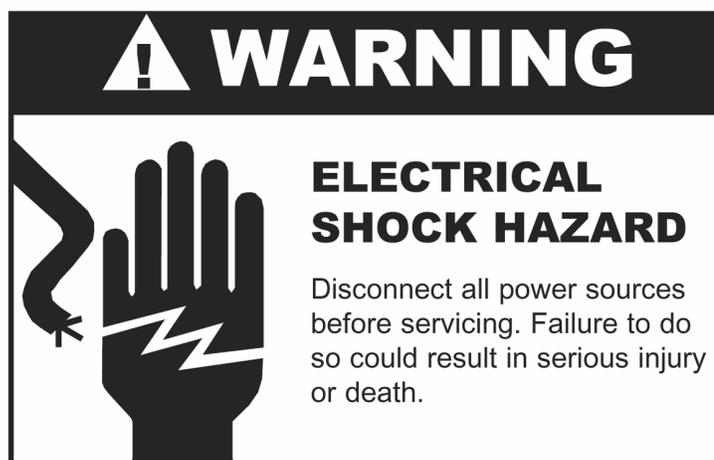
- Connect the Gen II unit to nozzle circuit by attaching the 1/4" nozzle circuit line to the 1/4" push-to-connect fitting on the Gen II connections panel.
- If the Gen II is equipped with a Zone Kit, connect the Zone 1 nozzle circuit to the upper 1/4" push-to-connect fitting, and connect the Zone 2 nozzle circuit to the lower 1/4" bulkhead fitting
- Check valves and anti-siphon valves are not required when using the Gen II unit. The internal solenoid valve prevents both siphoning and excessive nozzle circuit drain back
 - ☑ NOTE: If the first nozzle is located more than 30 ft from the Gen II unit, it is highly recommended to run 3/8" tubing from the Gen II to the first nozzle in order to avoid significant pressure loss in the line, and corresponding degradation in the quality of the mist at distant nozzles.

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Connect the Electrical Power

- Connect the Gen II power cord to the nearest electrical outlet.
- **NOTE: You must plug the Gen II power cord into a GFI/GFCI protected outlet. The use of extension cords is not approved by MistAway Systems, Inc.**
- Open the Gen II lid and observe the LCD display. It should be flashing "NO cAr" (i.e., No Cartridge) and display a time.



5

Set DST and the Date/Time

- Prior to setting the Date/Time you need to first set the Daylight Savings Time indicator **ON** or **OFF**.
- Navigate to **SET-UP → DST**.
- Push **SELECT** to set **DST** as **ON** or **OFF**.
- Press the **MENU** button when finished.
 - "**DST ON**" would be the setting used in summer months.
- Next navigate to the **DAY/TIME** menu.
- Turn the **SELECT** knob to set the day of the week.
- Press **SELECT** again to set the hour, followed by the minutes.
- Press the **MENU** button when finished.

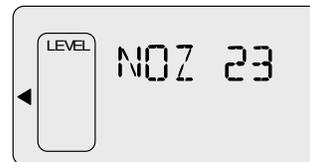


The MistAway™ Gen II Tankless Misting System

6

Set the Number of Nozzles

- Navigate to **SET-UP** → **NOZ**.
- Press **SELECT** while **NOZ** is flashing, and the number of nozzles will start to flash.
- Turn the **SELECT** knob to set the number of nozzles in the installation.
- Press the **MENU** button to exit.
- If the Gen II unit is equipped with a **Zone Kit**, you will instead need to navigate to **NZ1**, set the number of nozzles in Zone 1, and then navigate to **NZ2**, and set the Number of nozzles in Zone 2
- The **ZN1** and **ZN2** functions may be used to turn **Zone 1** and **Zone 2** on/off.



7

Program Remote Transmitter

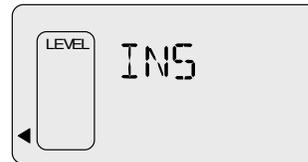
- Attach the provided antenna to the Gen II unit by screwing it to the connector on the top of the Gen II enclosure lid.
- Remove the small, raised plastic cover on the back of the remote and randomly set the DIP switches. A small nail, toothpick or safety pin works well.
- Changing the DIP switches from the standard position will minimize the possibility of interference from other mosquito systems or garage door and gate transmitters.
- Navigate to **SET-UP** → **LRN** and hold the **SELECT** button for 5 seconds.
- The system will begin a 30 second countdown. Hit any button on the remote until the display changes to "**DONE**".
- The remote transmitter is now programmed to work with the Gen II.



8

Run the Initial Inspection Cycle

- Use a flathead screwdriver to remove the small circular black plastic cover on the bulkhead fittings panel. Insert the flathead screwdriver through this hole and locate the pump pressure adjustment screw
- Navigate to the **INS** function on the **MAINTENANCE** menu. **INS** will be flashing.
- Hold down the **SELECT** button to activate the Inspection cycle
- The system will begin filling the internal reservoir with fresh water. Use this opportunity to check for leaks in the water line connection.
- Once the internal reservoir is filled with fresh water, the system will mist for 5 continuous minutes, automatically refilling the mixing vessel as needed.
 - NOTE: For very large installations, the system may stop before 5 minutes if the water flow rate into the machine is less than the amount misting out. In general, however, if the system stops prior to 5 minutes, there is likely a leak in the nozzle circuit.
- Use the flathead screwdriver to turn the pump pressure adjustment screw until the pressure gauge reads 240 psi. **Do NOT allow the system pressure to exceed 240 psi.**
- Inspect the nozzle circuit for any leaks or clogged nozzles and correct as necessary.
- If a Zone Kit is installed in the Gen II, you will need to inspect both zones.
- To inspect Zone 1, navigate to **INS 1** on the **MAINTENANCE** menu and hold **SELECT** for 5 seconds.
- To inspect Zone 2, navigate to **INS 2** on the **MAINTENANCE** menu and hold **SELECT** for 5 seconds.
- **Ensure the pump pressure is set such that neither Zone 1 nor Zone 2 exceeds 240 psi when misting.**



9

Drain the Internal Mixing Vessel

- Once the inspection cycle is complete, the internal mixing vessel should be drained in order to allow a full batch of insecticide mixture to be rebuilt.
- To Drain, navigate to MAINTENANCE → DRN and hold the SELECT button for 5 seconds.
- After a Warning duration of 30 seconds, the system will Drain the contents of the mixing vessel through the nozzle circuit.
- If a Zone Kit is installed, the system will only drain the internal reservoir through the Zone 1 nozzle circuit.



10

Insert the Insecticide Cartridge

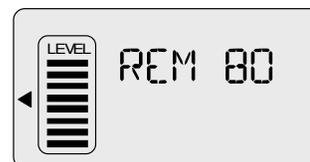
- Attach the smart cap to the cartridge (if not pre-attached)
- Place the cartridge in the cartridge tray area and guide the cartridge cap into the cartridge coupler.
 - There is no need to depress the cartridge eject button on the coupler when inserting a cartridge.
- If the system recognizes the cartridge as valid, the display will flash "VENT".
- Unscrew the vent cap on the cartridge, puncture the foil seal (if present), and lightly reattach - *but do not tighten* - the vent cap to the cartridge.
- Push the **SELECT** button to acknowledge that the cartridge has been vented.
- The system should now display the cartridge level, the day of the week, and the time of day.



11

Set the Remote Mist Duration

- Navigate to **SET-UP → REM**.
- Push **SELECT** to enable the remote mist duration to be changed.
- Turn the **SELECT** knob to set the remote mist duration.
- Press **SELECT** when complete (to enable navigation to **MAN** for the next step).



12

Set the Manual Mist Duration

- Navigate to **SET-UP → MAN**.
- Push **SELECT** to enable the manual mist duration to be changed.
- Turn the **SELECT** knob to set the duration for mists triggered by the **MANUAL MIST** button
- Press the **MENU** button when finished.



13

Program the Auto Mist Cycles

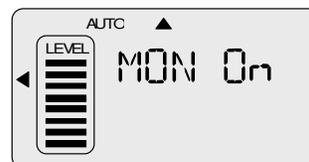
- Navigate to the **CYCLES** menu
- “C1” will be flashing, representing Auto Mist Cycle 1
- Press **SELECT**. The mist duration for Cycle 1 will be flashing.
- Turn the **SELECT** knob to set the Cycle 1 mist duration.
- Press **SELECT** again and set the Hour and then the Minute for the mist time for Cycle 1.
- Once the hour and minutes are set, press **SELECT** again to flash “C1”.
- Turn the **SELECT** knob again to select cycles C2 through C12 and repeat the above procedure to program each cycle as needed.



14

Program the Auto Mist Days

- Follow this step only if you need to program the system to auto mist on specific days of the week. If the system should auto mist everyday, you may skip this step.
- Navigate to the **CUSTOM PGM** Menu.
- Turn the **SELECT** knob to select the day of the week you want to turn ON or OFF for the auto mist cycles.
- Press **SELECT** and turn the **SELECT** knob to choose “ON” or “OFF” for the selected day.
- Press **SELECT** to choose the next day to configure.
- In Step 15 you must set the System Mode to **AUTO - CUSTOM PGM** in order to have the Gen II mist only on the selected days
- For the days set to “ON”, the system will follow the mist cycle schedule defined under **CYCLES**.
You cannot customize the mist times/durations for each day.



15

Set the System Mode

- You now must activate the System by setting the System Mode. The System mode is displayed along the top edge of the controller display.
- You may cycle through the four System Modes by pressing the green **AUTO ON/OFF** button.
- The four system modes are:
 - OFF**
 - System will *NOT* Auto Mist.
 - Remote transmitter and Manual Mist button are *DEACTIVATED*.
 - You may **INSPECT** and **DRAIN** the system, however.
 - ON**
 - System will *NOT* Auto Mist.
 - Remote transmitter and Manual Mist button are **ACTIVATED**.
 - AUTO – EVERYDAY** (“AUTO” + 1st triangle)
 - System will Auto Mist every day of the week.
 - Remote transmitter and Manual Mist button are **ACTIVATED**.
 - AUTO – CUSTOM PGM** (AUTO + 2nd triangle)
 - System will Auto Mist only on the days of week that are set to “ON” under the **CUSTOM PGM** menu.
 - Remote transmitter and Manual Mist button are **ACTIVATED**.

16

Run Initial Mist Cycle

- Use the **MANUAL MIST** button or **REMOTE** to trigger a mist cycle. (The **REMOTE** mist does not have a Warning period; the **MANUAL MIST** does).
- Since the internal mixing vessel was drained in Step 9, the system will rebuild a batch prior to the initial mist. It may take up to 5-7 minutes to build a full batch.
- After the new batch is built, the system will execute the normal misting cycle.
- Once the batch has been rebuilt following the mist, the system will return to the “Ready” screen with the Day and Time displayed.
 - If the system stops and flashes “ERR 2”, you have not set the number of nozzles. Hold **SELECT** for 5 seconds to clear the error, and then execute Step 6.
 - If the display is flashing “SKIP”, you have accidentally hit the **SKIP NEXT MIST** button on the Remote. Hold **SELECT** for 5 seconds to clear.
- Once a new batch has been built, and the system has returned to the Ready screen, verify the system mode is correctly set, and use the provided keys to lock the enclosure lid.

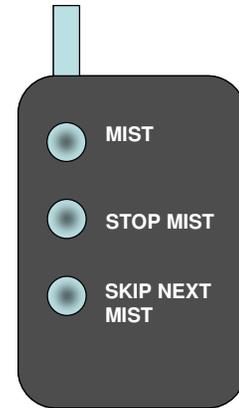
APPENDIX A - OPERATION OF THE REMOTE

MIST Button

Activates a Remote Mist for the duration defined under the SET-UP menu.

A brief agitation cycle will precede the Remote Mist.

If a Zone Kit is installed, the system will mist both zones or either zone, as defined in the SET-UP menu.



STOP MIST Button

The STOP MIST button stops any activity that the system is executing at the time “STOP MIST” is pressed. Pressing STOP MIST is the same as pressing the “STOP” button on the controller.

SKIP NEXT MIST Button

The SKIP NEXT MIST button enables the next programmed AUTO MIST to be skipped.

When SKIP NEXT MIST is activated, the controller display will flash “SKIP” and the external LED on the system enclosure will flash slowly.

The Remote and Manual Mist button may still be used to trigger a mist while the system is flashing SKIP.

Once the next programmed Auto Mist is skipped, the system will return to the normal display, with the “sunshine” icon in the lower right corner of the display flashing to indicate the mist was skipped.

You may only skip one mist at a time, i.e., pushing the SKIP NEXT MIST button multiple times will not cause multiple AUTO MIST cycles to be skipped.

The SKIP NEXT MIST can only be cleared by holding the SELECT knob on the system control panel down for 5 seconds.

What’s an example of how to use the SKIP NEXT MIST function?

- The system is programmed to auto mist at 6:30 AM and 7:30 PM.
- The user has a party scheduled to start outside at 7:00 PM. The user doesn’t want the system to mist during the party, but wants the system to mist prior to the guests’ arrival.
- At 6:30 PM the user presses the SKIP NEXT MIST button.
 - The user verifies a SKIP MIST has been set by ensuring that the controller display is flashing “SKIP” or checking that the external LED indicator on the enclosure is flashing slowly.
- The user then uses the Remote Mist to mist the yard immediately.

The system SKIPS the mist scheduled at 7:30 PM but executes the next auto mist cycle scheduled for 6:30 AM the next day.

APPENDIX B – THE CONTROLLER MENUS

Enter and Exit the controller menus at any time by pressing the MENU button on the controller. After pressing MENU, turn the SELECT knob to select the correct menu, and then push the SELECT knob to enter that menu path.

DAY/TIME Menu	
	Sets the Day of the Week and the Time of Day.
CYCLES Menu	
	Configures the mist time and duration for each of the twelve possible Auto Mist Cycles (C1 – C12).
CUSTOM PGM Menu	
	Configures the days of the week for Auto Misting in the AUTO-CUSTOM PGM mode.
SET-UP Menu	
DST	Turn Daylight Savings Time ON or OFF. (DST ON is the USA summer setting).
MAN	Sets the duration for mists triggered by the Manual Mist button on the Controller.
LRN	Programs system to recognize a specific Remote Transmitter. Hold down SELECT for 5 seconds and then press the Remote Mist button. When the system flashes DONE, remote is programmed.
REM	Sets the duration for mists triggered by the Remote Transmitter.
NOZ	Set the Number of nozzles in the circuit attached to the system. (No Zone Kit)
SEN	Turn Sensor Package On/Off (For future use - No sensor package option offered at this time)
NZ1	Set the Number of nozzles in Zone 1. (Systems with Zone Kit only)
NZ2	Set the Number of nozzles in Zone 2. (Systems with Zone Kit only)
ZN1	Enable or disable misting from Zone 1. (Systems with Zone Kit only)
ZN2	Enable or disable misting from Zone 2. (Systems with Zone Kit only)
MAINTENANCE Menu	
DRN	Drains the contents of the internal mixing vessel. If a zone kit is installed, the system will drain through Zone 1 only. Hold SELECT for 5 seconds to trigger.
INS	Inspect System – Mists for 5 minutes. Hold SELECT for 5 seconds to trigger (No Zone Kit)
INS1	Inspect System – Zone 1 (Systems with Zone Kit only)
INS2	Inspect System – Zone 2 (Systems with Zone Kit only)

DATA Menu	
	<i>Note: TMC, TMM, RMC and MMC may be individually reset by holding SELECT for 5 seconds</i>
DM	<i>Total Daily Mist</i> - Number of seconds the unit has misted since midnight. Resets at 12:00 AM each day.
MX	<i>Maximum Daily Mist</i> - Maximum number of seconds the unit is permitted to mist in a single day. This value is set from cartridge cap.
TMC	<i>Total Mist Cycles</i> - Total number of mist cycles executed since TMC was last reset. Includes AUTO, Manual, and Remote mists
TMM	<i>Total Mist Minutes</i> - Total number of minutes the unit has misted since TMM was last reset. Includes AUTO, Manual, and Remote mists.
RMC	<i>Remote Mist Cycles</i> - Total number of Remote Mist cycles triggered since RMC was last reset.
MMC	<i>Manual Mist Cycles</i> - Total number of Manual Mist cycles triggered since MMC was last reset.
TMH	<i>Total Mist Hours</i> - Cumulative time that the machine has misted since manufacture.
PRH	<i>Dosing Pump Run Hours</i> - Cumulative time that the dosing pump has run since manufacture.
A - J	<i>Internal Data</i> - Used for troubleshooting the system by a MistAway authorized technician. If calling MistAway for technical support, please have this data at hand.

APPENDIX C - FREQUENTLY ASKED QUESTIONS

This section of the Gen II Tankless Misting System Product Manual answers the most common questions regarding System Operation, the Remote Transmitter, and Installation & Servicing Procedures

Operating Questions	
FAQ – OPS – 01	What does the flashing LED on the outside of the unit indicate?
FAQ - OPS – 02	What happens if power to the unit is turned off and back on?
FAQ – OPS – 03	Can I set unique Auto Mist Times/Durations for each day of the week?
FAQ - OPS - 04	There is a symbol that looks like a “sunshine” flashing in the lower right corner of the display. What is it?
FAQ - OPS - 05	What happens if the water supply line to the unit is accidentally turned off?
FAQ - OPS - 06	Why does the Gen II keep building batches even when the cartridge looks like it is empty?
FAQ - OPS - 07	You have “MX”, the Maximum Daily Mist value on the DATA menu, but the value is very high. What is the purpose then of “MX”?
FAQ - OPS - 08	After the Gen II finishes misting, the display says “HOLd” for a short time, and there are some strange noises. What is going on?
FAQ - OPS - 09	The agitation time seems OK for pyrethrum-based insecticides, but wouldn't essential oils/repellents need longer agitation?

Questions about the Remote Transmitter	
FAQ – REM – 01	What does the SKIP NEXT MIST button on the remote do?
FAQ – REM – 02	I accidentally pressed SKIP NEXT MIST on the Remote. How do I clear it?
FAQ – REM – 03	If I press STOP MIST on the remote, does that set the Gen II SYSTEM MODE to OFF?
FAQ – REM – 04	What if I press STOP MIST in the middle of the system building a batch? Will the system recover properly?
FAQ – REM – 05	I have the optional Zone Kit installed. Can I use the Remote Transmitter to trigger each zone individually?

Questions about Installation & Servicing

FAQ – ISR – 01	Do I need to install a backflow preventer on the water supply line?
FAQ – ISR – 02	Why does this machine have to be plugged into an electrical circuit with GFI protection?
FAQ – ISR – 03	Do I need to install a check valve or anti-siphon valve on the nozzle circuit connected to the Gen II?
FAQ – ISR – 04	Is there a battery back-up for the clock that needs to be replaced?
FAQ – ISR – 05	Why do I have to set the Daylight Savings Time (DST) to ON or OFF?
FAQ – ISR – 06	When the system is agitating, the pump only shows about 90 psi. Is this normal?
FAQ – ISR – 07	What is SEN ON/OFF for on the SET-UP menu? Is this for a wind sensor? Where can I get one?
FAQ – ISR – 08	The installation instructions mention a zone kit. What is a zone kit, and how do I know if I have one?
FAQ – ISR – 09	I need to move the unit. How do I empty the internal mixing vessel?
FAQ – ISR – 10	When the cartridge is empty, why can't I just refill it and insert it back into the unit?

FAQ – OPS - 01

What does the flashing LED light on the outside of the unit indicate?

The LED is used to indicate the status of the system:

- **SLOW FLASH** (once per second) –
 - A SKIP MIST has been triggered by the remote, or
 - The cartridge is empty, or
 - There is a mechanical error with the GEN II
- **RAPID FLASH**
 - The machine is about to mist and is either in the WARNING or AGITATE stage.
 - NOTE: The machine will also RAPID FLASH during the AGITATE stage when rebuilding a batch following a mist
- **SOLID LIGHT**
 - The machine is misting

FAQ – OPS - 02

What happens if the power to the unit is turned off and back on?

When electrical power is restored to the unit, the Gen II digital controller will reboot into the same mode the unit was operating in prior to the power being turned off.

For example, if the unit was in AUTO-EVERYDAY mode prior to the power being turned off, it will reboot into AUTO-EVERYDAY mode when the power is restored.

The controller features a “Super Capacitor” that stores enough electrical power to run the internal clock for up to six weeks in the event power to the unit is turned off. There is no battery for the clock.

All user defined settings, such as the Auto Mist Cycles, are permanently saved regardless of whether or not the Gen II has electrical power.

FAQ – OPS - 03

Can I set unique Auto Mist Times/Durations for each day of the week?

No. While you may use the CUSTOM-PGM menu to turn specific days of the week ON or OFF, each day set to ON will mist according to the auto mist cycles defined under the CYCLES menu. You cannot customize mist times for each day.

FAQ – OPS - 04

There is a symbol that looks like a “sunshine” flashing in the lower right corner of the display. What is it?

The small “sunshine” indicates that the previous mist was skipped, for one of three reasons:

1. The user triggered a SKIP NEXT MIST with the remote, and the most recent auto mist was skipped.
 - The next Auto Mist will be executed as programmed unless the user presses the SKIP NEXT MIST button again.
2. The Maximum Daily Mist time has been reached
 - On the DATA menu, the “DM” and “MX” values represent the Total Daily Mist (seconds) and the Maximum Daily Mist allowed
3. A weather or motion sensor blocked the previous auto mist.

FAQ – OPS - 05

What happens if the water supply to the unit is accidentally turned off?

When the Gen II attempts to build the next batch, it will lock with an “**ERR 4**” indication.

Once the water pressure is restored, you may clear the **ERR 4** indicator by holding the **SELECT** button for 5 seconds. The Gen II will not clear this error automatically.

FAQ – OPS - 06

Why does the Gen II keep building batches even when the cartridge looks like it is empty?

There is still fluid in the tubing between the Cartridge coupler, the dosing pump, and the internal mixing reservoir. The Gen II will continue to operate until this tubing is cleared.

When the Gen II determines the supply of cartridge fluid is completely exhausted, it will flash “EMP cAr” in the display, and the external LED will flash slowly, indicating that the cartridge is empty.

FAQ – OPS - 07

You have “MX”, the Maximum Daily Mist value on the DATA menu, but the value is very high. What is the purpose then of “MX”?

The Maximum Daily Mist functionality is built into the machine in anticipation of future regulatory requirements that will limit the amount of active ingredient a system may disperse in a given day.

The value for the Maximum Daily Mist is programmed into the smart cap on the cartridge, and thus can be adjusted as regulations are changed. At present the value will be set high enough so that misting is not restricted.

How does it work? Let's say an Auto Mist is scheduled at 7:00 AM for 60 seconds, and another Auto Mist is scheduled at 7:30 PM for 60 seconds. The remote mist duration is 60 seconds as well. The Maximum Daily Mist is set, by the smart cap, for 180 seconds.

In this example, the system mists normally at 7 AM, adding 60 seconds to the DM (Daily Mist) value, as displayed in the DATA menu.

At 3:00 PM, a remote mist is triggered. DM now will equal 120 seconds.

At 7:30 PM, the second Auto Mist occurs.

The total Daily Mist is now 180 seconds, which equals the Maximum Daily Mist value of 180 seconds.

At 9:00 PM, another remote mist triggered.

However, since the Maximum Daily Mist was reached after the second Auto Mist at 7:30 pm, the system will not permit a mist. Instead, it will simply activate the “flashing sunshine” symbol in the bottom right corner of the display, indicating that the mist was skipped.

The Daily Mist variable will reset to 0 seconds upon the change of day at 12:00 AM.

If the optional Zone Kit is installed, and both Zones are active, the Daily Mist value will only be incremented by the duration of a single mist – not two.

The purpose of Maximum Daily Mist is to limit the duration each *nozzle* in an installation can mist in a single day.

FAQ – OPS - 08

After the Gen II finishes misting, the display says “HOLd” for a short time, and there are some strange noises. What is going on?

The Gen II features an internal Mist/Agitate solenoid valve that directs the pump flow either back into the internal reservoir (to mix and agitate the solution), or out through the nozzle circuit.

When the Gen II is not misting, the solenoid valve is closed to the nozzle circuit in order to prevent siphoning of the internal mixing reservoir.

However, immediately after the mist finishes, and the pump has stopped, the Gen II keeps the solenoid valve open to the nozzle circuit for a period of 15 seconds in order to enable the nozzle circuit pressure to rapidly bleed off through the internal pressure control valve. This action ensures that the nozzles close rapidly, minimizing any dripping. The noise the machine makes during the “HOLD” is the pressure bleeding off through the internal pressure control valve.

Once the system has depressurized the nozzle circuit, the solenoid valve is closed to the nozzle circuit.

FAQ – OPS - 09

The agitation time seems OK for pyrethrum-based insecticides, but wouldn't essential oils/repellents need longer agitation?

The agitation time is set by the smart cap on the cartridge. Different cartridges will have different agitation times depending on the repellent/insecticide being dispersed.

FAQ – REM - 01

What does the SKIP NEXT MIST button on the remote do?

Please refer to Appendix A - “Operating the Remote”.

FAQ – REM - 02

I accidentally pressed SKIP NEXT MIST on the remote. How do I clear it?

Hold down the SELECT button on the controller for 5 seconds.

The remote cannot be used to clear a SKIP MIST.

FAQ – REM - 03

If I press “STOP MIST” on the remote, does that set the Gen II system mode to OFF?

No. When STOP MIST is pressed on the remote, or the STOP button is pressed on the controller, the system simply halts whatever current activity it is executing, be it misting, agitating, filling, etc. The system mode remains unchanged.

FAQ – REM - 04

What if I press STOP MIST in the middle of filling the unit, will the system recover?

Yes, prior to the next mist cycle, the system will check the level of the tank. If the mist cycle was stopped prematurely for any reason, the system will rebuild the batch correctly prior to agitating during the next mist cycle.

FAQ – REM - 05

I have the optional zone kit installed. Can I use the remote to trigger each zone individually?

No. When the Remote is used to trigger a mist, and a zone kit is installed, the system will mist according to which zones are set to "ON" in the controller.

If you wish to suspend one zone for a period of time, navigate to the SET-UP menu and set ZN1 or ZN2 to OFF, depending on your needs. These two items control the zone behavior for all mist cycles.

FAQ – ISR - 01

Do I need to install a backflow preventer on the water supply?

No. The Gen II features an air gap in the internal water supply circuit that is more than double the minimum code requirement.

There is no need to have the air gap inside the Gen II inspected on an annual basis.

FAQ – ISR - 02

Why does this machine have to be plugged into a GFI circuit?

As an outdoor electrical appliance that is often exposed to the elements, MistAway Systems, Inc. -- for protection of both the installer and end-user -- requires that the Gen II Misting Unit is plugged into an electrical outlet that has Ground Fault Interrupter (GFI or GFCI) protection.

Please note that the unit also requires a minimum electrical service of 15 Amps.

FAQ – ISR - 03

Do I need to install a check valve or anti-siphon valve on the nozzle circuit connected to the Gen II?

No. The Gen II features an internal mist/agitate solenoid valve that is closed to the nozzle circuit at all times, except when the machine is misting.

It is not possible for the internal mixing reservoir of the Gen II to be siphoned out.

Please see question **FAQ – OPS – 08** for more details.

FAQ – ISR - 04

Is there a battery for the clock that needs to be replaced?

No. The Gen II controller features an electrical device known as a “Super Capacitor”. The “Super Cap” stores enough electrical energy to power the internal clock for up to six weeks in the event power is shut-off to the Gen II.

If electrical power is suspended to the Gen II for more than six weeks, the clock may need to be reset when the Gen II is powered up.

FAQ – ISR - 05

Why do I have to set the Daylight Savings Time (DST) to ON or OFF?

DST, which is found under the SET-UP menu, is a feature added for convenience of the user.

If DST is changed from OFF to ON, two events happened automatically:

1. The clock is advanced forward one hour
2. The time for each mist cycle, as defined in the CYCLES menu, is advanced forward one hour.

The reverse of the above occurs when DST is changed from ON to OFF.

DST ON is the setting that would be used in the summer months in the USA.

FAQ – ISR - 06

When the system is Agitating, the pump pressure only shows 90 psi. Is this normal?

Yes, when agitating the pump is circulating fluid through the internal mixing reservoir. It is normal for the pressure to be lower than it is when misting.

FAQ – ISR - 07

What is SEN ON/OFF for in the SET-UP menu? Is this for a wind sensor? Where can I get one?

SEN enables an external wind/rain/motion sensor package to be turned on or off.

However, at present MistAway has not identified a sensor package we consider reliable and durable enough to sell to our customers with Gen II units, and thus we are not offering a sensor package kit at this time.

The Gen II controller has been developed however to enable the installation of a sensor package at a later date.

FAQ – ISR - 08

The installation instructions mention a zone kit. What is a zone kit, and how do I know if I have one?

A zone kit is a secondary solenoid valve internal to the Gen II unit that enables the system to sequentially mist through two different nozzle circuits, effectively doubling the capacity of the unit.

Gen II units with zone kits may be visually identified by the presence of two ¼" bulkhead fittings on the external connections panel. "Zone 1" should be connected to the upper fitting, and "Zone 2" to the lower fitting.

For systems with zone kits, the controller is also slightly different in the SET-UP menu.

The number of nozzles setting "NOZ" is replaced by "NZ1" and "NZ2", representing the number of nozzles in Zone 1 and Zone 2 respectively.

FAQ – ISR - 09

I need to move the unit. How do I empty the internal mixing reservoir?

You need to execute the built-in Drain function.

Navigate to **MAINTENANCE** → **DRN** and hold the **SELECT** button for 5 seconds.

After a 30 second Warning duration, the system will drain the contents of the mixing vessel through the nozzle circuit.

If a Zone Kit is installed, the system will only drain the internal reservoir through the Zone 1 nozzle circuit.

NOTE: Ensure the area is free of people, pets, and food when executing DRAIN.

FAQ – ISR - 10

When the cartridge is empty, why can't I just refill it and insert it back into the unit?

The RFID smart cap on the insecticide cartridge contains a “virtual” volume representing the amount of fluid in the cartridge.

Each time the system doses fluid from the cartridge into the internal mixing vessel, the virtual volume on the smart cap is updated accordingly.

This feature allows cartridges of different concentrations and chemicals to be exchanged in the unit at will.

Once the virtual volume on the cap reaches 0, the Gen II labels the cartridge as empty. You cannot add more “virtual volume” to the cap.

Please note that, unless you possess the proper EPA licensing, rebottling or repackaging of insecticide is illegal.

APPENDIX D – TROUBLESHOOTING

Problem	Probable Cause	Troubleshooting Actions
The system clock shows odd numbers	The clock has not been set	On brand-new systems the clock must always be set when the system is powered for the first time. Refer to Step 5 of the Installation Guide.
The system display is flashing “EMP cAr” and the external LED is flashing	Cartridge is empty	Replace the cartridge. Refer to Step 10 of the Installation Guide.
The system display is flashing “INV cAr” and a number.	Unauthorized Cartridge	If the number in the display is 10 or 11, the cartridge inserted into the machine is not authorized for use in that unit.
	Internal Electrical Error	If the number in the display is 20 or 21, there is an internal electrical error in the system. Contact MistAway Technical Support.
The system display is flashing “NO cAr” but a cartridge is inserted.	Cartridge Reader Error	Remove the plastic cover and verify that the gray cable from the cartridge reader is securely attached to the connector on the lower circuit board.
The system display shows “ERR” and a number, and the external LED is flashing.	Mechanical fault detected.	Refer to Appendix E for detailed troubleshooting information on ERR conditions.
The Remote Mist won't work	System Mode set to OFF	Repeat Step 15 in the Installation Guide to set the System Mode. The system will not mist if the System Mode is set to OFF.
	Remote Mist Duration set to OFF	Repeat Step 11 in the Installation Instructions to set the Remote Mist Duration
	System does not recognize the Remote Transmitter	Repeat Step 7 in the Installation Guide to program the system to recognize the Remote Transmitter
	System antenna not installed	Verify rubberized black antenna is screwed on tightly to the antenna connector on the enclosure lid.
The Manual Mist Button doesn't work	System Mode set to OFF	Repeat Step 15 in the Installation Guide to set the System Mode. The system will not mist if the System Mode is set to OFF.

Problem	Probable Cause	Troubleshooting Actions
The system will not Auto Mist	System mode set to OFF or ON	The system mode must be set to AUTO-EVERDAY or AUTO-CUSTOM in order for the Auto Mists to work. If the system is to be set to only mist on certain days of the week (as programmed under the CUSTOM PGM menu), the System Mode must be set to AUTO-CUSTOM.
	SKIP mist has been triggered.	Verify controller is not flashing "SKIP". If it is, it can be cleared by holding SELECT for 5 seconds. If a small "sunshine" is flashing in the lower right hand corner of the display, the previous mist was skipped due to a SKIP signal from the Remote. It is possible that the unit is receiving signals from another remote. To correct, change the DIP switches on the remote and repeat Step 7 in the Installation Guide to program the system to recognize the Remote Transmitter.
The system shows a warning time normally, but just before the agitate cycle, the controller resets	Insufficient Electrical Power	Verify that the unit is plugged directly into a GFI-protected electrical outlet with 15 amps service. Do NOT use an extension cord on the unit. The use of electrical extension cords is not approved by MistAway Systems, Inc.
The System mists randomly during the day.	System receiving a remote signal from another source	Change the DIP switches on the remote and reprogram the system to recognize the remote. Refer to Step 7 in the Installation Guide.
The motor runs, but the system isn't misting at all, or the nozzles are sputtering	Air is being introduced into the pump suction	Verify that the 1/4" nozzle circuit tubing is securely engaged in the 1/4" bulkhead fittings. Remove plastic cover and verify that the pump suction pipe and discharge tubing is firmly engaged in the pump fittings.
	Pump collar loose	Remove plastic cover and use a screwdriver to verify that the collar securing the pump to the electric motor is tight.
	Suction Filter Clogged	Remove plastic cover and clean the suction filter on the end of the pump suction pipe (inside the mixing vessel).

APPENDIX E – INTERPRETING ERROR CONDITIONS

The MistAway™ Gen II features extensive internal troubleshooting capability. When the system detects a mechanical fault condition, it will flash “ERR” and a number in the display. This section provides a guide to the ERR conditions of the GEN II.

To clear an ERR condition, you must hold down SELECT for 5 seconds, and then reset the System Mode.

Err #	Condition	Probable Cause(s)	Troubleshooting Steps
ERR 1	Level of the Internal Mixing Reservoir dropped during the Agitation Cycle	Leak in internal plumbing for agitation circuit	<ul style="list-style-type: none"> ✓ Check for any water leaking out from under the machine, indicating a break in the internal agitation circuit. ✓ If leaks observed, remove the plastic cover and inspect the fittings and water lines closely for leaks. Verify all tubing is locked into the fittings.
		Mist/Agitate Valve Locked in Mist Position	<ul style="list-style-type: none"> ✓ If the machine is misting through the nozzle circuit when the display is flashing “AGT”, the mist/agitate valve is stuck in the mist position. ✓ Unplug the Gen II and plug back in. ✓ If the problem persists, contact Mistaway Technical Support.
		Float Switch Error	<ul style="list-style-type: none"> ✓ Remove the plastic cover and verify that the upper float is not jammed in the “down” position. ✓ If moving freely, contact MistAway technical support.
ERR 2	Number of Nozzles = 0	Number of nozzles not set on initial installation	<ul style="list-style-type: none"> ✓ Execute step 3 in the Installation Guide to set the number of nozzles. ✓ If an optional zone package is installed, you must set the number of nozzles for both zones (values “NZ1” and “NZ2”).

Err #	Condition	Probable Cause(s)	Troubleshooting Steps
ERR 3	Entire contents of Internal Mixing Vessel exhausted during Mist	Break in the nozzle circuit	<ul style="list-style-type: none"> ✓ Inspect the entire nozzle circuit carefully to ensure a cut or loose fitting is not causing a rapid loss of fluid.
		Mist Duration too long for number of nozzles installed	<ul style="list-style-type: none"> ✓ Reduce the mist duration. ✓ The Gen II can safely drive 60 nozzles for 120 seconds.
		Lower Float Switch False Reading	<ul style="list-style-type: none"> ✓ The lower float switch has falsely “tripped” ✓ Remove the plastic cover and verify that the lower float is not jammed in the “up” position. ✓ If moving freely, contact MistAway technical support.
ERR 4	Time for Internal Mixing Vessel to fill with water exceeds the maximum limit	Water sourced turned off or extremely low water pressure	<ul style="list-style-type: none"> ✓ Check that the water source is on. ✓ Verify that the water line <i>at the Gen II</i> is capable of filling a 1 gallon container in 45 seconds or less.
		Upper Float Switch Failure	<ul style="list-style-type: none"> ✓ Remove the plastic cover and verify that the upper float is not jammed in the “down” position. ✓ If moving freely, contact MistAway technical support.
ERR 5	Volume of water added to the Mixing Vessel exceeds the vessel’s maximum capacity	Extremely low water pressure	<ul style="list-style-type: none"> ✓ Very low water pressure will cause faulty flow meter readings. ✓ Verify that the water source is able to fill a 1 gallon container in 45 seconds or less
		Upper Float Switch Failure	<ul style="list-style-type: none"> ✓ Remove plastic cover. ✓ Verify upper float in mixing vessel is not stuck in the down position.
		Flow meter error	Contact MistAway technical support

Err #	Condition	Probable Cause(s)	Troubleshooting Steps
ERR 6	Time needed to drain system exceeds the maximum allowed	Pump or pump motor not operating properly	<ul style="list-style-type: none"> ✓ Verify pump is producing at least 200 psi pressure. If not, remove the plastic cover and check for leaks in the pump suction line or a loose pump collar.
		Lower Float Switch Failure	<p>The lower float switch is not registering that the tank has emptied.</p> <ul style="list-style-type: none"> ✓ Remove the plastic cover and check movement of the lower float. ✓ If the float moves freely, contact MistAway technical support
		Less than 15 nozzles in the nozzle circuit	If the nozzle circuit has 15 nozzles or less, execute the drain function again
ERR 7	Mixing Vessel volume did not change during the mist cycle.	Pump or pump motor not operating properly	Verify pump pressure of 240 psi during mist. If low pressure, remove plastic cover and verify pump circuit tubing is tight in all fittings and that the pump collar is tight.
		Mist/Agitate Solenoid Valve failed	Open the inspection port on the plastic cover and note if the system is agitating when the controller is flashing "MST". If so, the mist/agitate solenoid has failed.
		Float switch not reading correctly	Remove the plastic cover and verify that the upper float is not jammed in the "up" position.
ERR 8	Controller board unable to communicate with cartridge reader	Small ribbon between controller board and lower circuit board disconnected.	<p>Remove the plastic cover and verify that the smaller of the two electrical ribbon cables is firmly connected to each circuit board.</p> <p>The system will clear ERR 8 automatically if the fault is corrected.</p> <p>If ERR 8 persists after checking the ribbon cable, contact MistAway technical support</p>

APPENDIX F - WARRANTY AND LIMITATION OF REMEDY AND LIABILITY

MistAway Gen II Tankless Misting Unit

MistAway Systems Inc. (MSI) warrants this Product – the MistAway Gen II Tankless Misting Unit – to be free from defects in material and workmanship as follows:

For a period of one (1) year from the date of original installation (whether or not actual use begins on that date), MSI 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 MSI 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 MSI

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 MSI'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 MSI not more than one year after the original purchase date.
- MSI reserves the right to inspect the equipment prior to any decision involving a warranty claim.
- MSI reserves the right to make warranted repairs at either the installed site or at MSI's location in Houston, TX. If MSI opts for repair at its own location, the Purchaser is responsible for shipping the item to MSI's Houston location at the Purchaser's 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 MSI
- Cosmetic damage
- Damage in transit
- Failures caused by products not supplied by MSI
- 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 MSI or in a manner inconsistent with such authorization
- Any unit that has not been maintained in accordance with the operator's manual
- Normal wear on any item or piece of equipment
- Lost items

The foregoing is the Seller'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, MSI'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.