



# MCU1001A FW 1.10 Manual:

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### **MAIN SYSTEM FEATURES:**

- Easy to use LCD interface
- Intuitive keypad layout and menu system
- Quick installation/programming
  - Programs up to 80 sprays/day
- Standby mode
- Proven remote control system
- Full Statistics menu
  - Displays current usage statistics
  - Estimates refill date
  - Cost savings on unnecessary refills
- Ability to control 2 separate zones
  - Doubles system capacity with low added cost
- Controls up to 4 systems with one remote
- Franchise refill lockout code
  - Prevents loss of refill business
- Selectively spray based on month/day
  - Full flexibility for vacation homes
  - Allows auto shutoff in winter
- Programmable for future needs or expansion

## **DESCRIPTION OF PANEL BUTTONS:**

**OK** – selects menu items and confirms input

**X** – returns to main menu and cancels input

**UP/DOWN** – scrolls through menu choices and toggles AM/PM selection

**0-9** – used to input numbers and toggle yes/no questions

## **MAIN MENU:**

**Press OK to spray:** This is the start of the main menu. **OK** will spray for the amount of time set by “set duration”. **X** will cancel the spray early.

**Add spray time:** Selecting this menu item will allow you to enter an additional time of day to spray. Use the number pad to enter the time, and **UP** and **DOWN** to select AM or PM. Press **OK** when finished, or **X** if you make a mistake.

- Special spray times:
- add 99:00 to spray once an hour
- add 99:10 to spray once every 20 minutes

**Del spray time:** Selecting this menu item will allow you to delete spray times from the daily program. Press **UP** and **DOWN** to cycle through the programmed times and **OK** to delete. Press **X** to return to the main menu.

**View spray times:** Selecting this menu item will allow you to view the spray times in the daily program. Pressing **UP** and **DOWN** will cycle through the programmed times. Press **X** to return to the main menu. The numbers in the upper left corner show which item you are looking at and the number of programmed times. For example “02/05” would mean you are currently displaying item 2 and there are 5 total spray times.

**Set duration:** Sets the duration of each spray. Can be set between 1 and 99 seconds.

**Set time:** Sets the system time. Use the number pad to enter the time, and **UP** and **DOWN** to select AM or PM. Press **OK** when finished, or **X** if you make a mistake.

**Set date:** Sets the system date. Use the number pad to enter the time, and **UP** and **DOWN** to select AM or PM. Press **OK** when finished, or **X** if you make a mistake.

**Statistics:** Enters the statistics menu (see “STATISTICS”)

**Service mode:** Used by system operators during tank refills and setup. Must enter service code, or franchise code to continue. (see “SERVICE MENU”)

**Assign remote:** Used to set up remote control for use with system. If you hold the mist off button on your remote, you should see the address and button number displayed on the screen. If you press **OK** at the same time, you will assign this remote to your

system. If there is an asterisk "\*" displayed when you press the button, the remote has been correctly assigned. If the message "set remote addr " is displayed, the remote has not been given an address yet. Please see **APPENDIX A: Setting up the Remote** for more information.

**Set spray days:** This menu will allow you to turn off the system on days of the week that no one will be around. Press **UP** and **DOWN** to cycle through days of the week and **OK** to toggle Y or N (yes or no). Press **X** to return to previous menu.

**Set spray months:** This menu will allow you to turn off the system on months of the year that there are few mosquitoes. Press **UP** and **DOWN** to cycle through days of the week and **OK** to toggle Y or N (yes or no). Press **X** to return to previous menu.

**Reset settings:** Resets all user settings to the factory defaults. Press **OK** to initiate, and **OK** again to answer "are you sure?"

*NOTE: this does NOT reset the passwords, empty sensor, or setup data*

## **STATISTICS MENU:**

**Tank capacity:** This displays the total number of spray seconds a given system should provide. Press **OK** to enter the system information for a capacity estimate. Enter the number of gallons and press **OK**. Enter the number of nozzles and press **OK**. Calculations are based on 1 oz per nozzle per minute. **This must be set in order to give proper statistics.**

**Total tank use:** This displays the total number of seconds the unit has been used since the last refill.

**Program use:** This displays the portion of the total use due to daily programmed spraying.

**Manual use:** This displays the portion of the total use due to the "press OK to spray" and remote control function.

**Last fill:** This displays the last date that the tank was refilled.

**Should fill by:** This calculates the approximate date that the tank will become empty.

This is based on:

- tank capacity
- total tank use to date
- spray duration
- number of zones
- spray times per day
- spray days of the week
- spray months of the year

- estimate of manual use

**Tank empty date:** This displays the date which the tank went empty. If the tank has not been empty since the last fill, “N/A” is displayed.

**Last tank held:** This displays the number of total seconds sprayed the last time the tank went empty. If the tank has not gone empty yet, “N/A” is displayed.

*NOTE: if the total number of seconds is less than 1000, it is not updated because somebody most likely moved the empty sensor while filling*

**Firmware version:** This is the version of code running on the unit.

## **SERVICE MENU:**

**Filled tank:** Press **OK** to reset the tank sensor and statistics. “\*\*TANK IS FULL\*\*” is displayed when the tank has been filled recently.

*NOTE: This option must be selected after each fill to ensure proper operation.*

**Set SERV code:** and **Set FRAN code:** This allows operators to change the access codes for the system. Generally, the service code (SERV) is the only number the installer should use. The franchise code (FRAN) allows the franchise owner to reset the service code if there is a problem or the code is lost. Please see **APPENDIX C: Access Codes** for more information.

**Hit zone num or OK to test spray:** Allows a system operator to spray without affecting statistics. This is useful in system testing and checking for leaks. The system will spray for 4 minutes or until the stop button is pressed. **OK** will spray zone one and number keys will spray other zones.

**Remote type:** Changes the function of the buttons on the remote. Please see **APPENDIX A: Setting up the Remote** for more information.

**System zones:** Number of zones controlled by the system. Currently only 1 or 2.

**Drain Time:** Adjusts the amount of time the system allows each zone to de-pressurize before spraying the next zone. This is only applicable on multi-zone systems.

**Set sensor types:** Changes the type of sensors hooked up to the device. Toggle between normally open (NO) and normally closed (NC) by pressing **OK** or **0-9**. Use **UP** and **DOWN** to select sensor and **X** to exit.

## **APPENDIX A: Setting up the Remote**

- Open small panel on back of remote control with a paper clip

- Using paper clip, flip a few of the tiny switches to set the address. You can set the switches to any address except 0. If you flip the switches randomly there is less chance that your remote will be the same as your neighbors.
- Put the panel back on your remote.

**To change the remote type for a special system configuration:**

- enter service mode
- scroll to remote type
- enter new remote type:
  - 0-default configuration with spray all zones and system suspend buttons
  - 1-1<sup>st</sup> row of buttons spray all zones
  - 2-2<sup>nd</sup> row of buttons spray all zones
  - 3-3<sup>rd</sup> row of buttons spray all zones
  - 4-4<sup>th</sup> row of buttons spray all zones
  - 5-top 4 buttons control zones 1 and 2
  - 6-bottom 4 buttons control zones 1 and 2
  - 7-spray all zones, and on/off for zones 1 and 2
  - 8-spray all zones, system suspend, and on/off for zones 1 and 2
- by assigning the same remote to multiple systems and selecting different remote types, it is possible to control up to 4 systems (with 2 zones each) or 4 zones independently

## ***APPENDIX B: Shortcut Buttons***

If many of the buttons on the control panel are held for more than 3 seconds, they will perform an alternate function. These may be useful to service providers who need to set up multiple units, or homeowners who want to disable the system.

**Shortcuts are activated by holding the specified button for at least 3 seconds:**

- 0: Service operator enters code and tank is reset. Used when refilling tank.
- 1: Adds spray times to the schedule.
- 2: Deletes spray times from the schedule.
- 3: Test mode. Press X to exit.
- 4: Jumps to set duration.
- 5: Jumps to set time.
- 6: Jumps to set date.
- 7: Jumps to statistics menu.
- 8: Jumps to service menu.
- 9: Hold this button and a button on the remote to assign the remote control.
- X: Shuts off system. Turn back on with “OK”

## ***APPENDIX C: Access Codes***

Warning: do NOT change the franchise code unless you have to. If this code is lost you may have to call in for an unlock code.

## ***APPENDIX D: Refilling Procedure***

- unplug the system
- carefully remove the tank cover and fill/mix pesticide
- When tank has been filled, replace tank cover
- plug in system
- if unit had gone completely empty, you may want to check the statistics menu and see if the system capacity estimate needs to be adjusted
- hold the “0” key down for three seconds to enter quick refill mode
- enter the user or franchise password and press ok
- the empty light should go off, and total use statistics should return to 0 seconds

## ***APPENDIX E: Troubleshooting***

### **my system won't spray!**

Please check the following:

press **X** a few times to make sure you're looking at the main message

- does the display say “TANK EMPTY”, or “CODE REQUIRED”?
  - Tank is probably empty. Call your pest service to schedule a refill.
- does the display say “SYSTEM OFF”?
  - System has been suspended by remote or by holding **X** for 3 seconds. Press **OK** to return to normal operation
- does the display say “spray hold” with a countdown?
  - This system has built-in motor protection to prolong the life of the pump. Please wait until the countdown reaches 0 and try again.
- Check that the time and date is set properly
- make sure the system has not been disabled for the current month or day of the week using “set spray days” and “set spray months” in the main menu

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