



MICROGROW

GREENHOUSE SYSTEMS, INC

26111 Ynez Road, Suite C-4
Temecula, CA 92591
Phone 909.296.3340 Fax 909.296.3350

MINIMIST

*Irrigation and Misting
Control System*

Installation Procedures

Growmaster Series of Controllers

MINIMIST Mounting

Mount your MINIMIST in an accessible location. Make sure the location is free of vibration and in close proximity to devices being controlled. Always consider voltage drop of electrical current when locating the MINIMIST. Securely mount your MINIMIST.

Powering the MINIMIST

Always use stranded wire when connecting cables or conductors to the actual circuit board of the control panel. This will allow flexibility. Use no smaller than #18 gauge stranded wire for all outputs. Use no smaller than the recommended wire size of stranded cable for inputs, generally #22 gauge.

Dip Switches

Dip Switches, located on the back panel of the MINIMIST, can be accessed via the rear of the unit.

IMPORTANT: If any changes are made to Dip Switches, the entire system must be reset.

To reset system: At the same time, hold down the RUN/SET and the VALUE toggle switches (make sure in the down position) until the entire image disappears from the screen (about 10seconds). Release switches. MINIMIST will reset itself within 5 seconds.

Operation Modes

Prior to any operation, the system user must make the designation of STATION 1 and STATION 2. Each station may be set for Misting or Irrigation. Utilize Dip Switches, located on reverse of panel. Instructions for desired settings can be found on the 'Two Station Watering Controller Dip Switch Settings' page at the end of this manual.

Misting – In the misting mode, the user can define the amount of time a misting cycle will occur during a designated time period. Use Dip Switch settings on reverse of panel.

For example: From 10:00 am to 1:00 pm, the misting operation can be turned on every 'X' minutes for a predetermined amount of time (up to 120 seconds).

Irrigation – In the irrigation mode, the user can define an irrigation starting time and multiple irrigation cycles within that given period.

For example: Irrigation can be turned on at 'X' hour (AM or PM), run for a period of time, and then turn off. The user can also have the irrigation repeat itself, up to 4 times during a 10, 30, 60 or 90 minute time frame.

MINIMIST Operations

MINIMIST

The MINIMIST is a programmable irrigation and propagation greenhouse system. Produced by Micro Grow Greenhouse Systems, please follow instructions completely to assure proper installation and operation of your MINIMIST system.

Layout of your MINIMIST

The MINIMIST was created for easy user programming. The following will highlight the front panel of the MINIMIST system. Refer to setting and operation for details

SET – Use this position to program your MINIMIST or update settings

RUN – After programming times have been established, place toggle to RUN to execute.

VALUE – When in programming (SET) mode, this switch will change the desired values. Value up increases the display while value down decreases the display.

STATION 1 – This toggle will allow the user to view the individual settings for STATION 1.

STATION 2 – This toggle will allow the user to view the individual settings for STATION 2.

LCD DISPLAY – Located in the upper portion of the MINIMIST, the LCD DISPLAY will visually display the current status of the system. The ‘Start Time, Mid Stop Time, and Set Time will be explained later.

Settings and Operations

Follow the settings and operations section to make sure your MINIMIST system works correctly. Before making any settings, be sure your MINIMIST system is installed correctly and has power. Please read the entire Settings and Operations portion before beginning programming.

To set MINIMIST system operations, the RUN/SET and VALUE toggles will be used. *This toggle is a single pull. It will move back to its original position after each throw.* The LCD DISPLAY will display status of each operation.

MISTING

1. Setting Station Timing (if Misting STATION 1)

Begin Misting Time

- a. Set the hour to begin misting of STATION 1.
 - Flip the RUN/SET toggle switch to SET. The LCD DISPLAY will display a lighted bar next to STATION 1 indicating station to be programmed. A status light will be displayed next to start time. An flashing hour will be displayed indicating a random hour of day. To change the hour of day you wish STATION 1 misting to begin, use the VALUE toggle switch, up or down.
- b. Set the minute, of the same hour, misting to begin.
 - Flip the RUN/SET toggle one more time to SET. The minutes will now flash. Use the toggle to set the correct minute you wish to have the misting begin.
- c. AM or PM.
 - Flip the RUN/SET toggle one more time to SET. An ‘A’ or ‘P’ will now flash. Use the toggle to set AM or PM. (Up AM down PM).

Stop Misting Time

- d. Set the hour to stop misting of STATION 1
 - Flip the RUN/SET toggle switch to SET. The LCD DISPLAY will display a lighted bar next to STATION 1 indicating station to be programmed. A status light will be displayed next to MIST STOP CLOCK. A flashing hour will be displayed indicating a random hour of day. To change the hour of day you wish STATION 1 misting to stop, use the VALUE toggle switch, up or down.
- e. Set the minute, of the same hour, misting to stop.

- Flip the RUN/SET toggle one more time to SET. The minutes will now flash. Use the toggle to set the correct minute you wish to have the misting stop.
- f. AM or PM.
- Flip the RUN/SET toggle one more time to SET. An 'A' or 'P' will now flash. Use the toggle to set AM or PM (up AM down PM).

Set Duration of Misting

- g. Set duration 'ON' period
- Flip the RUN/Set toggle switch to SET. The LCD DISPLAY will display a lighted bar next to STATION 1 and STOP CLOCK. The word 'ON' will appear on screen for approximately 2 seconds and then disappear revealing a blinking time.
 - Use the VALUE toggle switch to change to desired length of misting time.(Maximum time length: 120 seconds).
- h. Set duration 'OFF' period
- Flip the RUN/Set toggle switch to SET. The LCD DISPLAY will display a lighted bar next to STATION 1 and STOP CLOCK. The word 'OFF' will appear on screen for approximately 2 seconds and then disappear revealing a blinking time.
 - Use the VALUE toggle switch to change to desired length of time between misting periods.

If misting is to be performed on STATION 2, repeat the above steps. Toggle to STATION 2.

Irrigation

2. Setting Station Timing (if Irrigation STATION 1)

Begin Irrigation Time

- a. The hour to begin irrigation of STATION 1.
- Flip the RUN/SET toggle switch to SET. The LCD DISPLAY will display a lighted bar next to STATION 1 indicating station to be programmed. A status light will be displayed next to start time. An flashing hour will be displayed indicating a random hour of day. To change the hour of day you wish STATION 1 Irrigation to begin, use the VALUE toggle switch, up or down.
- b. Set the minute, of the same hour, irrigation to begin.
- Flip the RUN/SET toggle one more time to SET. The minutes will now flash. Use the toggle to set the correct minute you wish to have the Irrigation begin.
- c. AM or PM.
- Flip the RUN/SET toggle one more time to SET. An 'A' or 'P' will now flash. Use the toggle to set AM or PM.

Stop Irrigation Time

- d. Set the hour to stop Irrigation of STATION 1
- Flip the RUN/SET toggle switch to SET. The LCD DISPLAY will display a lighted bar next to STATION 1 indicating station to be programmed. A status light will be displayed next to MIST STOP CLOCK. A flashing hour will be displayed indicating a random hour of day. To change the hour of day you wish STATION 1 Irrigation to stop, use the VALUE toggle switch, up or down.
- e. Set the minute, of the same hour, irrigation to stop.
- Flip the RUN/SET toggle one more time to SET. The minutes will now flash. Use the toggle to set the correct minute you wish to have the Irrigation stop.
- f. AM or PM.
- Flip the RUN/SET toggle one more time to SET. An 'A' or 'P' will now flash. Use the toggle to set AM or PM.

Set Duration of Irrigation

- g. Set duration 'ON' period
 - Flip the RUN/Set toggle switch to SET. The LCD DISPLAY will display a lighted bar next to STATION 1 and STOP CLOCK. The word 'ON' will appear on screen for approximately 2 seconds and then disappear revealing a blinking time.
 - Use the VALUE toggle switch to change to desired length of Irrigation time.(Maximum time length: 120 seconds).
- h. Set duration 'OFF' period
 - Flip the RUN/Set toggle switch to SET. The LCD DISPLAY will display a lighted bar next to STATION 1 and STOP CLOCK. The word 'OFF' will appear on screen for approximately 2 seconds and then disappear revealing a blinking time.
 - Use the VALUE toggle switch to change to desired length of time between Irrigation periods.

If Irrigation is to be performed on STATION 2, repeat the above steps. Toggle to STATION 2.

3. Setting System Clock

Setting current time of day

- a. Setting Hour
 - Flip the RUN/SET toggle switch to SET. The LCD DISPLAY will display a lighted bar next to SET CLOCK . A flashing hour will be displayed indicating a random hour of day. To change the hour use the VALUE toggle switch, up or down.
- b. Set the minute.
 - Flip the RUN/SET toggle one more time to SET. The minutes will now flash. Use the toggle to set the correct minute.
- c. AM or PM.
 - Flip the RUN/SET toggle one more time to SET. An 'A' or 'P' will now flash. Use the toggle to set AM or PM.